

TFM: *Using Computer Based Exploratory
Talk to Encourage Secondary School
Students' Oral Interaction*

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Abstract

Several studies have investigated the main communicative problems of students engaged in collaborative tasks. Likewise, computer-based activities have been proved successful at stimulating effective talk among L1-English primary-school learners (L1). However, research on learners of English as a Foreign Language (EFL) is still limited comparatively. Inspired in the communicative activity defined by Fisher (1992) as Exploratory Talk, this study intends to analyse the effects of computer-based communicative tasks in EFL students in order to determine whether they encourage oral interaction, and the type and amount of Negotiation of Meaning (NoM) and L1 use it might generate. The study was conducted with eight students, separated in four dyads, belonging to the 3rd year of the Compulsory Secondary Education high school in Pamplona, Navarre. The four dyads participated in two different communicative tasks. In the first task learners had to perform a Cambridge picture-describing task while on the second they had to complete an interactive narrative designed to elicit exploratory talk. Data for the study was collected by means of audio-recorded oral interaction. It was subsequently transcribed and coded according to Oliver's classification of NoM strategies (1998). Results indicate that computer-based Exploratory Talk task increases interaction between students as regards the number of turns carried out by each dyad and generated a higher number of instances of L1 use. However, a poor number of conversational adjustments reveals that there are no significant alterations between task in terms of NoM.

Key words: Exploratory talk, Interaction, Negotiation of Meaning, Task, EFL.

1. Introduction

Vygotsky's Sociocultural Theory (1978) stated that social interaction plays a fundamental role in the development of cognition. Moreover, he noted that the sociocultural context profoundly influences the process of learning. Following the principles proposed by Vygotsky, at the end of the 20th century, scholars such as Neil Mercer, Eunice Fisher, Maurice Galton or Rupert Wegerif, analyzed the new sociocultural and cognitive environment of the primary school period (Fischer, 1992; Galton & Williamson, 1992; Mercer, 1994; Barnes & Todd, 1995; Wegerif & Scrimshaw, 1997; Mercer, Fernandez,

Dawes, Wagerif & Sams, 2003; Dawes & Wegerif, 2004 and Wagerif, 2007). These researchers examined and dissected the main communicative problems among pupils engaged in communicative tasks. On the one hand, they attempted to define a kind of talk where students could engage critically but constructively with each other's ideas, what has come to be known as exploratory talk. On the other hand, they promoted the implementation of ICT in education, exploiting pedagogical software to encourage the quality of discussion-based tasks.

As Dawes & Wegerif (2006) observe, the practice of computer-based programs supporting communicative learning, improves the efficiency of core subjects in the UK's national curriculum, such as science, maths or literacy. In addition, the effects of computer-based exploratory talk task among L1-English primary students have been proved successfully in Mercer (1994), Wegerif (1996) and Mercer et al (2003). However, little focus has been given to learners of English as a foreign language (EFL), at the time when new academic streams exhibit the increase of EFL programmes for children (Pinter, 2011; Enever, 2018).

Likewise, interaction has been proven to play a pivotal role in Second Language Acquisition (SLA), where “conversational partners may be important as facilitators and shapers of learner output” (Long, 1996). ‘Negotiation of Meaning’ (NoM), is a central concept in the Interaction Hypothesis, and refers to the process whereby interactions are modified between conversational partners in order to overcome communication breakdowns. NoM has been analysed by a myriad of authors (Pica, 1994; Oliver 1998; Mackey, 2007; García Mayo & Lázaro Ibarrola, 2015; Lázaro & Azpilicueta Martínez, 2015; among many others). Ergo, this research will focus on the analysis of computer-based collaborative activities. The aim of this study will be to analyse the extent to which the use of ICT within guided group discussions leads to richer oral performance, in terms of NoM.

In order to measure the consequences of computer-based Exploratory Talk task in students of Secondary School in Biurdana B.H.I, the study will compare this methodology with a traditional Cambridge English speaking picture-based discussion task. Based on Rupert Wegerif's software called Kate's choice used by Mercer et al (2003), the program will merge content from the curriculum of English language and moral content used for tutorial classes.

2. Literature Review

2.1. Oral Tasks

Regarding the implementation of new technologies in education, Wegerif (2007) raises a question: “what kind of pedagogy do we need to develop for the children of the Internet revolution?” (p. 2). In response to this question, both researchers state that not only it is a technological challenge but also a conceptual one. Developing a new pedagogy for the Internet age should focus on promoting new practices and understanding new educational contexts.

Dawes & Wegerif (2004), analysed the requirements of the pedagogical software and realized that computer-based oral tasks demand little intervention from the teacher. However, they made an attempt to specify some key pedagogical aspects to ensure the effectiveness of computer-based activities in terms of interaction: “classroom community dialogues take place through and at computers; software and applications support learning dialogues focus on curriculum learning; activities necessitate learning dialogues” (p.2).

Fisher (1992) illustrates that the interaction of educational significance found in observations of children working with computers can be divided into three different sequences: disputational talk, cumulative talk and exploratory talk.

Contrary to disputational talk and cumulative talk, where discussion in different context of conversations are simply accepted and not developed, exploratory talk encourages a model of interaction where arguments can be hypothetically challenged and counter-challenged. Hence, exploratory talk offers a potential for learning (Wegerif, 1996, p. 23).

Fischer (1992), Galton & Williamson (1992), Mercer (1994), Barnes & Todd (1995), Wegerif & Scrimshaw (1997), were pioneers on the idea of ICT in education, exploiting pedagogical software to encourage the quality of oral discussion-based tasks. Hence, following the conception of Exploratory Talk established by Fischer (1992), they attempted to develop different communicative tasks to encourage this specific sequence of talk.

Mercer et al (2003) states that exploratory talk tasks encourage students to engage in their ideas critically but constructively with the rest of students ideas. Moreover,

stimulate students to work together in order to reach a shared goal. Therefore, students become an active member of the learning team. “Exploratory talk uses the open sharing of ideas, receptiveness to the ideas of others, constructive conflict, and well-argued counter proposals in order to reach consensus in groups” (Webb, Withlow & Venter, 2016, p. 4). Moreover, Kerawalla, Petrow & Scalon (2013) observed that some dialogic features and structures indicate that students are engaged in proper exploratory talk conversational inquiry: “(‘I think X because Y’, ‘I dis/agree with X because Y’ and ‘why do you think that?’)” (p. 90).

Sinclair (1987) observed that using pictures in communicative tasks could bring benefits to teaching EFL by simplifying comprehension and enhancing interest. Moreover, Byrne (1980) stated that pictures not only stimulate students’ discussion and interpretation of the topic but also their imagination. According to Brown (2004), the picture-cued technique can be considered an important and powerful method to elicit students’ oral language performance at extensive and intensive levels”. As Wright (1989) observed, picture-based tasks help students since they provide motivation and a context with information to use. In addition, pictures represent a guide in spoken activities stimulating interaction without teacher guidance or the interference of written language.

As far as the learners are concerned, visual support facilitates the understanding of the task, affecting the way things are interpreted. Therefore, visuals support encourages students with ideas in order to communicate with the partner, as well as encourage the activation of vocabulary knowledge (Lavalle & Briesmaster, 2017). Thornbury (2004) claimed that visualizing pictures is the most efficient way to assimilate and remember new vocabulary.

As far as the task is concerned, it is essential to highlight the importance of encouraging students to do meaningful activities using authentic language, where the task serves only as the core unit of planning and instruction. (Richards & Rodgers, 2001). Therefore, Wegerif, Mercer and Dawes, (1999) defend the importance of developing convergent tasks which encourage learners to reach a consensus in order for a reasonable solution to be produced. Convergent tasks are described as those tasks “that require true justified knowledge, abstract conceptualization, and active experimentation. They allow for collaboration in meaning negotiation of where a single goal is needed; thus, collaborative work is required” (Skehan, 2001, p.49). Furthermore, as Cropley (2006) observes, in convergent tasks students work interdependently, being forced to interact and

communicate in a manner that requires more interaction. Finally, tasks that require interaction among task-takers and have a single convergent outcome are considered as the most effective because they trigger comparatively more opportunities for NoM than other, less controlled types of interaction such as those elicited in decision-making and opinion exchange tasks (Pica et al., 1993, 2006).

2.2. Interaction and Negotiation of Meaning

Michael Long's (1996) Interaction Hypothesis stated that "negotiation for meaning, and especially negotiation work that triggers interactional adjustments by the more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (p.45). Long's (1996) updated version of the Interaction Hypothesis highlights the benefits of interaction as a context where learners not only obtain positive input and produce modified output, but where they might also receive corrective feedback. Cooperative interaction, thus, often leads to mutual understanding, and a myriad of authors have focussed their attention on the incidental learning that occurs through NoM. In fact, several children-based studies have been recently carried out in Basque Country and Navarre in EFL contexts (García Mayo & Lázaro-Ibarrola, 2015; Lázaro-Ibarrola & Azpilicueta-Martínez, 2015; Azkarai & García Mayo, 2016; Azkarai & Imaz, 2016; Hidalgo, 2019 among others).

The most widely acknowledged classification of NoM strategies comprises conversational adjustments (CAs) and repetitions, the latter exceeding the scope of the present study. CAs include, in turn, confirmation checks, clarification requests and comprehension checks.

Confirmation checks are "any expressions [...] immediately following an utterance by the interlocutor which are designed to elicit confirmation that the utterance has been correctly heard or understood by the speaker." (Long, 1983, p.137). Consider the following example by (García Mayo & Lázaro-Ibarrola, 2015) where the repetition of the previous utterance is perceived as confirmation check.

(1) Confirmation check

CHILD 1: and what colour is your shoes?

CHILD 2: brown

CHILD 1: *brown?*

(García Mayo & Lázaro-Ibarrola, 2015, p. 46)

“A clarification request is “any expression ... designed to elicit clarification of the interlocutor's preceding utterance(s).” (Long, 1983, p.137). The following example by (García Mayo & Lázaro-Ibarrola, 2015) illustrates how Child 2 seeks assistance in order to understand Child 1's utterance. In this specific case the speaker uses 'what?' as a question statement, although it is extremely common to find imperative statements such as, 'Please repeat' (Pica, 1987).

(2) Clarification request

CHILD 1: is with the dog?

CHILD 2: *what?*

(p. 46)

“Comprehension checks are “attempts to anticipate and prevent a breakdown in communication.” (Long, 1983, p. 136). Take into account the following examples by (García Mayo & Lázaro-Ibarrola, 2015), where the Child 2 tries to determine if the Child 1 has understood the previous statement.

(3) Comprehension check

CHILD 1: between the two tables in the classroom

CHILD 2: between the two tables in the classroom, and is looking a little bit at the end of the blackboard. *Did you understand?*

(p. 46)

Likewise, a solid body of research suggests that a balanced use of the L1 in FL classes yields beneficial effects for SLA (Brooks & Donato, 1994; Macaro 2005; Viladot & Villanueva, 2007; Carless, 2008; Storch & Aldosari, 2010; Tognini & Oliver, 2012; Azkarai & García Mayo 2017; Garcia Mayo & de los Angeles Hidalgo, 2017, among others).

Macaro (2005) stated that the use of the L1 in FL classroom is natural and commonly used to compensate low linguistic knowledge. Moreover, Storch & Aldosari, (2010) observed that L1 use is limited only to serve as facilitator for task completion. Other researchers like Brooks and Donato (1994), Carless (2008) and Tognini and Oliver (2012) recognized that the use of L1 in SLA contexts as facilitator particularly emerges in communicative tasks, helping learners with procedure and vocabulary which eventually promote communication in the target Language (TL). Although Storch & Aldosari (2010) observed that the use of L1 varies as a function of age and proficiency, where the higher the proficiency is, the lower the amount of L1 use, recent research by García Mayo and Lázaro-Ibarrola (2015) observed that other variables such as learner motivation, task complexity or instructional setting might also affect L1 use.

Several researchers have identified the different functions of instances of L1 use (Swain and Lapkin, 2000; Storch and Wigglesworth, 2003; Tognini and Oliver, 2012) in different ways. In the present study I have followed the functions proposed by Alegría de la Colina and García Mayo (2009), due to the fact that two of the functions those researchers qualified are clearly identifiable in this study: metacognitive talk and vocabulary. García Mayo & Hidalgo (2017) stated that metacognitive talk makes reference to the instances in which the speaker uses the L1 to talk about the task itself, as the following example illustrates:

(4) Metacognitive talk

CHI1: Finished.

CHI2: *Te falta una* (one is missing)

(García Mayo & Hidalgo, 2017, p.6)

As for the vocabulary functions, we refer to instances in which the L1 is used to deliberate over TL vocabulary, L1 term in the TL discourse [borrowings], and L1 terms modified to the rules of the TL [foreignising] (Muñoz, 2007).

(5) Vocabulary - Deliberation

CHI 1: *¿Cómo se dice galleta?* (how do we say cookie)

(p. 6)

(6) Vocabulary - Borrowing

CHI1: What color is t-shirt?

CHI2: The t-shirt is (...) *gris* (grey).

(p. 6)

(7) Vocabulary - Foreignising

CHI2: And the boy he's got t-shirt blue and she's got short hair?

CHI1: Is in front the *portery* (goal).

(p. 6)

As García Mayo & Alcón Soler (2013) observed, NoM that emerges between students' interaction promotes SLA at different levels. Moreover, "Research indicates that through interaction language learners obtain crucial information that may assist them in their performance and in their acquisition process" (García Mayo & Lázaro-Ibarrola, 2015, p42). However, Lazaro-Ibarrola & Azpilicueta-Martínez (2015) observed that a minimum threshold level was necessary for students to foster negotiation in the TL. Besides, Hidalgo (2019) observed that learners seem to go through different stages as they start to negotiate, hence, she proposed four stages in the acquisition route of the NoM strategies: Stage 1, no negotiation when breakdowns occur, with very little NoM; stage 2, only negotiate to repair breakdowns in the form of clarification requests; stage 3, purpose to negotiate is shared in breakdowns and confirmation checks start to be frequent; stage 3, negotiation flourishes to confirm successful communication.

To the author's best knowledge, several studies have analysed the impact of the learning context in L1-Spanish EFL children, examining oral interaction in terms of NoM and L1 use (García Mayo & Lázaro Ibarrola, 2015; Lázaro-Ibarrola & Azpilicueta-Martínez, 2015; Azkarai & García Mayo, 2016; Azkarai & García Mayo 2017; García Mayo & Hidalgo, 2017 among others), and often involved Content and Language Integrated Learning (CLIL), in which subjects are taught through the medium of English, thus involving a significant level of exposure to the TL. By contrast, this paper analyses the extent to which NoM and L1 use differ from one task to another among same-age teenage students Immersed in an instructional setting involving less exposure to the TL.

3. Research Questions

The current study focuses on the interaction in terms of NoM and L1 use of 8 EFL students (age 13-14) while performing two different collaborative tasks in pairs in a secondary school which follows a traditional approach. The following research questions guided the current study:

- RQ1: To what extent does computer-based Exploratory Talk encourage oral interaction in terms of NoM and use of L1 compared to a Cambridge picture-based discussion task?
- RQ2: Which NoM strategies and L1 functions do students resort to in their oral interaction with age-and-level-matched dyads?

4. Method

4.1. Participants

The participants in the study were 8 teenagers who were paired up according to the learning context and age. It consisted of 4 dyads of 14-15-year-old teenagers studying third year of Secondary School (D.B.H. 3) at Biurdana B.H.I. school in Pamplona (Northern Spain). Biurdana is a state school implementing a linguistic D-programme, an instructional setting in which contents are taught through the medium of Basque.

Schools which follow the linguistic D-programme also include EFL. Learners start learning English in the first year of Primary Education (when they turned 6). During the 6 years of Primary School, they receive 5 English lessons per week (55 minute per lesson). However, when they enrol in Secondary School, the hours of EFL are reduced to 3 English lessons per week. These lessons follow a structure-based communicative methodology, where the four skills are covered. For the purposes of this research, the proficiency of the was rated using school-internal assessment tests and teacher's notes.

Table 1***Participants in the study***

	Cambridge	Exploratory
<i>School Year</i>	3 rd Secondary Education	3 rd Secondary Education
<i>TL hours per week</i>	3 sessions of 55 minutes	3 sessions of 55 minutes
<i>Age</i>	14 -15	14 -15
<i>Number of Dyads</i>	4	4
<i>Level of English</i>	A2-B1	A2-B1

4.2. The Task

Tasks share a single convergent goal, both of them are focussed on discussion-based interaction between learners, where dyads have to constructively negotiate and discuss a specific topic. To perform both tasks, each dyad was taken to an isolated room. There, both students sat together in the same table in front of the task.

As far as the Cambridge task¹ is concerned, students performed a Cambridge picture-based discussion task, particularly, the Cambridge English Preliminary speaking part 4, where the researcher described a situation to them and they talked together and discussed with the help of some pictures. More precisely, all participants had a poster which depicted two scenes, a woman lying in a bed while she watched her mobile phone and a man washing the dishes in the kitchen. Apart from having visual support, the students also have some cards with different back-up prompts in the form of written messages (e.g. “Talk about the things you like to do at home”, “talk about the things you like to do at home”) in order to ease the conversation.

As for the exploratory task² participants had to complete an interactive narrative designed to elicit exploratory talk, based on Rupert Wegerif’s (1996) software called *Kate’s choice*. In this case, the subjects are introduced to a boy called John, who tells them a secret; he has stolen the money from the final school trip. However, he argued that the money would be used to buy a present for his mother, who is really sick in hospital. John begs the students not to confess the secret to the rest of the class. Subsequent events

¹ See appendix 1

² See Appendix 2

make it difficult to choose if they should be loyal to their friend or they should confess the secret. The task will lead students to develop the actions of our main character in this fictional tale and discuss in order to expand the narrative in new possible directions.

4.3. *Data Collection and Codification*

Following Oliver's (1998) work on interaction, the audio-recorded oral interaction of the 4 dyads were transcribed literally. NoM was measured by means of CAs (i.e. clarification requests, confirmation checks and comprehension checks). Moreover, given the recent findings indicating that L1 use has positive effects in interaction, the extent to which learners made use of that strategy has also been codified, following the characteristics described by Alegría de la Colina and García Mayo (2009) (i.e. Metacognitive talk and Vocabulary). The examples below constitute actual instances from the present study:

➤ **Conversational Adjustments:**

(8) **Confirmation check**

Speaker A: I don't like it.

Speaker B: *You don't like it?*

Speaker A: Yes. My favourite room is the salon (living room).

(9) **Clarification request**

Speaker B: I think that the decision is correct because, o sea (that is), John stoled the money but did not learn anything?

Speaker A: *What?*

Speaker B: O sea (that is), we have to speak with John more to learn. O sea (that is), something. Eso (that).

(10) **Comprehension check**

Speaker B: Yes yes, he is going to do it again, because, he don't, *you understand?*

Speaker A: Yes.

➤ **L1 use:**

(11) **Metacognitive talk**

Speaker B: (long pause to read the second slide). *Depende no?* (it depends) I think that he should speak with John's brother because the brother would help John.

Speaker A: Yes yes.

(12) **Vocabulary – Deliberation**

Speaker B: Bueno, I, in my house I have 3 floors so in the (pause).

Speaker A: First floor.

Speaker B: *Cómo se dice "el de abajo"?* (how do we say ground floor).

(13) Vocabulary – Borrowing

Speaker A: Okey. My house is small and I like my room and sometime my bathroom because have *a pestillo* (lock).

(14) Vocabulary - Foreignsign

Speaker B: Long pause (whispering in L1) for my opinion, *I accord*_(agree) with Ibai and I am not gonna tell anyone.

5. Results

This section reports findings regarding the amount of interaction, in terms of NoM and use of L1, produced by students of Secondary 3rd year enrolled in Linguistic D-programme, where English is taught as EFL, while they perform two different speaking tasks. First of all, the effects of interaction in terms of NoM are examined, taking into account the number of conversational adjustments produced in each task. Subsequently, the total use of L1 instances are quantified. Finally, the average duration of each activity and the number of turns and words produced by subjects in both activities is measured. By analysing these two tasks, results allow us is not only to observe in what extent does computer-based exploratory talk encourage oral interaction compared to Cambridge picture-based discussion task, but also to assess which NoM strategies and L1 functions are used by students in their oral interaction.

Table 2

Interactional strategies - Conversational Adjustments

	Cambridge	Exploratory
<i>Clarification Requests total</i>	1	0
<i>Average per task</i>	0.25	0
<i>Confirmation Checks total</i>	1	2
<i>Average per task</i>	0.25	0.5
<i>Comprehension Checks total</i>	0	1
<i>Average per task</i>	0	0.25
<i>Conversational Adjustments total</i>	2	3
<i>Utterances total</i>	121	139
<i>CAs per Utterance</i>	0.01	0.02

As far as table 3 is concerned, the difference in terms of NoM was not substantial. Although the computer-based exploratory talk task presents a rate of 0.02 conversational

adjustments per utterance, slightly higher than the rate displayed in Cambridge picture-based discussion task, rates remain extremely low.

Strategies to confirm successful NoM are, likewise, merely anecdotal. However, the prevailing CAs employed in both of the task were the confirmation checks, which have been identified as 0.375 per task. The rest of the CAs, comprehension checks and clarifications requests, have been identified 0.125 times per task. In overall, the results are extremely scarce in terms of NoM.

Table 3

Interactional strategies – L1 use

	Cambridge	Exploratory
<i>Metacognitive Talk Total</i>	1	4
<i>Average per task</i>	0.25	1
<i>Vocabulary Total</i>	7	9
<i>Average per task</i>	1.75	2.25
<i>Instances of L1 use Total</i>	8	13
<i>Utterances total</i>	121	139
<i>L1 use per Utterance</i>	0.06	0.09

The analysis of L1 use revealed that the students used more instances in computer-based exploratory talk task than in Cambridge picture-based discussion task. While in the exploratory task the students produced a total number of 13 instance of L1 use, 0.09 per utterance, in the Cambridge task the learners used their native language in a total of eight times, 0.06 per utterance.

As far as the L1 use functions are concerned, the most employed strategy by the participants was the vocabulary type, and did not trigger enormous differences between tasks: seven instances in Cambridge task and nine instances exploratory task. However, metacognitive talk was registered mainly in computer-based exploratory talk task: One instance in Cambridge task and four instances in Exploratory task.

Table 4

Overall duration and number of turns

	Cambridge	Exploratory
<i>Total number of turns</i>	40	92
<i>Average number of turns</i>	10	23
<i>Total duration (seconds)</i>	912s	1757s
<i>Average Duration (seconds)</i>	228s	435s
<i>Total number of words</i>	769	1096
<i>Average number of words</i>	192.25	273.5
<i>Turns per minute</i>	2,6	3.1
<i>Words Per minute</i>	50	37

As we can observe in table 3, the students spend nearly twice as much time developing the computer-based exploratory task compared with the Cambridge picture-based discussion task. Moreover, the interaction between students was considerably higher in the exploratory task, taking into account the number of turns conceived by each dyad. Finally, focussing on the total number of words produced by the students, it can be observed that they have produced an average of 81 words more per task in the second one in comparison to the first one.

As far as the average duration of each task and the turns per minute are concerned, although the interaction between the students was slightly higher in exploratory task, the results were not substantial in terms of interaction. However, focussing on the production of words per minute, the subjects performed 13 words more in the Cambridge task than in the exploratory task.

Figure 1

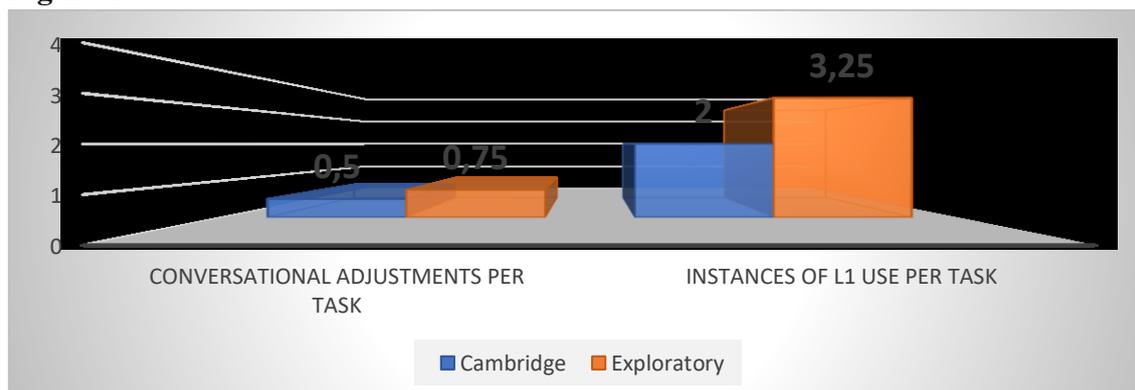
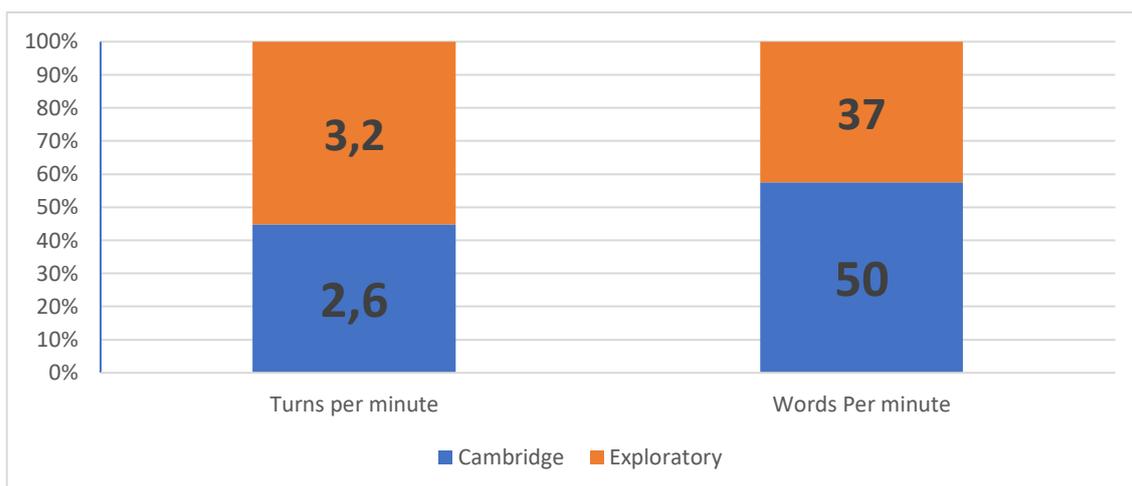


Figure 2



In general, taking into account the present results in figure 1 and 2, three clear patterns are observed: Firstly, computer-based exploratory talk task increases slightly the interaction between students, as regards the number of turns generated by each dyad. However, it does not foster a higher production of words; secondly, poor results in terms of NoM indicate that either the tasks or the students might not be best suited to encourage negotiation; finally, computer-based exploratory talk task stimulated higher instances of L1 use.

6. Conclusion, Discussion and Pedagogical Implications

The main aim of this paper was to report the extent to which computer-based Exploratory Talk encourage oral interaction in terms of NoM and use of L1. Therefore, my intention was to compare the results taken by this task with the results taken by a traditional Cambridge picture-based discussion task. To do so, the oral interaction of eight students following the mainstream approach in the study of foreign languages was analysed. The main difference between the two tasks lied in the fact that computer-based exploratory talk task was discussion-guided, while in Cambridge picture-based discussion task the interaction was supported by images.

The research reported was framed within the interactionist framework (Long, 1996) and following the pioneering research about exploratory talks proposed by Scholars (Fischer, 1992; Galton & Williamson, 1992; Mercer, 1994; Barnes & Todd,

1995; Wegerif & Scrimshaw, 1997; to name some), who proposed that students could engage constructively with each other's ideas by implementing quality discussion-based tasks. These findings indicate that computer-based exploratory talk task increases a more balanced co-constructed interaction between students, given the number of turns performed by each dyad. However, the low use of conversational adjustments suggested that students did not negotiate in terms of NoM. These results are in line with the proposal by Lázaro-Ibarrola & Azpilicueta-Martínez (2015), who observed that a minimum threshold level was necessary for students to foster negotiation in the TL. Moreover, taking into account that learners seem to go through different stages when they start to negotiate for meaning (Hidalgo, 2019), it could be proposed that the subjects who participated in the research belonged to the first stage, where learners do not negotiate albeit suffering communication breakdowns.

As we can observe in Table 3, students used L1 more frequently in order to interact and negotiate, which could lead us to speculate about the cognitive and linguistic complexity of the task. García Mayo and Lázaro-Ibarrola (2015) observed, that other variables such as learner motivation, task complexity or instructional setting might affect L1 use. Therefore, it could be that in this particular study, computer-based exploratory talk was more challenging for students, stimulating higher instance of L1 use.

The results of the study follow the popular trends which suggest that L1 serves functions to facilitate the fulfilment of the task. Hence, taking into account the comprehension difficulty of each task, it was not surprising to find a higher rate of metacognitive talk and vocabulary deliberation in computer-based exploratory talk task. These results are highly interesting considering the L1's potential to aid the development of the TL, as García Mayo & Hidalgo (2017) observed.

The main function of the L1 use was to negotiate about vocabulary problems, hence, deliberations in L1 and borrowings were quite common in all the students. As Storch & Aldosari (2010) observed, the use of L1 varies as a function of proficiency, where the higher the proficiency is, the lower the amount of L1 use. In this particular research, I observed that heterogeneous dyads, where the level of English of one student was lower than the other student's one, registered the highest number of vocabulary deliberations. Recognize the examples below, where three instances of deliberation corresponding to the same speaker in the exploratory task were registered:

(15) Dyad 3 exploratory task

Speaker A: I would not tell to the rest of the class because. You can *konpondu* (fix), *como se dice konpondu?* (how do I say Fix?).

Speaker B: I don't know.

(16) Dyad 3 exploratory task

Speaker A: (Long pause to read the third slide) *Qué es punishment?* (what is punishment).

Speaker B: *Creo que es castigo* (I think that it is punishment).

(17) Dyad 3 exploratory task

Speaker A: But the classmate (long pause) *hasarretu?* (get angry?).

Speaker B: Get angry.

Corroborating the results of the computer-based exploratory talk task developed for this particular research, considerable observations can be concluded. However, I completely different attitudes towards the two tasks which could not be perceived through quantitative results have been spotted. Therefore, after every task, a concise interview to each dyad was performed in order to evaluate their opinion and stress level.

First of all, there is no denying that the exploratory task was not consistent in terms of rhythm and fluency as the Cambridge task. This factor was possibly caused by the nature of the task itself, where the students spent a significant amount of time reading and analysing the instructions. Therefore corresponding, although the number of turns per minute was slightly higher, the production of words per minute was consistently lower. Observe (18) and (19) below, both to dyad 3: (19) belongs to the first minute of transcription in the Cambridge task, where a big amount of interaction is generated; (18) belongs to the first minute of transcription in exploratory task, where just three words are produced.

(18) Dyad 3, exploratory task

Speaker A: (Pause to read instructions, whispering) *Cuál cogemos?* (pause).

Speaker B: *No se* (I don't know) (pause) (inaudible).

(19) Dyad 3, Cambridge task

Speaker A: The things I like to do it in my home is, staying in the sofa seeing, eh, series.

Speaker B: Films and series (both laugh).

Speaker A: And you?

Speaker B: I like, eh, putting the radio, the (inaudible), and to listen to music. And the, read also.

On the one hand, it could be said that the exploratory task was more challenging for students and required reading skills, hence, they spent a bigger amount of time to internalize the aim of the task and comprehend how they had to perform it, something that occurred in every new slide. On the other hand, it could be concluded from the post-activity interviews that the picture-based discussion task was familiar to them and easier to understand; this might explain the production of TL and the interaction between them was faster.

Corresponding to the different stages of the computer-based exploratory talk task, serious alterations were observed between the 4 decision points in terms of interaction and production. During the first three slides, where the participants had to choose a decision between two options, the dyads devoted nearly two turns per decision point, as example (20) shows.

(20) Dyad 2 exploratory task

1. **Speaker A:** (Long pause to read instructions). In this situation I won't tell the class. Because (pause) my mother is very bad. And I take the money for to buy her a present.
2. **Speaker B:** Yes but, stealing is very wrong, so the rest of the class is going to be angry with John, so I think that I won't tell the rest of the class. ← **Decision 1**
3. **Speaker B:** (long pause) Me, I would not speak with the teacher, because, eh, the teacher will be hungry, eh, angry, with John.
4. **Speaker A:** (long pause) I, want to because, he will be so angry. ← **Decision 2**
5. **Speaker B:** (long Pause) I will speak with John's brother, because if I speak with the teacher, she will be angry.
6. **Speaker A:** Yes, too hungry. Angry. ← **Decision 3**

However, when the task reached the last decision point and the subjects were guided to reflect about their previous elections, the interaction flourished between students. Consider (24) and observe how in this stage the turns between speakers were doubled in comparison to the previous three decision points. This pattern was mostly predominant

in the rest of the dyads. Therefore, it could be deduced that the first decision points were transitional and that the interaction expected from the task arrived in the last stage.

(21) Dyad 2 exploratory talk

1. **Speaker B:** I think that the best is the teacher's opinion. Because John needs a hard punishment. It is so wrong to steal money to your friends. That's not a friend, a good friend. Stealing money is not good.
2. **Speaker A:** I think the better opinion is the mother's opinion, because he needs to learn the result but the punishment don't have to affect to his grades.
3. **Speaker B:** I don't think. I don't think.
4. **Speaker A:** Because?
5. **Speaker B:** Okay okay, I agree, I agree (long Pause).
6. **Speaker A:** John needs a hard punishment but John needs to learn the lesson. The mother is better.
7. **Speaker B:** No, because eh, (long pause). The best is teacher's opinion. Because if he don't get a punishment, eh, is not going to learn anything. Eh, because, stealing is very eh, is intolerable thing. Is very hard, you need to do things, you need to punish him. Because, if you don't punish him, he is going to do it again.
8. **Speaker A:** Yes?
9. **Speaker B:** Yes, yes, yes, he is going to do it again, because, he don't, you understand? (long pause) (both laugh).
10. **Speaker A:** Yes.
11. **Speaker B:** So, the teacher's one is best. ← **Decision 4**

As far as the Cambridge picture-based discussion task was concerned, all of the learners acknowledged that they felt more comfortable and prepared performing it due to the familiarity of the exercise. As Lavalley & Briesmaster (2017) observed, visual support facilitates the understanding of the task, encouraging students with ideas and activating previous vocabulary knowledge. However, it could be supposed that the familiarity of the task combined with the previous knowledge encouraged long monologues, avoiding real interaction between students.

Observe example (22), it could be inferred that the production of long monologues in order to overcome the standards of traditional speaking tasks did not foster interaction in terms of NoM. By contrast, the exploratory task (23) was unknown to learners, possibly boosting their interaction and negotiation. Hence, more turns were created and NoM was encouraged.

(22) **Dyad 4, Cambridge task**

Speaker A: In my house I do many things. For example, I play video games. And I stay with my phone. Eh. My favourite room is my bedroom, because, because, I have many things. I dislike from my house, the, the, eh, the windows because they are very small. And I can't see the environment. I like seeing the television for example football match and documentals. And you? What do you do?

Speaker B: I have to do my homework every day. Eh, and them, I go to play football with my friend, eh eh, I don't like to... My favourite room is my room because I have there my PlayStation and I play every day. When I invite my friends, we play playstation or we go out to play football. Eh, eh, and I don't like my door because is very big. Eh, and, and I don't like it.

(23) **Dyad 4, exploratory task**

Speaker A: I think that I decide good because the money is not to, *como se dice comprar?* (how do I say to buy). ← **Vocabulary deliberation**

Speaker B: Buy.

Speaker A: *To buy?* ← **Confirmation check**

Speaker B: Yes.

Speaker A: To buy a new console.

Speaker A: (Long pause) I think that I do good telling to my teacher.

Speaker B: (Pause) In my opinion I am agree with the classmate because John should go to the school trip.

Speaker A: I think that John needs a hard punishment because it is intolerable to steal money and he deserves a hard punishment.

7. Limitations and Future Research

An undeniable shortcoming to be acknowledged is the fact that more class hours and a bigger sample size would be necessary in order to reach firm conclusions. Nevertheless, results seem to indicate that the traditional structured-based educational approach with limited exposure to the TL, does not seem to prepare students for oral interaction. As could be perceived, this particular skill was not stimulated and was limited to previously prepared artificial monologues.

The aim with the use of computer-based tasks was to encourage a more realistic negotiation between learners. However, as mentioned before, the learners' inexperience to negotiate enabled NoM in these particular exercises. Therefore, it can be concluded that the developing of speaking interactive tasks in class needed from previous preparation and training, a trait in which traditional approaches might struggle. During

the observation period of the EFL subject many factors that affected this study were observed.

As far as the teacher's role is concerned, the vast majority of sessions were teacher-centred, and interaction between students was not promoted, hence, they did not develop negotiation skills. Furthermore, the use of the L1 was extremely common in learner-learner and teacher-learner interaction. Students always interacted among them in the L1 and they felt under pressure every time they had to communicate in the TL. Therefore, the most challenging topics were addressed in the L1 by the instructor.

In this particular research, it could be argued that the task was not appropriate for the qualities of this specific group of students in order to encourage interaction in terms of NoM. as for the L1 use, the results concur with recent findings suggesting that the L1 serves functions to facilitate the fulfilment of the task. However, the students' perceived habits to overuse the L1 and the fact that the researcher gave them the instructions in their L1 might have contributed to minimise TL use in the tasks.

In terms of dyad pairing, teachers' recommendations were followed according to their previous grades. From the short list of volunteers, the aim was to create homogenous pairings, taking into account their affinity and TL proficiency. However, the opportunity to analyse their level via an Oxford Placement Test would have contributed to a more solid pairing solution proficiency-wise.

All in all, taking into account the students' difficulties to negotiate, the scope of this paper should not be determined by the low NoM rates provided, and it could pave the way for further research on the influence of task type on both NoM and, equally important, on the nature and role of the L1, since instances were abundant in the corpus.

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9. References

- Alegría de la Colina, A., & García Mayo, M. P. (2009). *Attention to form across collaborative tasks in foreign language learning by beginner-level EFL students*. In M. P. García Mayo (Ed.), *Investigating tasks in formal language settings* (pp. 91e116). Clevedon: Multilingual Matters.
- Azkarai, A., & García Mayo, M. D. P. (2017). *Task repetition effects on L1 use in EFL child task-based interaction*. *Language Teaching Research*, 21(4), 480-495.
- Azkarai, A & Imaz, A. (2016). *Negotiation of meaning strategies in child EFL mainstream and CLIL settings*. *TESOL Quarterly* 50. 844–870.
- Barnes, D. And Todd, F. (1995) *Communication and Learning Revisited*. Portsmouth: N.H., Heinemann.
- Byrne, D. (1980). *English teaching perspectives*. London, England: Longman.
- Brooks, F. B., & Donato, R. (1994). *Vygotskyan approaches to understanding foreign language learner discourse during communicative tasks*. *Hispania*, 77, 262e274.
- Cropley, A. J. (2006). *Creativity in education and learning: A guide for teachers and educators*. London: Kogan Page.
- Enever, J. (2011). *ELLie: Early language learning in Europe*. London: British Council.
- Fisher, E. (1992) *Characteristics of children's talk at the computer and its relationship to the computer software*. *Language and Education*, 7,2,187-215.
- Galton, M. And Williamson, J. (1992). *Group Work in the Primary Classroom*. London: Routledge.
- García, M. P., & Alcon Soler, E. (2013). *Negotiated input, output/interaction*. In J. Herschensohn, & M. Young-Scholten (Eds.), *The handbook of second language acquisition* (pp. 209e299). Cambridge: Cambridge University Press.
- García Mayo, M., & Lázaro Ibarrola, A. (2015). *Do children negotiate for meaning in task-based interaction? Evidence from CLIL and EFL settings*. *System*, 54, 40-54. doi: 10.1016/j.system.2014.12.001.
- García Mayo, M. P. & Hidalgo, M. (2017). *L1 use among young EFL mainstream and CLIL learners in task-supported interaction*. (In press). <http://dx.doi.org/10.1016/j.system.2017.05.004>.
- Hidalgo, M. (2019). *Differences in the task-supported negotiations of younger and older EFL children: From repair into prevention*. *International Review of Applied Linguistics In Language Teaching*, 0(0). doi: 10.1515/iral-2018-0206.

- Kerawalla, L., Petrou, M., & Scanlon, E. (2012). *Talk Factory: supporting 'exploratory talk' around an interactive whiteboard in primary school science plenaries*. *Technology, Pedagogy And Education*, 22(1), 89-102. doi: 10.1080/1475939x.2012.745049.
- Lavalle, P., & Brienmaster, M. (2017). *The study of the Use of Picture Descriptions in Enhancing Communication Skills among the 8th-Grade Students—Learners of English as a Foreign Language*. i.e.: inquiry in education: Vol.9. Retrieved from: <https://digitalcommons.nl.edu/ie/vol9/iss1/4>.
- Lázaro Ibarrola A. & Azpilicueta Martinez, R. (2015). *Investigating negotiation of meaning in EFL children with very low levels of proficiency*. *International Journal of English Studies*, 15, 1e21.
- Long, M. H. (1983). *Native speaker/nonnative speaker conversation and the negotiation of comprehensible input*. *Applied Linguistics*, 4, 126e141
- Long, M. H. (1996). *The role of the linguistic environment in second language acquisition*. In W. C. Ritchie, & T. K. Bhatia (Eds.), *Handbook of language acquisition* (vol. 2, pp. 413e468). New York: Academic Press. Second language acquisition.
- Macaro, E. (2005). *Codeswitching in the L2 classroom: A communication and learning strategy*. In E. Llurda (Ed.), *Nonnative language teachers: Perceptions, challenges and contributions to the profession* (pp. 63e84). New York, NY: Springer.
- Muñoz, C. (2007). *Cross-linguistic influence and language switches in L4 oral production*. *VIAL, Vigo International Journal of Applied Linguistics*, 4, 73e94.
- Mercer, N. (1994) *The Quality of Talk in Children's Joint Activity at the Computer*. *Journal of Computer Assisted Learning*, 10, pp. 24–32.
- Mercer, N., Wegerif, R., Dawes, L., Sams, C. And Higgins, S. (2003) *Language, Thinking and ICT in the Primary Curriculum: Final Report of the Research*. London: The Nuffield Foundation.
- Oliver, R. (1998). *Negotiation of meaning in child interactions. The relationship between conversational interaction and second language acquisition*. *The Modern Language Journal*, 83, 372e386.
- Pica, T. (1994). *Research on negotiation: what does it reveal about second language learning conditions, processes, and outcomes?* *Language Learning*, 44, 493e527.
- Pinter, A. (2011). *Children learning second languages*. London: Palgrave Macmillan.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching*. Cambridge: Cambridge University Press.

- Schiffrin, D. (1987). *Discourse markers*. Cambridge: Cambridge University Press.
- Sinclair, J. (1987). *Collins COBUILD, Collins Birmingham University International Language Database: English language dictionary*. London, England: Collins
- Skehan, P. (2001). *A framework for implementation of task-based instruction*. *Applied Linguistics*, 17(1),38-62.
- Storch, N., & Aldosari, A. (2010). *Learners' use of first language (Arabic) in pair work in an EFL class*. *Language Teaching Research*, 14, 355e375.
- Thornbury, S. (2004). *How to teach vocabulary* (1st ed.). New York, NY: Pearson Education Limited.
- Tognini, R., & Oliver, R. (2012). *L1 use in primary and secondary foreign language classrooms and its contribution to learning*. In E. Alcon, & M. P. Safont (Eds. *Discourse and language learning across L2 instructional settings* (pp. 53e78). Amsterdam: Rodopi.
- Vygotsky, L. (1987) '*Thinking and Speech*' in R. W. Riber and A. S. Carton (Eds.) *The Collected Works of L. S. Vygotsky: Volume 1: Problems of General Psychology*. New York: Plenum.
- Webb, P., Whitlow, J., & Venter, D. (2016). *From Exploratory Talk to Abstract Reasoning: a Case for Far Transfer?*. *Educational Psychology Review*, 29(3), 565-581. doi: 10.1007/s10648-016-9369-z.
- Wegerif, R. (1996) *Collaborative Learning and Directive Software*. *Journal of Computer Assisted Learning*, 12, 22–32.
- Wegerif, R. (2010). *Dialogic education and technology*. New York: Springer.
- Wegerif, R. and Dawes, L. (2004). *Developing thinking and learning with ICT*. New York: RoutledgeFalmer.
- Wegerif, R. and Scrimshaw, P. (1997) *Computers and Talk in, the Primary Classroom*. Clevedon: Multilingual Matters.
- Wright, A. (1989). *Pictures for language learning*. New York, NY: Cambridge University Press. 12.

Appendix 1

Part 4 (3 minutes)

Examiner
Say to both
candidates:

Your photographs showed **people doing things at home**. Now I'd like you to talk together about the things **you have to do** at home and the things you **like** doing at home.

*Allow the candidates enough time to complete the task without intervention.
Prompt only if necessary.*

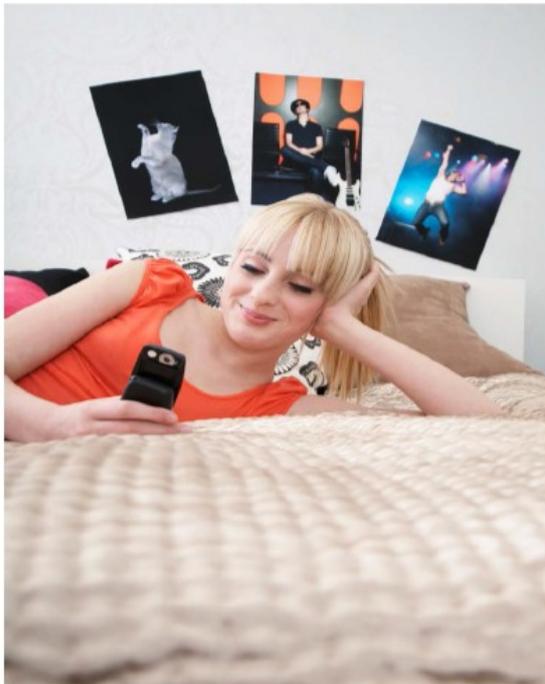
Thank you. That's the end of the test.

Back-up Prompts

1. Talk about the things **you have to do** at home.
2. Talk about the things you **like** doing at home.
3. Talk about **your favourite room** in your home.
4. Talk about **inviting friends** to your home .

PARTS 3 & 4

A



B



Appendix 2:

Your best friend Jon has just told you that he has stolen some money for the Final year school trip. However, his mother is sick and he wants to buy a present for her.



Talk together and decide what you should do.
Then click one of the buttons.

Tell the rest of the class

Do not tell the rest of the class

The rest of the class gets furious with Jon. He explains them his mother's situation and promises to return the money.



Talk together and decide what you should do.
Then click one of the buttons.

Speak with the teacher

Do not speak with the teacher

Jon uses the money to buy a Video Game for his new console.



Talk together and decide what you should do.
Then click one of the buttons.

Speak with the teacher

Speak with Jon's brother

His brother speaks with Jon and forces him to return the money

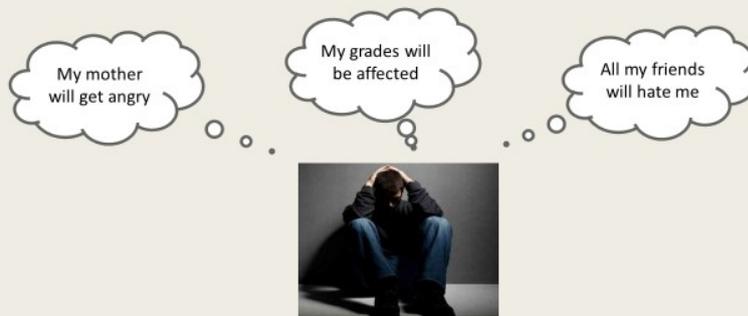


Talk together and decided if you have choose the correct decision
Then click one of the buttons.

YES

NO

The teacher forces Jon to return the money. Jon is Expelled from the school and could not go to the final trip.



Talk together and decided if you have choose the correct decision
Then click one of the buttons.

YES

NO

Take a look to the different opinions



MOTHER: Jon needs to learn the lesson, but the punishment should not affect his grades.



Brother: Jon is going through a rough patch. He needs our help, not to be hardly punished.



TEACHER: Jon needs a hard punishment. It is intolerable to steal money to your friends.



Classmate: Although I am angry with Jon. I think that he should not be punished and should came to the trip.

Talk together about the different opinions and decided the most reasonable option for you
Then click one of the buttons.