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English Studies

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**Students' perceptions of mobile-mediated corrective feedback
and oral messaging in a WhatsApp chat group**

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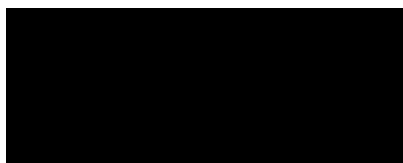
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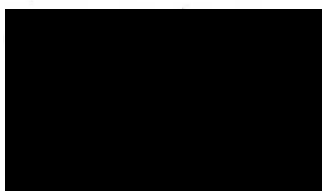
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**Official MA programme in
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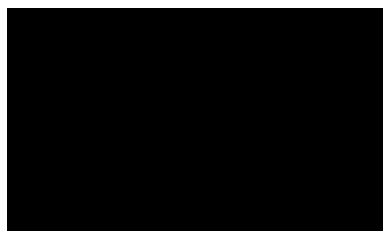
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Abstract

This study has been carried out in response to the scarcity of research dedicated to corrective feedback provision on mobile devices and the tendency for investigators and educators alike to overlook the multi-modal features of mobile instant messaging platforms, such as oral-based messages. The present study, attempts to bridge this gap by examining a class of 17 intermediate EFL learners and their perceptions towards receiving corrective feedback in a WhatsApp chat group (supplemented with a weekly feedback session on Zoom), which ran for the duration of 6 weeks. Screenshots of the chat were analysed to provide a comprehensive overview of interaction and participation with a special focus on oral messages. A semi-structured questionnaire was also administered to glean information regarding students' perceptions of the corrective feedback they received in the two modalities, in addition to their perceptions of oral-based messages. Findings revealed positive attitudes towards receiving corrective feedback in this manner, with a preference towards receiving more explicit corrective feedback. The production of oral messages was scarce, although students highly rated having the opportunity to use this feature.

Keywords: Mobile Assisted Language Learning, Mobile Instant Messaging, WhatsApp, oral messages, (mobile-mediated) corrective feedback, negotiated feedback.

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1. Introduction

As mobile devices have become ubiquitous within our society, SLA and educational researchers alike have become interested in ways in which they may be integrated in various learning contexts. As a result, Mobile-Assisted Language Learning (MALL) (an adjunct of Computer-Assisted Language Learning (CALL)) has become an expanding field of interest. Empirical research has shown MALL to be fruitful for the investigation of SLA constructs such as the way in which learners receive meaningful input and feedback, negotiate and produce amended output (Ziegler & Phung, 2019).

This study focuses on the mobile instant messaging (MIM) application WhatsApp, the world's most popular MIM app (Statista 2020). WhatsApp was described by Kulkuska-Hulme and Viberg (2018) and Mistar and Embi (2016) as an ideal learning tool for extending L2 usage beyond the classroom due to its reported affordances which include: its accessibility, ease of use, potential for interaction and for the instantaneous and permanent nature of messages. In addition to text messaging, WhatsApp also boasts a selection of features which include image-sharing, multi-media sharing and voice-messaging.

WhatsApp's suggested benefits have become all the more appealing in recent times as the global pandemic has given rise to the already growing trend of blended and distance learning. Moreover, many educational facilities, including the one in which this study takes place, have made the transition from in-class to teleconferencing platforms such as Zoom, presenting novel challenges for teachers to maximise interaction (Kohnke and Moorehouse, 2020).

In light of the above, the present study aims to investigate student's production of oral messages (using WhatsApp's voice-message feature), identified as having underutilized potential, in addition to determining students' perceptions of sending oral messages and the barriers which may hinder their production. Secondly, the study aims to examine students' perceptions of feedback in response to errors produced in a WhatsApp chat group, where feedback is provided in the context of WhatsApp-based task performance, in combination with weekly feedback sessions on Zoom.

The section that follows (section 2) provides an overview of the relevant research on the above mentioned topics. In section 3, the study and its methodology are introduced and the research questions are stated. Then, the subsequent findings are discussed in section 4 and ideas for future research and limitations are stated. Lastly the conclusion is provided in section 5.

2. Literature Review

In order to situate the current study in perspective, it is essential to examine the antecedent research and key concepts relating to computer-mediated corrective feedback (CF), MALL and instant messaging (section 2.1) in addition to empirical research on mobile-mediated CF and negotiated feedback (section 2.1.1) and oral messaging (section 2.2).

2.1. Introduction to computer-mediated CF, MALL and instant messaging

Computer-mediated CF can be defined as feedback provided in response to learners' erroneous utterances occurring during CALL interactions. The trend in current literature however appears to focus on the affordances of computer-automated CF e.g. (Penning de Vries, Cucchiarini, Strik & Van Hout, 2020; Lee, 2020), while research which has focused on written or oral computer-mediated CF, in which CF is provided by a human mediator, is insufficient. The existing studies suggest benefits such as its use as a pedagogical tool to facilitate collaborative learning and in the development of productive skills. For example, Yu and Wu (2020) conducted a study in which 7th grade students gave peer computer-mediated feedback to student-generated questions with results suggesting that students who engaged in peer feedback had improved the quality of their question formation in addition to increasing their use of cognitive and metacognitive strategies. AbuSeileek (2013) also reported the effectiveness of written computer-mediated CF (explicit and implicit) in enhancing L2 writing skills as well as a decrease in the amount of CF provision required, which became noticeable in the 4th week of the 8 week study.

One area of computer-mediated CF which has received recent attention is the role of timing. The empirical evidence suggests that synchronous, as opposed to asynchronous, CF may have a beneficial effect on L2 acquisition. For example Arroyo and Yilmaz (2018) conducted a study which investigated the role of immediate CF (provided 40 seconds after the production of an erroneous utterance) vs. delayed CF (provided after task completion) using the Skype chat function. Findings suggested that immediate CF may be advantageous in the development of L2 oral skills. Similarly, Shintani and Aubrey (2016) investigated the effect of timing on grammar acquisition, where synchronous CF was provided during a written task and asynchronous CF was provided post task. It was found that both experimental groups (the synchronous and the asynchronous CF group) had outperformed the control group (no CF) and that synchronous CF was found to be effective in particular at

improving learners' accuracy, with similar results in the delayed post test. Beyond the CALL literature, Li, Zhu and Ellis (2016) reported that although immediate feedback shows some advantages over delayed feedback, it may only serve to develop explicit knowledge.

Recent years have seen the rise in popularity of MIM applications as a means of extending teaching and learning beyond the classroom, with WhatsApp being the application of choice due to its omnipresence. Studies have reported a range of benefits including vocabulary acquisition (Castrillo, Martín-Monje, & Bárcena, 2014), negotiation of meaning (Khan, 2016), its influence on affective factors such as motivation (Haron, Kasuma & Akhilar, 2021) and in promoting confidence and lowering speaking anxiety (Han & Keskin, 2016).

Caetano et al. (2019) report two key advantages of WhatsApp which are the ability to create and participate in chat groups, thus allowing the sharing of multi-modal content between participants and the fact that it may promote more spontaneous and unstructured conversations. In terms of timing, Andujar and Salaberri-Ramiro (2019) refer to the style of communication, which takes place on WhatsApp, as "quasi-synchronous" in that learners may benefit from synchronous communication styles, which may boost interaction and heighten motivation, as well as asynchronous feedback in which learners are afforded additional time in which to respond. The authors further state that asynchronous feedback is advantageous to teachers for the same reason, in that it may give them additional time in which to make the most appropriate choices with regards to feedback provision.

2.1.1 Research on mobile-mediated CF and negotiated feedback

Despite the benefits as stated above, there is a dearth of research dedicated exclusively to CF provision on mobile devices with the exception of Andujar (2020) and Rad (2021). In Andujar's study (2020), students received feedback in a WhatsApp chat group, via a graduated inventory of CF prompts, ranging from most implicit to most explicit, to examine the effectiveness of mobile-mediated CF on L2 development. It was reported that in several instances, students became curious about the nature of their errors, which led them to reflect on their language production and that over time, students required less explicit feedback from the 3.5 month mark of a 5 month study. This move towards needing less explicit feedback was not the case in Rad's study (2021) on L2 writing, possibly due to the shorter duration of the intervention (1 month). Rad's study did however show the effectiveness of mobile-mediated CF provision and highlighted its potential for peer-peer interaction.

An area of importance for research is learners' attitudes towards computer-mediated feedback. The fact that feedback is made publicly has been found to make some students feel uneasy or ashamed (Ko, 2019). However attitudes seem to be largely positive regarding written and audio feedback in improving writing skills (Xu & Yu, 2018; Elola & Oskoz, 2016). From the paucity of research which exists on student perceptions towards receiving mobile-mediated CF, what is known is that it is generally considered a useful and enjoyable tool. Wu and Miller (2020) evaluated mobile-mediated peer CF in improving L2 speaking skills and found that overall it was perceived positively by students and teachers alike. In a study by Murphy (2021) it was reported that although students found feedback provision "useful" and "interesting" there was a preference for feedback which was provided within 24 hours, when the trigger was still "fresh in their minds", as opposed to a weekly "delayed" in-chat mobile-mediated CF component. In the same study, all of the participants were of the opinion that they learned a lot from the feedback provided to their own messages and that the majority found merit in reading CF directed at their classmates as well. Similar to Murphy, Rad (2021) reports on students' favourable views towards the immediacy of the feedback they received through their MIM app group.

Virgils (2019) reported that all participants in her study rated the in-class weekly CF sessions more positively than the tasks they had performed on a WhatsApp chat group (to which they did not receive feedback online). This finding suggests the benefits of a complementary in-class CF component to MALL initiatives.

What's more, one of the reasons why CF via instant messaging has been generally perceived as positive may lie in its capacity for allowing negotiated feedback, a process which occurs during interactions between learners and tutor. Negotiated feedback, even if it can be time consuming for the instructor (as reported in Murphy, 2021), takes students' needs and responses into consideration, which may contribute to its facilitating effects (Nassaji, 2011). Yet, according to Nassaji (2017), the majority of the literature has addressed negotiated feedback provided to learners' oral (as opposed to written) errors. Moreover, the little research that has been conducted on negotiated feedback in response to written errors has been conducted in lab settings, in the traditional classroom, or in the context of oral conferencing (Nassaji, 2017). In lieu of this, the present study intends to contribute to the research on negotiated feedback in the contexts of instant messaging and the virtual classroom.

2.2 Oral-based messages on WhatsApp

The existing literature suggests that engaging in the production of oral messages in MIM platforms can enhance learners' oral proficiency and that student perceptions are generally favourable (Andujar & Cruz-Martinez, 2017; Wu, Hsieh & Yang, 2017; Xu, Dong & Jiang, 2017; Xu & Peng, 2017; Ziegler & Phung, 2019). Much like written messages Xu et al. (2017) highlight the permanent nature of oral messages in that they can be replayed interminably, which they posit could lead to students noticing TL structures. With regards to speaking skills, Andujar & Cruz-Martinez (2017) analysed the voice messages of 80 students who had participated in a WhatsApp group over a six-month period. Positive findings were reported regarding the use of voice messages to generate situations in which LREs occurred, phonetic triggers being the most common. In terms of student perceptions, a study by Wu et al. (2017) was carried out to investigate the effects of participation in a MIM platform on oral proficiency. Participants were placed in chat groups of two and were to upload self recordings. They were encouraged to re-listen to their messages until they found them acceptable, whereupon they would receive oral peer and teacher feedback. They expressed enjoyment at re-listening to their messages and at using those of their partners' for reference. In terms of timing, they liked the fact that that they could "instantly discuss" and get "immediate" support. They further mentioned that the discussions with their partners not only led them to feeling more confident and engaged, but that they also provided a more natural context to learning English, with one student commenting (p.151), "*it's all about communication and interaction.*" The reduction of anxiety is another affective factor mentioned in a study by Shamsi, Altaha, and Gilanlioglu (2019) where students recorded and listened to their own voice messages before posting them to a WhatsApp chat group. Seven of the students (out of a total of 9) felt that their involvement in the study had assisted them in reducing their levels of anxiety when speaking in English. On the other hand, two out of the nine students reported an increase in their anxiety levels.

In spite of the affordances of oral messages in instant messaging, Kulkulska-Hulme & Shield (2008) mention that the multi-modal features of MIM platforms are frequently overshadowed by instructors. Indeed what initially brought oral messages to our focal point was a study by Tragant, Pinyana, Mackay and Andria (2020) (carried out in the same language school as the one in this study). It was found that a task, in which students were

required to submit an oral, as opposed to a written message, had the second lowest participation rate at 25%.

A second focal point for the purpose of this study was Murphy's MA thesis (2021), also involving students at the University of Barcelona, where four out of a total of eleven participants commented in retrospective interviews their predisposition towards producing oral messages if participating again in a similar WhatsApp project (the intervention in that study was restricted to written messages.) This led us to create an intervention in the present study where students were afforded the option of which modality to use (i.e., written or oral messages or even video messages), an option that was not given in previous studies where students were either assigned to a voice or text group, as in Rassaei (2019), or where students were only given the option of producing oral messages, as in (Andujar and Cruz-Martinez, 2017).

3. The Study: Research Questions and Methodology

This study focused on one intact group of EFL learners who received CF provision through two modalities in parallel: WhatsApp and Zoom. The intervention, which lasted 6 weeks and 2 days, meant having students use their existing WhatsApp class group to enhance student agency and to use English rather spontaneously. In order to achieve this, students were invited to post their own prompts from week 2 of the intervention onwards and were told that they could send voice or written messages. Topics were not preselected nor were they restricted to the grammatical or lexical focus of their teacher-led lessons. The two major research questions of the present study are:

RQ1: How successful was the intervention in eliciting oral messages from students?

According to students, what prevented them from sending oral messages more often than they did?

RQ2: What are students' perceptions towards receiving corrective feedback in a WhatsApp chat group and through a supplementary weekly follow-up session on Zoom?

In the sections that follow, the participants are described (section 3.1) and the general structure of the pedagogical intervention is outlined (section 3.2). Next, the instrument is detailed (3.3) and an overview of how the data was managed is presented (3.4).

3.1 Participants

A class of 17 adult EFL students participated in this study. They were enrolled at a private language school associated with a public university in Barcelona, Spain. They were initially enrolled in a 100h face-to-face B2 English class which started on October the 13th 2020 and ran until the May the 27th 2021. Due to Covid restrictions however, the course was transferred to Zoom and as a result, students only participated in one face-to-face class. Classes were conducted twice weekly, on a Tuesday and Thursday evening from 17h-19h.

From here onwards, students will be referred to as S1, S2, S3 etc. for ease of reference and to provide anonymity. All of the students took part in the WhatsApp group intervention, with the exception of S3, who dropped out of the course in week 3. With the exception of a 41 year old student, the remaining participants' ages ranged from 17 to 23. Eight students were female and 9 were male. The majority were university undergraduate students (n=10), 3 were graduate students, 3 were working part-time and 2 were in full-time employment. All of the students were either Spanish or Catalan/Spanish native speakers. One student was Venezuelan and the rest were of Spanish origin.

The student researcher, who shall henceforth be referred to as T2, a Scottish native English speaker and experienced EFL practitioner, was responsible for administering and modelling the conversational prompts in the first week and for providing additional conversational prompts if deemed necessary as well as delivering positive feedback (PF) and CF in response to student messages. The class teacher of the English course (T1) a Spanish/Catalan native speaker, with many years of EFL teaching experience, participated in the group chat sporadically.

3.2 Pedagogical intervention

In this section, the structure of how the pedagogical intervention was initiated is detailed (subsection 3.2.1) followed by a description of how the intervention was set up in week 1 (3.2.2) and in weeks 2-6 (3.2.3). In subsections 3.2.4 and 3.2.5 feedback, as it was provided on WhatsApp and on Zoom, is presented.

3.2.1 Structure and week 0: preparatory step

During week 0, T1 informed the students that they would be taking part in a research project which would involve them participating in a WhatsApp chat group, where they would be responsible for starting conversations (prompts) and replying to messages of other students. Students were blind as to the objectives of the study other than that they would receive feedback from a student researcher and that on the Tuesday zoom session the researcher would join the class to provide feedback on the messages that had been posted on the chat during that week. They were additionally informed that if they sent audio messages, they would receive CF on their pronunciation. Further instructions given by T1 were that controversial topics such as religion and politics should be avoided and that students refrain from using offensive language. No instruction was given on the explicit use of English, however this was widely assumed. Moreover, students were informed that their participation would form part of continuous assessment towards their final grade.

The WhatsApp group had been set up by the students themselves prior to the intervention to discuss course specificities. The main languages of communication in the chat, prior to the intervention, were Spanish and Catalan (to a lesser extent). During week 0, students signed consent forms agreeing to their participation in the project (see Appendix A) and were sent a document providing them with ideas for prompts (Appendix B). They were additionally informed that prompts would be scheduled i.e. the project would require one student to write a prompt every second day and as such, they were sent a calendar (Appendix C), created by T1, informing them the day on which they would be responsible for posting their individual prompts. Furthermore, they were instructed to send their prompts in the morning, if possible, so that the other students would know when they could expect one. Students were also made aware that the T2 would be commenting on a selection of messages per day, but not all of them. In week 0, T1 joined the existing group. T2 joined the group and introduced herself on the Friday of week 0. A table illustrating the weekly schedule of procedures can be found in Appendix D.

3.2.2 Week 1: modelling the task

In week 1, the researcher was responsible for sending a prompt every 2 days (3 prompts in total were sent). This was done so that students would have a model of what would be expected of them when it was their turn to promote conversation in the weeks that

followed. The first two prompts were based on topics taken from the student's textbook. For the third prompt, the researcher posted a personal photograph and invited students to comment on it. Prompt 1 was in written format and contained a YouTube video, prompt 2 featured a video (made by T2) and an oral message and prompt 3 contained a photograph and a written message. These prompts were chosen to show students that the prompts could be related to class topics, but that they were not restricted to them. In addition, text, audio and video messages were used to show students that they were also unrestricted with regards to modality.

The preliminary zoom session in week 1 was used as an opportunity for the students and researcher to become acquainted with each other. It did not involve the provision of CF. The session was also used to address any queries that the students may have with regards to their participation in the study.

3.2.3 Weeks 2-6

The following weeks (2-6) consisted of students posting their prompts to the chat, replying to prompts (and the subsequent messages generated) in addition to receiving and replying to CF issued by T2. Due to dips in participation, 3 additional conversational prompts were issued by the teachers in weeks 2-5. S5 also sent a spontaneous, unscheduled prompt in week 5.

3.2.4 Feedback provision in the WhatsApp group

A combination of CF and PF was provided by T2. In this study CF follows the definition provided by Ellis (2009) in which it is described as the response to a learner's erroneous utterance and can indicate a deviation from a more target like form, provide the correct form and give metalinguistic details surrounding the nature of an error. PF, as it is referred to in this study, refers to the reactions of T2 when a student repaired correctly within a feedback episode and often took the form of words of affirmation or clapping/ smiley emojis. Feedback was issued daily by T2, within 24 hours of when a student had sent a message. No more than one message was selected per student per day, although sometimes a message contained more than one error. Error selection criteria consisted of: non-target like structures in a student's utterances and included errors causing a breakdown in understanding,

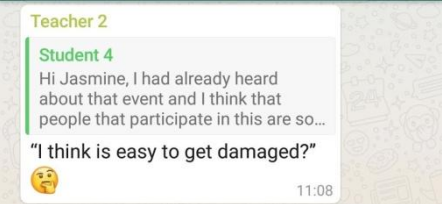
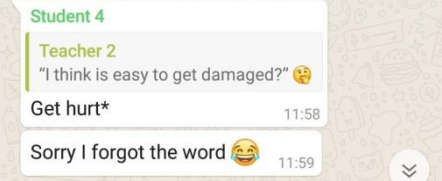
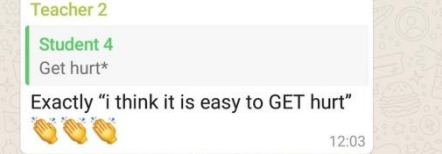
recurrent errors typical of first language (L1) Spanish or (L1) Catalan students and language inappropriate for a B2 level of English.

In parallel to feedback provision, T2 also commented on the content of student messages, which could involve turns of multiple messages between students and T2. All in all, T2 spent between 20-30 minutes per day issuing feedback and replying to the content of students' messages, which was not restricted to a specific time of day.

3.2.4.1 Initial feedback provision

Initially (from days 1-20) feedback was provided by placing a thinking emoji at the end of an utterance without making the student aware of where their error lay, referred to as output-prompting CF (Loewen and Sato 2018) (see Excerpt 1, message 71). If the student successfully self-repaired, PF was provided by T2 (see Excerpt 1, message 84).

Excerpt 1: Example of successful self-repair

Message number	Chat Screenshot	Message type
71		T2: CF prompt
80-81		S4's successful repair
84		T2: PF and reiteration of correct form

When the student unsuccessfully repaired (see Excerpt 2, message 86) PF was provided as well as a reformulation of their erroneous utterance (see message 94). This procedure is in keeping with the "hybrid corrective package" by Li et al. (2016) in which a

prompt is issued, encouraging the learner to self-repair, followed by a reformulation, if the learner fails to self-repair.

Excerpt 2: Example of unsuccessful self-repair


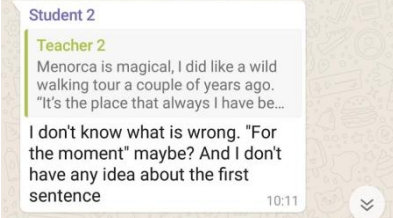
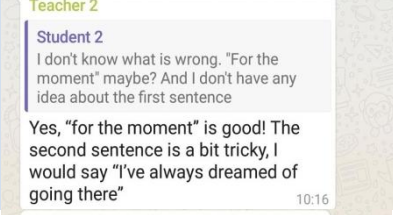
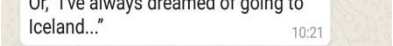
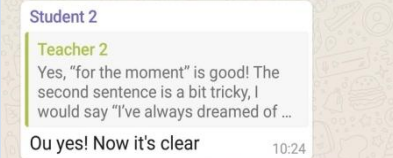
Message number	Chat Screenshot	Message type
74		T2: CF prompt
86		S12's unsuccessful repair
94		T2: PF and reformulation

3.2.4.2 Later feedback provision

It was noticed that the rate of students' responses to CF had dropped from 69% in week 1 to 47% in week 2. In addition, two separate requests from S2 (on day 9 and day 18) and S5 (on day 23) were made for T2 to provide a more explicit hint (see Excerpt 3, message 262). Taking students' requests onboard, more explicit feedback appeared on the chat from day 18. However, a resolute decision was made that from day 24 onwards, feedback would be made more explicit than it had been prior to then. Although a thinking emoji often remained present at the end of the utterance, the erroneous part was either highlighted in bold, or students were given options from which to choose.

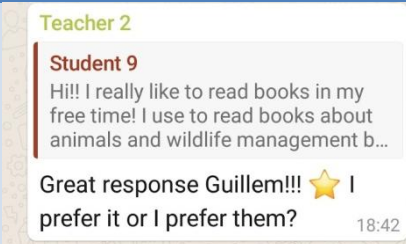
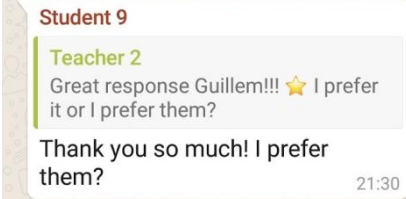
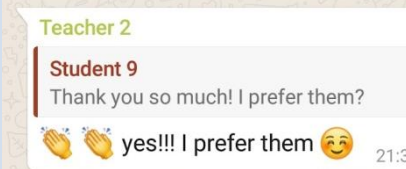
In Excerpt 3, which occurred on day 18, the researcher repeats S2's erroneous utterances (elicitation), to which the student successfully self-repairs the second and states that she has "no idea" how to repair the first. In response, the researcher provides PF and provides two more target-like forms by reformulating S2's erroneous utterance (see messages 263-264).

Excerpt 3: Student request for a more explicit hint

Message number	Chat Screenshot	Message type
250	 <p>Teacher 2 Student 2 Hi good moorning! It may sound weird but I haven't consider that question yet. My needs now are only see my gran... Menorca is magical, I did like a wild walking tour a couple of years ago. "It's the place that always I have been dreaming to go" 😕 "by the moment"</p>	T2: CF prompt
262	 <p>Student 2 Teacher 2 Menorca is magical, I did like a wild walking tour a couple of years ago. "It's the place that always I have be... I don't know what is wrong. "For the moment" maybe? And I don't have any idea about the first sentence</p>	S2: successful repair and request for clue
263	 <p>Teacher 2 Student 2 I don't know what is wrong. "For the moment" maybe? And I don't have any idea about the first sentence Yes, "for the moment" is good! The second sentence is a bit tricky, I would say "I've always dreamed of going there"</p>	T2: PF and reformulation
264	 <p>Or, "I've always dreamed of going to Iceland..."</p>	
266	 <p>Student 2 Teacher 2 Yes, "for the moment" is good! The second sentence is a bit tricky, I would say "I've always dreamed of ... Ou yes! Now it's clear</p>	S2: acknowledgement of feedback.

In response to S9's erroneous utterance (which occurred on day 28 and can be found in Excerpt 4), the researcher provided PF in addition to providing him a choice between a more target-like form and his original erroneous utterance. In response, the student chose the correct option, thus successfully repairing.

Excerpt 4: Later feedback: successful repair

Message number	Chat Screenshot	Message type
410		T2: PF and CF prompt
413		S9: successful repair
414		T2: PF and reiteration of correct form

Excerpt 5 (day 43) illustrates later feedback provision to an unsuccessful repair. In this excerpt, the researcher has provided PF and has indicated the wrong word by highlighting it in bold and providing the target-like form from which to choose (see message 562). In response, the student has produced an emoji with a bead of sweat running down its face, which likely indicates nervousness or uncertainty. In this case, T2 has deemed the most appropriate response to be an explicit metalinguistic comment. Message 563 has been classified as an unsuccessful repair, because even though the student did not technically attempt to repair, he did respond indicating his uncertainty.

Excerpt 5: Later feedback: unsuccessful repair

Message number	Chat Screenshot	Message type
561-563	<p>Teacher 2 Student 1 Hey Mia, I love astronomy and cosmology. I think it's the science which wants to answer the biggest ... Great writing Toni and good impressive questions. One thing however: 21:49</p> <p>Teacher 2 Student 1 Hey Mia, I love astronomy and cosmology. I think it's the science which wants to answer the biggest question f... live or life? 21:50</p> <p>Student 1 Teacher 2 live or life? 😂 21:56</p>	<p>T2: PF</p> <p>T2: CF prompt</p> <p>S1: unsuccessful repair</p>
564	<p>Teacher 2 Student 1 😂 Haha no worries, To live: is the verb/ vivir Life: the noun/vida 😊 22:02</p>	<p>T2: metalinguistic comment and PF</p>

3.2.5 Feedback on Zoom

In order to give feedback on Zoom, T2 led all Tuesday evening Zoom sessions, for the duration of the intervention, with the exception of week one which lasted only 22 minutes as it was an introductory activity and lacked the feedback provision element. In week 4, at T1's request, the researcher participated in a conversational activity and as such was present for one hour.

At the beginning of every Tuesday session, 30-40 minutes were devoted to reviewing a selection of student messages which had been posted on the group chat over the previous 7 days. These sessions, which were recorded, were primarily led by T2, however T1 did contribute where and when appropriate. (See Figure 1 for a summary of how the feedback sessions in Zoom were structured). Around 10 minutes of this time served as a warmer activity and was dedicated to welcoming students to the class, commenting on the content of messages, praising them for their contributions and on occasion encouraging them to use oral

messages. Students were then presented with a selection of 6-8 erroneous utterances, in the chat box, similar to those which had appeared on the chat during the previous week, which they would work on in groups (of three to four) for 10 minutes in break-out rooms in order to repair. (See Appendix E for a table containing the sentences which appeared in the chat box for correction). This is in keeping with Scriviner's (2005, as cited in Li et al., 2016) correction technique "discuss the error" whereby the teacher writes a sentence including an erroneous utterance on the board for consideration. Utterances were changed for student anonymity and to verify that learning had indeed taken place. During feedback sessions, errors that were chosen included those which were recurrent in the chat and those which students had failed to repair correctly or had not attempted to repair. However in feedback sessions 1, 2 and 3 no indication of where the errors lay was provided. From feedback session 4 onwards a combination of sentences were presented to students, some in which the error had been made explicit (see sentences 2 and 3 in Figure 2) and others in which it had not (see sentence 1 in Figure 2). This was in keeping the transition from a more implicit to a more explicit feedback style in the chat.

Figure 1: Procedures for Zoom weekly feedback sessions

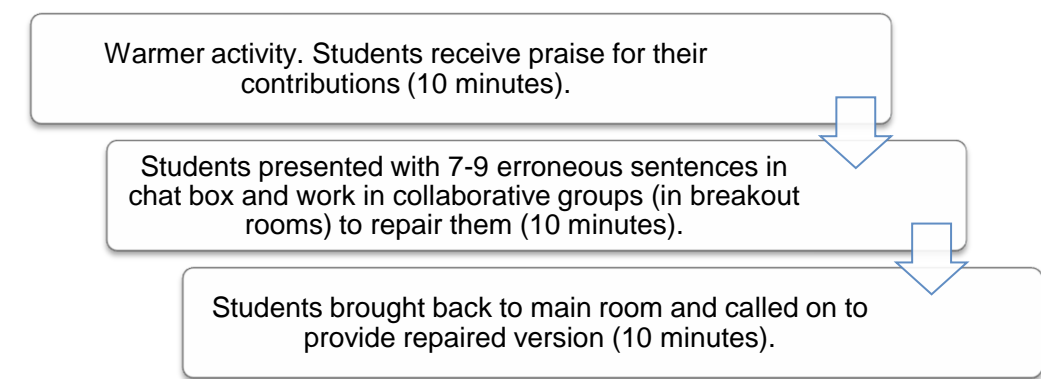
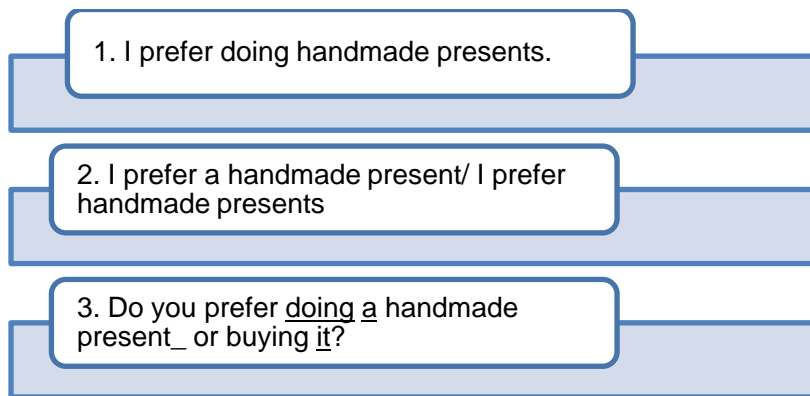


Figure 2: Example of erroneous sentences presented to students during Zoom session 5



After 10 minutes, students were brought back to the main room and called on at random to provide their repaired version. For clarity, T2 often provided additional examples for students to attempt on the spot and gave brief metalinguistic explanations. This section lasted roughly 10 minutes. Only in session 5 did the researcher join students in the breakout rooms.

3.3 The questionnaire

In order to glean data and information relating to student's perceptions, a questionnaire was designed using Google Forms. Students consented for their responses to be used for research purposes prior to submission. The questionnaire was administered by T1 (during the Thursday evening Zoom session in week 5) and was completed by 15 out of the 17 students who were part of the WhatsApp group. It consisted of 61 items: 27 7-point likert scale items, 14 multiple choice items, 9 short answer items (of which 8 related to participants' biodata), 3 dichotomous items and 8 long answer items. The questionnaire was organised into 6 sections which covered 9 themes (see Table 1). In addition, due to an oversight, there was no item 29. Several items were adapted from Andujar & Salaberri-Ramiro (2019), Virgils (2019) and Murphy (2021). The questionnaire was conducted in English and revised by a second researcher. It can be viewed in Appendix F.

Table 1: Breakdown of questionnaire item numbers and themes

Item number	Themes
1-4, 12	1. Students' general perceptions of the project
5-7, 9, 21	2. Students' general perceptions of the WhatsApp chat group
13,15	3. Students' use of WhatsApp and chat group prior to the intervention
8, 23-26	4. Student perceptions of oral messages
16-18, 22	5. Students' reported behaviour in the WhatsApp group
19-20	6. Student perceptions of learning and reported attention to form
10, 27-28, 30-42	7. Student perceptions of feedback in the WhatsApp group
11, 43-51	8. Student perceptions in Zoom based weekly follow up sessions
52-62	9. Participant background information

3.4 Data management

In order to process the data, screenshots of the chat were first uploaded to PowerPoint presentations which were divided by week. Following that, individual screenshots were exported to a series of Word documents that were grouped according to the prompt which had generated them. An example of S5 prompt 5, which highlights this procedure, can be viewed in Appendix G.

4. Results

In this section, a general overview of the results is presented followed by a description of oral messages in subsection 4.1.1. Next, students' perceptions of oral messages are examined in subsection 4.1.2. Following that, students' general perceptions towards receiving CF are described at the beginning of section 4.2 as well as their perceptions towards receiving CF via the Whatsapp modality (4.2.1) and on Zoom (4.2.2).

During the 50-day period that the intervention lasted, a total of 626 messages were generated in response to 27 prompts with a mean of 12.5 messages per day. Students produced 335 messages, T2 produced a considerable number (n=271) and T1 produced much

fewer messages (n=20). In addition, the majority of messages were sent during the week, with less activity (13%) on weekends.

Twenty-one conversational prompts were sent in total, which generated 594 messages. The majority of these prompts, (n=15) were issued by students, of which 14 were scheduled and 1 was unscheduled (i.e. not dictated by the calendar). Five prompts were issued by T2 and 2 were issued by T1. Of the messages which these prompts generated, the majority were sent by students (n=312). However, a sizeable number (n=266) were sent by T2. T1 participated to a much lesser extent with 16 messages. See Appendix H, a table illustrating student participation by conversational prompt and the total number of messages by prompt).

Students sent an average of 18 conversational messages each with participation differing greatly from student to student as can be gathered from Appendix H. For example S2 produced 49 messages whereas S15 and S17 produced only 2 messages. The total number of messages by prompt also fluctuated over time, ranging from 1 to 65 messages, with more messages generated towards the beginning of the intervention. For example, the prompt which elicited the most responses (n=65) was T2 prompt 1, issued in week 1 whereas the prompt which elicited the least responses (n=1) was issued in week 4 (T2 prompt 5).

There were also prompts related to class content (e.g. requesting the zoom-link to enter the class) and to the intervention itself (e.g. requesting access to the calendar of student prompts) (see Appendix I for message types by participation). There were 6 of these prompts in total and they generated 32 messages. With the exception of 1 prompt on the subject of the questionnaire issued by T2, they were all student generated (n=5).

In terms of students' general perceptions towards the project, 12 out of 15 students felt happy about conversations not being focused on class content, when T2 started conversations spontaneously, T2's responses to the content of their messages and the fact that they could exchange opinions and personal experiences. Additionally 12 students would not have preferred conversations to have been less general and more focussed on class content.

4.1 Oral-based messages

In terms of modality, written messages were the most frequent with a total of 560 written messages sent. Oral messages were infrequent (both those produced by students and teachers) but rather long in the case of students: The majority of student oral messages were approaching or over 1 minute in duration. The duration of teachers' oral messages were

shorter in duration ranging from 0:06 seconds to 0:57 seconds. (See Appendix J for a table depicting the length of oral messages generated by students and teachers.) Other modalities (messages including only emojis, one or more photos or a video) were extremely infrequent (see Table 2).

Table 2: Messages generated by modality*

Modality	Students	T2	T1	Total number of messages
written	306	238	16	560
emojis	11	7	2	20
photo	9	8	1	18
oral	5	8	1	14
video	4	7	0	11
total	335	271	20	626

*Attachments (i.e. linked content containing neither a student nor teacher generated message) of which there were 13 messages have been re-classified into the above modalities.

4.1.1. Chronological description of oral messages

During week 1 of the intervention, one of the three conversational prompts issued by the researcher was oral, (a video with audio): This was done in an attempt to encourage students to respond orally. This prompt generated written responses from 11 students, yet failed to elicit any oral messages. The lack of oral messages generated in week 1 was commented on by T1 and T2 on day 8 of the intervention, during the first zoom feedback session, where students were encouraged to send oral messages in the forthcoming weeks. Students were informed by T1 that in doing so, T2, a native English speaker, could provide them with feedback on their pronunciation.

In weeks 2-6, it was the responsibility of the students to initiate oral or written prompts and they could also choose the modality of their response. The first oral message sent by a student was produced in response to conversational prompt 1 issued by S17, towards the beginning of the intervention, on day 9 (see Excerpt 6, messages 199-200) and it was probably triggered by an oral message that T1 had sent just beforehand (see message 201). The student message (215) was fairly long (at 78 words and 1:04 minutes) and did not go unnoticed as it triggered some joking among students and T1 (see messages 216, 217 and 220) and an encouraging comment from T2 (see message 239).

Excerpt 6: S5 sends the first oral message

Message number	Screenshot	Transcript
199-200		
201		<p><i>“I would love to go hiking in the mountains or travel to an exotic destination like to...I dunno, French Polynesia or to the Maldives, for example.”</i></p>
215		<p><i>“Uhm, I would like to go to Ireland, if I could for a year, better, to be able to work and improve my English and I would like to, em, enjoy, em, all of the experience and can, hmm, go to the party and can drink some beer with people who meet there. Emm, but now, I couldn’t, em, when all of this situation em, pass, em, I hope... hopefully can go to Ireland or some country when the people speak only English and that’s all.”</i></p>
216		
217		
220		

239

Teacher 2

Student 5
 ↓ Voice message (1:04)

Really well done for sending this message, it was great!!! Living in Ireland and speaking with native speakers would be a great way to improve your English!

16:28

241

Student 5
 ↓ Voice message (1:04)

Teacher 2

0:12 16:30

“So well done for sending this message, it was great! Em, one little thing, eh, the country is pronounced more like AYER-LAND, AYER-LAND.”

242

Teacher 2

Teacher 2
 ↓ Voice message (0:12)

Like “Higher” (without the H) > igher
 land > Ireland

16:31

In spite of the T1 and T2’s attempts to promote oral messages during the weekly Zoom-based feedback sessions, no further oral messages were sent, by either students or teachers, until prompt 8, sent by S9, on day 23. This prompt consisted of multiple messages: two oral messages (of 96 and 36 words respectively which lasted 0:38 and 0:12 seconds), a written message and a video (without audio). S9 prompt 8 generated participation from 3 students (S1, S4 and S16) and a total of 11 messages, two of which were also oral (which contained 132 and 110 words respectively and lasted 0:57 and 1:03 minutes). Similar to Excerpt 6, T1 acknowledged the use of orality in the form of two hand-clapping emojis and a student (S1) sent a humorous compliment: *“Your spoken English is perfect! Are you sure you need B2 English classes?”* With the addition of a smiley emoji. (See Appendix K for a reproduction of this episode). These oral messages were further highlighted during the subsequent weekly feedback session where T2 praised students who had made oral contributions in their exchanges to S9 prompt 8. No further oral messages were produced in prompts 9-14 however.

To summarise, very few oral messages were produced by students during the intervention (a total of 5 oral messages in contrast to 300 written messages). However, when

they were produced, the messages tended to be quite long. Additionally to highlight their infrequency, the oral modality of these messages was reacted to with humour and compliments by the teachers and some students.

4.1.2. Students' perceptions of oral messages

All but one student, (S13), reported appreciating having been given the opportunity to use the oral modality in the WhatsApp group. In the case of S13, although she rated her experience in the project highly, she also described herself as shy person who did not like sending messages on WhatsApp or having her errors corrected publicly. Unsurprisingly, she did not regret not having sent more oral messages. Likewise, 7 students also mentioned lacking confidence or feeling ashamed in their oral skills as their reason for not sending more messages of this kind. For example, S9 commented that he felt shy and uncomfortable as he didn't know his classmates very well (note that students had only met physically one time before Covid restrictions resulted in classes being transferred online). In contrast, 8 students regretted not having used the function to a greater extent. The fact that 8 participants reported having a preference for receiving written messages may provide an answer to this apparent discrepancy. Moreover, S12 commented that as well as having a preference for sending written messages, he found it strange to send oral messages.

Indeed, the fact that the majority of messages were written is unlikely to have incentivised the sending of more oral messages. As S10 explained: *"I think because of like 80% of the messages were written."* Similarly S11 stated: *"I guess because I was embarrassed or because almost no one sent them and that was more difficult."*

Furthermore, S16 commented that it's simply easier to write a message than to send an oral one and in the same vein, S2 stated: *"Because sometimes while I speak I have to think that I want to say before."* This could indicate that oral messages were viewed as a more arduous endeavour than written messages by some students. Additionally, S1 commented that it was not easy to reply orally due to the fact that he was at work during the day, when the majority of messages would have been sent.

4.2 Student perceptions towards CF

In total, there were 71 CF episodes generated (with some messages containing a mixture of error types): 51 were related to grammar, 24 were related to vocabulary and 1 was related to pronunciation.

There were 24 feedback episodes in which students successfully self-repaired, 6 where they partially-repaired, 5 instances in which students unsuccessfully self-repaired and 36 instances of unattempted repairs (i.e. the CF prompt went unanswered). (See Table 3 for the breakdown of percentages of CF responses generated by prompts and a comparison of the first and second part of the intervention.)

Table 3: CF responses generated by CF prompts (in percentages)

CF prompts	Day 1-23	Day 24-50	Overall
% of overall attempted repairs	55.56%	45.55%	49.30%
(Successful)			(33.8%)
(Partially successful)			(8-45%)
(Unsuccessful)			(7.04%)
% of unattempted repairs	44.44%	54.55%	50.70%

4.2.1 Students perceptions towards CF in the WhatsApp modality

In general, CF provision in the WhatsApp group was rated positively or very positively as can be gathered from items 19, 27-28, 30-32 and 41 of the questionnaire. Further supporting evidence comes from item 2 of the questionnaire, which asked students what they liked most about the project. S4 commented that he liked: *“The very positive feedback received in terms of errors related with grammar and use of words in English”*. Two students commented on the attitude of the T2, in that she gave feedback in a light-hearted and palatable manner which S11 claims improved her confidence when speaking English: *“I like the fact that she was so nice when she corrected our mistakes and I didn't feel bad, it helped me to be a bit more confident when I have to talk in English.”* S5 expressed a similar opinion, *“Jasmine's attitude towards us, it has helped us a lot. She always answered us super well and gave us the opportunity to see our mistakes in a very funny way.”* In

addition, many students (n=12) indicated that they felt that their participation in the WhatsApp group had improved their English to some extent (see Table 4 item 19).

In terms of students' perceptions of the CF which they received on the chat, the majority of students (n=14) perceived the amount of feedback they received as adequate and the majority of students (n=11) indicated that they enjoyed receiving a mixture of CF in addition to more conversational responses to the content of their messages.

Thirteen students agreed that they learned a lot from the feedback provided to their own messages and 13 students also agreed that they learned a lot from the feedback provided to their peers, which is in keeping with Murphy (2021) (see Table 4 items 27 and 28). This was additionally reported by S7 and S17, who only sent between 2 and 3 messages respectively. This finding may illustrate that even if students are more passive and do not contribute as actively as other members, they may still find value in participating in such projects. Similarly, when asked what they paid the most attention to in terms of English when reading T2's and other students' comments, S6 expressed that she did not pay attention to the errors of others and only to her own. On the contrary, S11 expressed that paying attention to the mistakes of others was useful in that she could find errors in the work of others more easily than she could in her own and subsequently identify what the correct form should be.

The majority of students (n=11) indicated that they enjoyed receiving a mixture of feedback which included CF as well as feedback which was more conversational in nature i.e. feedback that responded to the content of their message. Two students stated that they preferred CF to conversational feedback and 2 students reported that they preferred receiving conversational as opposed to CF.

Out of the 71 CF episodes generated, the majority of erroneous student utterances were grammar related (n=51) as opposed to 24 for vocabulary, which may be as a consequence of the error selection criteria. Eleven students agreed that they had learned new grammar from the feedback they received. (See Table 4 items 30 and 31). Thirteen students also indicated that the CF they received had been useful for reviewing certain grammatical concepts i.e. the use of prepositions, (see Table 4 item 32). For example, S9 commented that he paid most attention to prepositions because it is something that he finds difficult. Similarly S10 and S13 commented that they paid most attention to conjugations and to verb tenses respectively.

In terms of vocabulary, 12 students commented that they learned new vocabulary from the feedback which they received (although in fairness, students may not have made a distinction between the vocabulary they learned from responses made to the content of their

messages and the CF provision the received). S17 commented that what he liked most about the project was that he could learn colloquial language. Similarly, 4 students mentioned that they paid the most attention to expressions that they would not have known otherwise, e.g. *"not my cup of tea."*

In terms of the amount of feedback which students received, 14 students indicated that the amount they received was just right and 1 student commented that the feedback was too little. No student indicated that the amount of feedback they had received had been insufficient.

With regards to the affective reaction to CF, only 2 students felt somewhat uncomfortable, while the majority (n=12) did not feel uncomfortable by any means. (See Table 4 item 41.)

It may also be worthwhile mentioning that S15 was the only student who stated that she would not continue with the project if she was given the opportunity to do so. Although rating her general experience and the overall CF provision she received on WhatsApp positively, she was also the only student who consistently gave a negative rating to items which dealt with receiving feedback on WhatsApp (see Table 4, items 19, 27 and 30-35). S15 was also the only student who would have liked the topics of conversation to be less general and more focussed on class content. In addition, S15 felt that participating in the chat had not helped her to improve her English, (S7 was undecided). In terms of participation, S7 contributed 3 messages and S15 contributed just 2 messages to the chat, of which the majority were scheduled (i.e. when it was their turn to post a prompt as per the calendar of prompts). S7's reasons for his lack of contribution were that he felt obligated to send messages every day and that he hardly ever uses WhatsApp. In the case of S15, she commented that she only sometimes read the comments and messages posted in the group. It appears therefore that the students who felt that their English improved as a result of their participation were also the ones who engaged the most regularly with the chat.

Table 4: Student responses to questionnaire

Questionnaire item number	title	negative		neutral	positive	
		1-2	3	4	5	6-7
19	My participation helped me improve my English	0	1*	1	3	9
27	I learned a lot from the feedback provided to my own messages	0	1*	1	0	13
28	I learned a lot from the feedback provided to others	0	1	1	5	8
30	I learned new vocabulary from the feedback I received	1*	1	1	3	9
31	I learned new grammar from the feedback I received	1*	1	1	3	8
32	Feedback was useful for reviewing grammar	1	1*	1	2	11
41	I felt uncomfortable having my errors corrected	12	0	1	1	1

*Negative ratings by S15

Students were additionally asked which type of feedback they preferred receiving, since T2 had used prompts that differed in their degree of implicitness/ explicitness over the course of the intervention. Nine participants indicated that they preferred receiving explicit feedback and 6 students indicated that they had no preference. No one had a preference for implicit feedback however. With regards to receiving explicit CF, S14, commented that it had been his favourite aspect of the project: *“I liked when she gave 3 or 4 options and we had to answer with the correct one.”* Similarly, S4 described feedback in which he had to locate and correct the answer as being *“a bit tough”* and as such, his least favourite aspect of the project. Others however viewed receiving implicit feedback as a challenging, but worthwhile endeavour. As S9 commented: *“What I liked least was when we had to find the incorrect thing in some sentences, but just because I found it difficult, on the other hand I learned a lot doing this type of exercise!”*

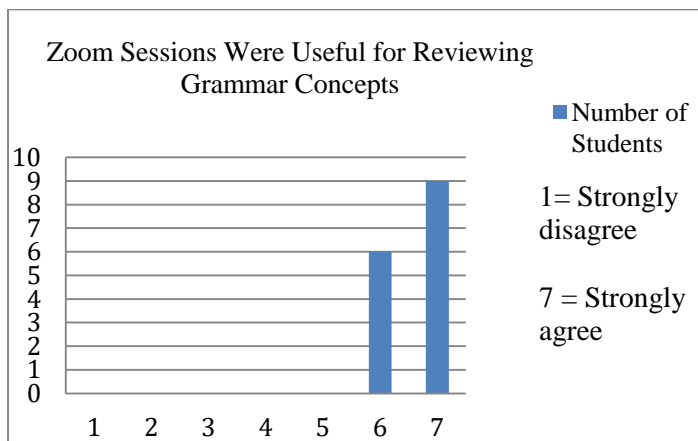
In relation to how students responded to CF, 11 students claimed that they always responded whereas 4 students stated that they didn't always respond. The reasons which they provided included reading comments many hours after they were sent and consequently

feeling too embarrassed to reply, because they simply forgot and not liking being on their phone all day. Further reasons students provided for not always responding to feedback included finding it difficult to keep up to date with messages due to overlapping conversations (S12), that scrolling through and reading all of the messages was tedious at times (S5) and that it didn't always seem necessary to respond (S6).

4.2.2 Student perceptions towards Zoom-based follow up feedback sessions

Zoom feedback sessions were found to be extremely useful for reviewing certain grammatical concepts i.e. the use of prepositions (see Table 5). S7 commented that his favourite thing during the project was when the researcher joined the Zoom sessions to talk about the errors that had appeared over the last seven days. Similarly, S5 commented that she enjoyed the way in which the Zoom sessions had been carried out: *"I have found it very good, she has given use the opportunity to talk about it with the group and with her."*

Table 5: Usefulness of Zoom sessions (item 43 of the questionnaire)



The vast majority of students (n=13) indicated that the typical 6-8 sentences they were asked to amend during class time had been a sufficient number and 12 students also reported the length of sessions (which lasted around 20-30 minutes) as being an adequate amount of time. The majority of students (n=12) also indicated that the ten minutes in which they were allocated to the break-out rooms had also been sufficient. No one reported that the duration of the sessions or the time spent working in the break-out rooms had lasted too long. In addition, the majority of students (n=13) felt that they had had enough time to speak and ask questions during the sessions. However, S6 commented that she would have liked for the sessions to

have lasted longer and for there to have been additional examples to practice. Likewise, S17 would have liked more time to have been dedicated to the feedback sessions with the provision of additional examples.

In terms of how Zoom sessions may be improved, S1 commented that quieter students could have been given more opportunities to participate, S9 mentioned giving hints as he found the task of identifying errors difficult if the location of the error had not been made overt, which is true more so of sessions 1-3: *“When correcting the sentences that Jasmine selected, I would give clues to correct the answer, because sometimes it was kind of stressing to be stuck in some sentences that you didn't realise where the error was.”* S4 and S10 further mentioned wishing that the sessions could have been more dynamic through the provision of games or quizzes. Finally, S7 commented that he would have liked the researcher to join the breakout rooms more often, as this was only done in session 5.

In summary, although students only responded to roughly half of the feedback they received, they reacted positively to receiving CF on both WhatsApp and Zoom modalities. Regarding CF provision on WhatsApp, the majority of students felt that their English had improved as a result of the project in terms of learning new vocabulary and reviewing certain grammar concepts. Additionally, they felt that they had learned a lot from feedback provided to their own messages and that of others. Furthermore, they appeared to have a preference for receiving explicit CF.

Regarding CF provision on Zoom, students also found it useful for reviewing grammar concepts and the majority found the number of exercises and the length of the task itself sufficient. Some students did mention however that they would have liked more time to have been allocated to feedback provision and for further (productive) exercises to have been provided and for T2 to have joined the breakout rooms more regularly.

5. Discussion

One of the two major objectives of the present study was to gain an understanding of EFL students' production and perceptions of sending oral messages in a WhatsApp chat group. The other objective was to determine students' perceptions of receiving individualised CF complemented with a weekly whole-class feedback component.

5.1: Discussion of research question 1 on oral messages.

With regards to RQ1, students liked having the opportunity to send oral messages and over half of participants regretted not having sent more messages of this type. The oral messages that were produced tended to be consecutive. Perhaps students felt more comfortable when the preceding messages had been oral or seeing the oral messages of others may have reminded them that the voice message function was indeed an option. It may also be of interest to note that the oral messages produced by students tended to involve students talking at length about their own personal lives and experiences. This may translate to a preference for sending oral messages when the message is perceived as being "too long" to type.

However, students' oral message production was extremely scarce, and when they did send oral messages they were usually met with humour and/ or compliments. This paucity may in part be attributed to the teachers themselves making scarce use of them, thus establishing written messages as the "default" modality. Further intensifying written messages as the default modality may lie in the instructions students received prior to starting the intervention where no examples were given of oral prompts or oral responses.

Equally, the fact that there is a general tendency among WhatsApp users to send written as opposed to oral messages may further explain the lack of oral messages e.g. in Enge's (2020) survey, only 5% of users preferred the latter. One teaching implication could be therefore that to truly promote the production of oral messages, a MIM application with an emphasis on voice messaging, such as Voxer, may be a better option.

In terms of further pedagogical implications, if the group in question is being taught exclusively online, lesson content is exam focussed and the group is large; 6 weeks may be an insufficient amount of time for students to gain the level of confidence with each other and/ or in themselves to send oral messages of their own initiative. In order to boost confidence, the use of collaborative tasks as in Xu et al. (2017) and Wu et al. (2017) in which students can record interactive conversations as opposed to monologues may be more appropriate to promote oral messages.

5.2: Discussion of research question 2 on CF

With regards to RQ2, the majority of students highly rated the CF provision they received both on WhatsApp and on Zoom. They liked the way in which the feedback had

been delivered and felt that their participation had been a worthwhile endeavour in terms of supplementing and reinforcing their English knowledge.

The choice to respond to the content of student messages as opposed to only issuing CF was made in a bid to maximize participation, lessen anxiety and to keep the atmosphere on the chat as similar as possible to the classroom. The drawback to this however was that replying to the content of messages and providing CF simultaneously, not to mention the high volume of messages produced and T2 replying to messages (which would have been produced earlier in the day) late at night may have resulted in decreased saliency of the CF and may have contributed to some CF going unanswered and/or unnoticed. Although not examined in this study, an investigation into how students responded to earlier vs. later feedback provision (within 24 hour of a student sending a message) may have shed some light on this.

One reason for students not responding to initial CF (days 1-23) may have been due to its implicit nature, in that students were neither made aware of where their errors lay nor how many errors their utterance contained. In contrast, feedback given by Murphy (2021) may have been easier for students to assimilate as, throughout the duration of her intervention, a thinking emoji was placed adjacently to students' errors, making them aware of both the location of their errors and the number of errors that their utterances contained. This may explain why in Murphy's study 81.63% of feedback was responded to; whereas in the present study, only 49.30% of feedback was responded to.

Although the transition to more explicit CF provision was carried out at the request of learners and in response to a dip in participation, it did not appear to serve its intended purpose of increasing participation. Considering that in days 1-23, CF provision received a 55.56% response rate compared to days 24-50 where it received only a 45.45% response rate. In saying this however, it is difficult to draw conclusions as to why the response rates were generally low and why there was a decrease in response rates from part 1 to part 2 of the intervention. As students' positive perceptions of the project seem not to reflect these low response rates, there may have been other factors at play: such as the novelty factor wearing off and/or students turning their attention to other areas such as their university exams.

The duration of the intervention may have also been a factor which contributed to student's preferences for receiving explicit CF. Had the study been longer, a transition towards students requiring less explicit feedback i.e. Andujar (2020) or less CF in general i.e. AbuSeileek (2013) may have been observed. For future research, in addition to investigating

the prolonged use of WhatsApp and its effects on participation over time, (Tragant et al., 2020) it may also be of interest to see if and how CF provision transitions over time.

Our data seems to indicate that some students also saw value in implicit feedback, although the majority of students appeared to prefer more explicit feedback, possibly due to its face saving nature and the fact that being able to correct themselves evoked a sense of success. This finding appears to be in keeping with previous research on student preferences regarding written CF in which implicit feedback has been found to be useful, and in some cases preferred (Westmacott, 2016); however, in general students seem to prefer receiving explicit CF (Amrhein & Nassaji, 2010; Ferris & Roberts, 2001; Irwin 2017). Student preferences appear to clash with instructors however, who are claimed to prefer implicit feedback as it is thought to be conducive to long-term learning in comparison to explicit feedback, which is thought to be less cognitively demanding and therefore not as likely to result in acquisition (Ellis, 2009).

Similar to the WhatsApp chat group, Zoom sessions in this study were highly rated and were found especially useful for reviewing grammar concepts that had caused difficulties on the chat throughout the week. This suggests the value of having a supplementary weekly feedback session as a component of MALL projects, in accordance with Virgil's study (2019). Preferably with the facilitator also having an active role in the breakout rooms.

Limitations to this study include the fact that the questionnaire was not piloted and that due to time constraints, it was not possible to conduct interviews, which would surely have resulted in giving a more emic perspective. Furthermore, although it is hoped that this research can provide some insight into the themes in question, due to the small number of participants (n=17) is it not possible to make generalizations to EFL learners in different contexts or the EFL population at large.

6. Conclusion

This study aimed to evaluate the success of the project in eliciting oral messages from students and to shed some light on potential reasons as to why more messages of this type were not sent. In addition, it attempted to provide an insight into students' perceptions towards receiving CF on a WhatsApp chat group as well as via supplementary weekly follow-up sessions on Zoom. This study adds to the lacuna of existing research on the use of oral-based messages on WhatsApp, mobile-mediated CF, negotiated feedback and students' perceptions thereof. Findings indicate positive student attitudes towards receiving CF, in the

manner in which it was provided. Students additionally found value in the project, with the majority stating that their English had improved as a result of their participation. Regarding the type of CF provision, although some students saw the merit of implicit feedback, the majority seemed to prefer receiving feedback which was more explicit. In terms of oral messages, although students highly rated having the opportunity to send them, their production was few and far between. It is posited that this may be due to written messages being viewed as the "default modality" and students feeling somewhat uncomfortable at the prospect of sending them in front of their peers. Alternatively, it could be that there is simply a greater tendency for people to send written messages on WhatsApp, however further research would be needed to confirm this suspicion. It is also proposed that a MIM app, more centred on the oral message function may promote messages of this kind to a greater extent.

Word Count: 10,519

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Appendix A
Student Consent Form

STUDENT CONSENT

Dear students,

As part of your course, we are inviting you to take part in activities via the WhatsApp group that will increase your contact with English outside class. We will analyse the results in order to measure how successful these activities are and we will ask you for your opinion. The activities will be organized and led by a student studying for an MA in Applied Linguistics at the UB, and will be supervised by a member of the research group.

We would like to ask your permission

- to allow the MA student (Jasmine Green) and the researcher (Dr M^a Angels Pinyana, UVic) to join your class WhatsApp group.
- to allow us to record part of one class every week, when you will get some feedback on your English in the WhatsApp activities
- to share any information and images generated in these activities with the research group for the purposes of analysis. If any of this information is used in publications, we guarantee to maintain your privacy by only using pseudonyms and not sharing any personal details. These activities are voluntary and you can choose to stop participating at any time.

Thank you very much for your help and I hope you enjoy the activities!

Dani

If you agree, please sign and date the form below.

Name Date
.....

Appendix B

Ideas for Student Prompts

Starting discussions in WhatsApp

Here are some ideas for beginning conversations in WhatsApp

Related to the book:

Unit 7 Nature

A. Direct question

1. What type of *weather* do you like the most/least. Why?
2. Comment or ask questions on three different posts by your classmates

1. What is the weather like today?
2. What do you think it will be like tomorrow?

B. Preferences

1. What's your favourite *season*. Why?
2. Comment, agree/disagree or ask a question on three posts by different classmates

C. Experiences

1. Have you ever *experienced really bad weather*? What happened?
2. Choose three different posts and write a comment or question

D. Continue the sentence

1. The last time I *saw snow*, I
2. Comment on and/or ask questions about your partners' contributions

E. Complete the phrase

1. The best way to *protect the environment* is to
2. Choose three of your classmates' contributions and make a comment or ask a question. If there are already three comments, choose another one.

F. Agree or Disagree?

1. I think Greta Thunberg deserves the Nobel Peace Prize. Do you agree?

To create your conversation starters, you can use these 'frames':

1. What type of do you like most/least? Why?
2. What's your favourite? Why?
3. Have you ever? What happened?
4. The last time I, I
5. The best way to is to
6. I think Do you agree?

Related to current events or what's happening in 'the real world':

A. Current events*

1. When do you think we will get a COVID vaccination?
2. Do you think the Olympics will go ahead in the summer?

*Avoid controversial topics, like politics

B. Memes

1. Have you seen the Bernie Sanders meme?



2. Which is your favourite? Why?
3. Why do you think this has become so popular?
4. What do you know about Bernie Sanders?

C. Viral videos

1. This video has recently gone viral in the UK:
<https://www.youtube.com/watch?v=Rdzw5cyiMec>
2. Do you think men talk more than women in meetings?
3. Have you heard of mansplaining? What is it?
4. Has this ever happened to you?

D. Your lives

1. What was the last film you saw? Did you enjoy it?
2. I want to watch something this weekend. Would you recommend a good TV series?
3. What is the first thing you'll do when the COVID restrictions are lifted?

Here are some ideas for creating conversation starters:

1. What do you think of
2. What's your opinion about
3. Have you seen? What did you think?
4. What do you know about
5. What was the last you

Appendix C

Calendar of Student Prompts

Student	Date	Day of intervention
S17	24th Feb	17
S4	26th Feb	19
S10	28th Feb	21
S1	2nd Mar	23
S5	4th Mar	25
S14	6th Mar	27
S15	8th Mar	29
S9	10th Mar	31
S3	12th Mar	33
S6	14th Mar	35
S11	16th Mar	37
S7	18th Mar	39
S8	20th Mar	41
S13	22nd Mar	43
S2	24th Mar	45
S16	26th Mar	47
S12	28th Mar	48

Appendix D

The Weekly Schedule of Procedures

Week	Starting Date	Procedure
Week 0 Preparatory work And T1 prompt (#1)	08/02/21 - 14/02/21 (days 1 - 7)	<ul style="list-style-type: none"> ● Students informed of study ● Consent forms issued and signed ● Document containing examples of conversation starters issued by T1 ● Calendar of student prompts shared by T1 ● T1, T2 and further researcher join group ● 1st prompt issued by T1 (T1 prompt 1) ● T2 introduces herself
Week 1 T2 Prompts	15/02/21 - 21/02/21 (days 8 - 14)	<ul style="list-style-type: none"> ● T2 sends 3 prompts: (T2 prompts 1-3) → 16/02/21: Zoom feedback session 1
Week 2 Student prompts (#1-2)	22/02/21 - 28/02/21 (days 15 - 21)	<p>Student prompts 1-2:</p> <ul style="list-style-type: none"> ● S17 Prompt 1 ● S4 Prompt 2 ● T2 sends additional prompt (T2 prompt 4) → 23/02/21: Zoom feedback session 2
Week 3 Student prompts (#3-6)	01/03/21 - 07/03/21 (days 22 - 27)	<p>Student prompts 3-6:</p> <ul style="list-style-type: none"> ● S1 prompt 3 ● S10 prompt 4 ● S5 prompt 5 ● S14 prompt 6 → 02/03/21: Zoom feedback session 3
Week 4* Student prompts (#7-9)	08/03/21 - 14/03/21 (days 28 - 34)	<p>Student prompts 7-9:</p> <ul style="list-style-type: none"> ● S15 prompt 7 ● S9 prompt 8 ● S5 prompt 9 (spontaneous prompt out with calendar) ● T2 sends additional prompt (T2 prompt 5) → 09/03/21: Zoom feedback session 4
Week 5** Student prompt (#10)	15/03/21 - 21/03/21	<p>Student prompt 10:</p> <ul style="list-style-type: none"> ● S11 prompt 10 ● T1 sends additional prompt (T2 prompt 2)

and T1 prompt (#2)	(days 35 - 41)	→ 16/03/21: Zoom feedback session 5 → Questionnaires issued
Week 6 + 2 days from week 7 Student prompts (#11-14)	22/03/21 - 30/03/21 (days 42 - 50)	Student prompts 11-14: <ul style="list-style-type: none"> ● S13 prompt 11 ● S2 prompt 12 ● S16 prompt 13 ● S12 prompt 14 → 23/03/21: Zoom feedback session 6

*S3 and S6 were supposed to post a prompt in week 4, as per the calendar of prompts

**S7 and S8 were supposed to post a prompt in week 5, as per the calendar of prompts.

Appendix E

Questions Provided on Zoom

Date and session	Zoom prompt
16.2.21 (day 9) session 0	N/A: introductory session
23.2.21 (day 16) session 1	Data missing
2.3.21 (day 23) session 2	<ol style="list-style-type: none"> 1. I would like to do a trip with my family. 2. I couldn't go because the Covid. 3. It's a long time from lockdown. 4. I would visit again Paris. 5. Last year I have been cooking for my family. 6. My brother is policeman.
9.3.21 (day 29) session 3	<ol style="list-style-type: none"> 1. You make me sad remembering me those days. 2. It took a long time to arrive to the place. 3. I miss going to the mountain. 4. I went camping on the mountain. 5. I love so much to visit art galleries. 6. I don't understand this paintings. 7. I didn't understand nothing. 8. When we were in the camping.
16.3 (day 36) session 4	<ol style="list-style-type: none"> 1. I'm studying a degree of mathematics/ I'm studying a degree in mathematics. 2. I'm doing my PhD about volcanoes/ I'm doing my degree on volcanoes. 3. I think that yes/ I think so/ I believe so? 4. It would be curious to learn about the mating habits of crocodiles. 5. My favourite tv serie at the moment is The Queen's Gambit. 6. I love walking in nature or in the nature? 7. I don't like so much the snakes. 8. What's it's extremely illegal it's to drink and drive.
23.3. (day 43) session 5	<ol style="list-style-type: none"> 1. I prefer doing handmade presents. 2. I prefer a handmade present/ I prefer handmade presents. 3. Do you prefer <u>doing</u> a handmade present_ or buying <u>it</u>? 4. It depends for who I give the present___. 5. The chocolate cake looks like delicious/ looks delicious. 6. I found a really interesting news story/ I found a really interesting news. 7. It talks about building a city in Mars by 2050/ in 2050. 8. It would be interesting to see the Mars colony <u>grow up</u>.

Appendix F

The Questionnaire


To view, copy and paste the link into your browser:



<https://bit.ly/3n3fANo>

Appendix G

Example of Message Screenshots and How They Were Grouped

- Messages have been reproduced chronologically.
- All messages triggered by a prompt appear in the same column.
- Colours have been used to identify CF that referred to different conversations/prompts.
- Labelling i.e. CF1(1), CF1(2), CF1(3) etc means that the CF episode generated more than one message.
- Each number within parenthesis stands for a different message.

349	<p style="background-color: #e0b0ff; padding: 2px;">Prompt 5 (S5): Museums</p> 	
350-351	<p>Good Morning class! 😊 A few years ago I have been visiting the Momma Museum and it was an amazing experience. I love so much to visit museums or art galleries and try to understand the paintings of the artists. But in the case of this two paintings that it can see in the photo I couldn't get to understand what the artist wanted to convey. 09:25</p> <p>Do you like to visit museums or art galleries? You used to understand the paintings? And what do the paintings make you feel? 09:26</p>	
352	<p style="background-color: #e0b0ff; padding: 2px;">Student 16 4 MARCH 2021</p> <p>Good morning! Three years ago I went to Museo del Prado and I didn't like it very much. I went with my parents and I was all the time saying "how much is left? 😞". I think that I don't like museums, art galleries and all this stuff because I don't understand the paintings and I don't appreciate the little details. It's like watching a soccer match without understanding this sport... it would be very boring! So I think I have to learn more about art if I want to go to museums. 11:07</p>	

353		<p>Student 8</p> <p>Hello mates 🍷 Wow what a coincidence!! I'm just coming back from CCCB (Cultural Contemporary Center of Barcelona). Specially from the Xcentric File. It's a special room dedicated to auteur cinema. U can watch to many exclusive films for free! Well, dont expect hollywood movies, its another type of films, without topics. If u dont like cinema maybe it's not your place. Anyway I 100% recommend it! 🍷🍷</p> <p>12:38</p>	
354		<p>Student 14</p> <p>Hii guys. I love to visit museums! When I was in California, 2 years ago, I visited 3 museums in 1 day about art, I didn't understand nothing because I don't know nothing about art history, but it was fun. In fact, I prefer to visit science or historic museums because I know more about these things.</p> <p>12:49</p>	
355	<p>Student 6</p> <p>Teacher 2</p> <p>Feel good films like comedy are nice too! We ended up watching "The Fundamentals of Caring" instead, w...</p> <p>Okeyy</p> <p>13:30</p>		
356			<p>Student 6</p> <p>Student 10</p> <p>Hi class! I took this picture while doing a hiking with some friends and we were preparing t...</p>  <p>Wow it looks amazing! I love too these beaches that have sea an mountain. To be honest, I'm not sure what I would choose. I've slept in mountain doing bivouac shelter with my campmates. However I always wanted sleep with friends in the beach</p> <p>13:40</p>
357		<p>Student 2 4 MARCH 2021</p> <p>Student 5</p> <p>Good Morning class! 🍷 A few years ago I have been visiting the Momma Museum and it wa...</p>  <p>Hi clàudia! I don't understand this painting too 🍷 About your questions... Art galleries aren't my kind of think because I don't usually understand the meaning of the paintings. However, I like museums. Five years ago I went to Santillana del Mar en I sae the torture museum, It was amazing!!</p> <p>17:01</p>	

<p>358-359</p> <p>CF1(1)</p>		<p>Teacher 2</p> <p>Student 5 Good Morning class! A few years ago I have been visiting the Momma ...</p> <p>Nice question! I do enjoy art galleries but to be honest I haven't been to one in years. I feel that it definitely helps when the artist at least gives some indication of what his work is about. This one reminds me of how they paint the eggs red at Easter in Greece, but I doubt that's what it's about!</p> <p>"In the case of this two paintings"</p>	
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<p>360-362</p> <p>CF2(1)</p> <p>CF2(2)</p>		<p>Teacher 2</p> <p>Student 16 Good morning! Three years ago I went to Museo del Prado and I didn't like it very much. I went with my parents and I was ...</p> <p>I kept on saying: "how much _____ is left?"</p> <p>Teacher 2</p> <p>Student 16 Good morning! Three years ago I went to Museo del Prado and I didn't like it very much. I went with my parents and I was ...</p> <p>Good football analogy!</p> <p>Student 16 How much time is left?</p>	
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<p>363-364</p> <p>CF3</p> <p>CF2(3)</p>		<p>Teacher 2</p> <p>Student 8 Hello mates! Wow what a coincidence! I'm just coming back from CCCB (Cultural Contemporary Center of Barcelona). Sp...</p> <p>especially or specifically from the Xcentric file? The price sounds good!</p> <p>Teacher 2</p> <p>Student 16 How much time is left?</p>	
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<p>365</p> <p>CF4(1)</p>		<p>Teacher 2</p> <p>Student 14 Hi! guys. I love to visit museums! When I was in California, 2 years ago, I visited 3 museums in 1 day about art, I didn't u...</p> <p>You visited 3 art museums in 1 day? Wow!! That's a lot. Didn't you get tired?!</p> <p>"I didn't understand something or anything because I don't know _____ about art history"</p>	
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Appendix H

Student Participation by Conversational Prompt*

Student	T1 prompt 1	T2 prompt 1	T2 prompt 2	T2 prompt 3	S17 prompt 1	S4 prompt 2	T2 prompt 4	S1 prompt 3	S10 prompt 4	S5 prompt 5	S14 prompt 6	S15 prompt 7	S9 prompt 8	S5 prompt 9	T2 prompt 5	S11 prompt 10	T1 prompt 2	S13 prompt 11	S2 prompt 12	S16 prompt 13	S12 prompt 14	total
S1		4		2	2	1		3	1				2	5			1	2				23
S2	3	8	1	6	3	3	6	1	2	6	1	2				2		2	2	1		49
S3	2				1	1			4													8
S4	1	4	4	1	2	7	1		1		1	1	5			1	5			1	3	38
S5	1	3			2	2				7				4				2				21
S6	1		6	3	2	2	2		1			3				1		2				23
S7	1		1		1																	3
S8	3	3	1		1				3	1							2					14
S9	3		3	2		2	1					2	15				1					29
S10	2	2			2			1	3								1	1				12
S11		1	2										2			4						9
S12		3		1	4	6					1					4		2		1	8	30
S13		4		1	3				1		1					1		3				14
S14			3	1	1					2	2											9
S15					1							1										2
S16			4		1	1	1		2	2	2		5			2		1		4	1	26
S17					2																	2
T2	3	32	30	26	20	19	13	6	11	18	8	9	13	12	1	18	4	12	1	3	7	266
T1	5	1	1		2	1							1				3	1		1		16
Total	25	65	56	43	50	45	24	11	29	36	16	18	43	21	1	33	17	28	3	11	19	594

* Blue stands for prompts issued by T1, pink stands for prompts issued by T2 and green stands for prompts issued by students.

Appendix I

Message Types by Participant

	Messages in (conversational prompts)	Messages in (prompts relating to class content and intervention)	total messages
S1	23	8	31
S2	49	1	50
S3	8		8
S4	38	3	41
S5	21	2	23
S6	23	4	27
S7	3		3
S8	14		14
S9	29		29
S10	12		12
S11	9	1	10
S12	30		30
S13	14	2	16
S14	9	1	10
S15	2		2
S16	26	1	26
S17	2		2
T2	266	5	271
T1	16	4	20
Total	594	32	626

Appendix J

Duration of Students' and Teachers' Oral Messages*

oral message number	student/ T2/ T1	message duration in minutes
125	S5	1:04
418	S9	0:38
423	S9	0:12*
455	S16	0:57
426	S4	1:03
103	T2	0:06
105	T2	0:07
241	T2	0:12
437	T2	0:39
548	T2	0:59
549	T2	0:29
550	T2	0:23
551	T2	0:13
201	T1	0:14

* Message 423 by S9 lasted 0:12 seconds. It was not a standalone message however and served as a continuation of message 418.

Appendix K

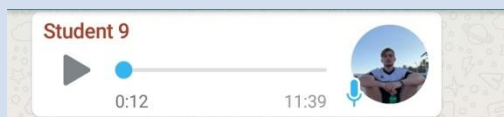
Oral Messages Sent by S9, S16 and S4

Message number	Screenshot	Transcript
419		<p>Transcript of S9 oral message1:</p> <p><i>“Hello class, good morning. Em, well, as some of you already know, em, I’m studying a, the degree of Environmental Science and I’m starting my TFG that it’s eh well like a project that eh we have to do when we are finishing our degree and I am doing it about eh insects and the biodiversity of insects in the eh urban parks that well hmm, it means the, the parks that we have in the city and well to get closer to the insects. I have a new pets that I will show you now.”</i></p>
420		
421		
422		



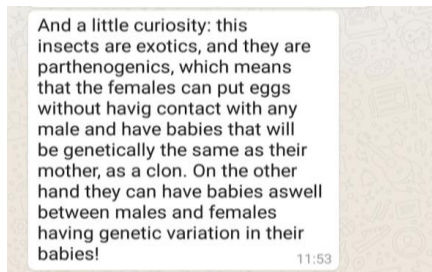
Transcript of S9 oral message 2:

423



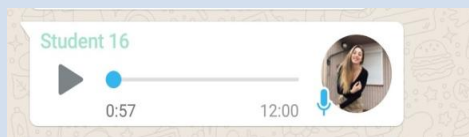
“And well, I wanted to ask you if do you like insects? And which one is your favourite and if you don’t like them eh why and if you would have a insect as a pet?”

424



Transcript of S16 oral message:

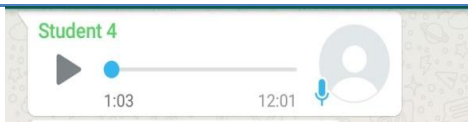
425



“Eh, to be honest, I don’t like insect and because I, I’m really afraid of them and I know that they, they, in general, they are very small and well, I’m big, but that’s the reason because I’m afraid of them because em, it could sound stupid but I can’t stop thinking that, I dunno, they could enter in my body by my mouth or my ears or, I dunno, my nose and stay in my body. I, I know that it’s stupid, but I can’t stop thinking that and I, I’m afraid of, of this. Well, it’s, it isn’t only about fraid, it’s a combination about fraid and repugnance.”

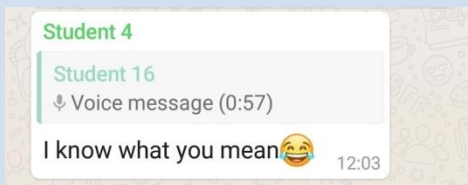
Transcript of S4 oral message:

426

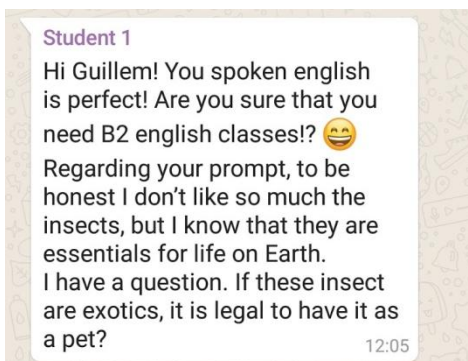


“Hi Guillem, I, I think that eh, it’s, it’s a very interesting topic this because I never eh, stopped to think about have an insect as a pet and I dunno so much about this, this kind of eh, living things and em, it would be curious to, to have one and know about his behaviour in the nature and all this things and I think that your TFG it’s so, it’s so curious and I would, I would like to know more about it to, to can em give, more, more information about it but I don’t know, I don’t know much. Uhm, it would be interesting to, to know more about, about insects and all the environment that we don’t, em stop to, to look for, uhm, all these stuff.”

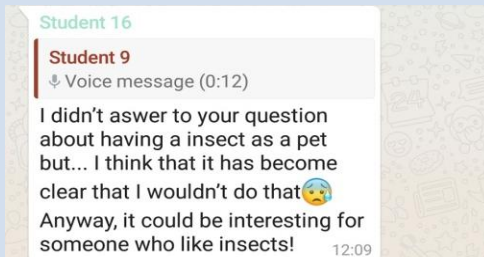
427



428



429



430

Student 16
Student 4
I know what you mean 😊
😂😂😂 12:09

431

Student 1
Student 16
📻 Voice message (0:57)
Nina, may be you would be a good
screewriter of scary movies! 😊😊

432

Student 9
Student 1
Hi Guillem! You spoken english is
perfect! Are you sure that you need
B2 english classes!?! 😊...
Thank you so much Toni!! Yes
it's legal! It's the same as having
a snake for example, what it's
extremly ilegal it's to release them
in the nature, because it could be
so dangerous for the ecosystem..
12:19

434

Student 16
Student 1
Nina, may be you would be a good
screewriter of scary movies! 😊😊
😊
Hahahaha, I think that I woludn't
have future but, who knows... 😊
12:21