

Learners' willingness to communicate in face-to-face versus oral computer-mediated communication

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The present study had two main goals: to explore performance differences in a task-based environment between face-to-face (FTF) and oral computer-mediated communication (OCMC) groups, and to investigate the relationship between trait-like willingness to communicate (WTC) and performance in the FTF and OCMC groups. Students from two intact intermediate university Spanish classes carried out two decision-making tasks in random groups of three; one task was carried out via Skype and the other was performed FTF. To determine L2 WTC, participants completed a WTC questionnaire, adapted from Cao and Philp (2006). Results showed that learners initiated a significantly higher number of speaking turns in OCMC. Additionally, the significant positive correlation found between WTC and the number of turns and words spoken in the FTF setting did not hold for the OCMC group. In other words, number of turns and words produced reflected WTC in the FTF mode but not in the OCMC mode. This reveals that learners indeed interact differently through OCMC and FTF, which could pose certain advantages for L2 teaching and learning.

Keywords: oral computer-mediated communication; willingness to communicate; decision-making tasks; L2 interaction.

1 Introduction

The interactionist stance on SLA holds that interaction between second language (L2) students and between L2 students and NSs facilitates L2 acquisition. This view, championed by Long's (1996) Interaction Hypothesis, places strong emphasis on the negotiation of meaning that occurs

between learners when they are trying to solve a communication problem. This context is argued to be an optimal environment for L2 acquisition given that input, selective attention and output are conjugated in a very productive manner through communication and negotiation of meaning. Several studies in the CALL field have investigated synchronous computer-mediated communication (CMC), mostly in its written form, under this perspective (e.g., Blake, 2000; Smith, 2003, 2004). These investigations have explored L2 learners' interactions using a variety of chatting programs (e.g., Beauvois, 1992; Chun, 1994; Kelm, 1992; Kern, 1995). Myriad studies have followed, investigating various aspects of CMC, such as teacher strategies (Meskill & Anthony, 2005), socialization (Sengupta, 2001; Shin, 2006), and individual differences (Payne & Ross, 2005). Other studies have compared synchronous and asynchronous CMC (Pérez, 2003; Sotillo, 2000).

More recently, Yanguas (2010) emphasized the importance of interacting orally in the L2 and called for the investigation of synchronous oral CMC (OCMC) in the classroom. According to this researcher, the implementation of OCMC activities is now feasible, given that most schools have access to the hardware, the software, and the Internet broadband width that can make it possible. He showed how learners' OCMC interaction patterns were opposite to those displayed in written CMC interaction and very close to the patterns displayed in FTF communication. Consequently, it could be argued that if technology is to be used in the L2 classroom to practice and develop the oral skills needed to be successful in communicating in the L2, it should include OCMC. However, since only a handful of studies have explored this type of communication (Jepson, 2005; Lee, 2007; Sykes, 2005; Yanguas, 2010, 2012), several questions remain regarding this new mode of CMC as a medium of L2 oral practice and its application in the classroom. In this study, our objective is to set the preliminary bases for future investigations that explore more in depth in the questions raised here. On the one hand, we explore if there are any tangible differences in language production between traditional oral interaction and OCMC. On the other hand, this study investigates willingness to communicate (WTC), which has been underexplored in the field of CMC and has been argued to be very closely related to the communication act (Dörnyei, 2005). Dörnyei contends that this individual difference (ID) variable is an antecedent to the actual onset of L2 communication and as such, its investigation should not be avoided in any context in which L2 learners' communicative performance is being explored.

2. Review of the Literature

2.1 Oral Computer-Mediated Communication

Many studies in the past two decades have explored synchronous written CMC (see Blake, 2008 for main issues investigated); as in the present investigation, several of these studies have adopted an interactionist approach that places great emphasis on students interacting and negotiating for meaning so that they can notice new forms. For instance, Blake (2000) explored written CMC as a means to offer L2 students further opportunities to interact in and outside the classroom. His findings led him to suggest that this mode of communication is a very appropriate environment for L2 interaction to take place with all the benefits attributed to it.

Research into synchronous OCMC has been scarce; it has in fact been less researched than other forms of CMC (Levy and Stockwell, 2006). Of the few studies that have been conducted, even fewer (Jepson, 2005; Lee, 2007; Satar and Özdener, 2008; Sykes, 2005; Yanguas,

2010, 2012) have explored the use of synchronous OCMC as a developmental tool for L2 proficiency. Investigation into audio- and videoconferencing has primarily explored the context of distance language education, according to Blake (2008). Furthermore, the very different research designs used by the limited number of researchers who have explored synchronous OCMC for L2 acquisition limits our ability to make any generalized conclusions. For example, Sykes (2005) analyzed the effects of three types of synchronous group discussions in the acquisition of strategies to refuse an invitation in the L2. She found that no group outperformed any other in pragmatic acquisition, but she also found that the synchronous written chat group outperformed the other two in complexity and variety of strategies used. Jepson (2005) took a different angle and compared language use by NNSs of English in text and voice chat rooms on the Internet (the participants were all enrolled in an online school). The objective was to determine what types of repair moves and patterns each group employed and examine the differences between the groups. Jepson operationalized this study based on Long (1983; 1996) and divided the repair moves into the categories of negotiation of meaning and negative feedback. Interestingly, in this study, the voice chats lead to significantly more repair moves when compared with the text chats, and the majority of these voice chat repair moves were related to pronunciation. In turn, Lee (2007) investigated videoconferencing from a qualitative standpoint. She conducted interviews to analyze participants' viewpoints on this mode of communication as a valid tool to promote the acquisition of oral skills. Her conclusions point to the task, the context, and students' training as key factors for the success of this type of activities. Finally, Satar and Özdener (2008) compared voice, chat, and a control group in order to investigate oral proficiency gains and anxiety measures. Results of this study showed that both CMC groups increased their oral proficiency but only participants in the chat group reduced their anxiety.

From an interactionist point of view, Yanguas (2010) compared audio- (AudCMC) and videoconferencing (VidCMC) with FTF communication in learner/learner dyads. The author of this task-based interaction study concluded that AudCMC forces students to make use of more linguistic resources than either VidCMC or FTF, because learners do not have access to visual cues. In addition, the turn-taking patterns shown for both OCMC groups are equal to those shown for FTF and opposite to those displayed in written CMC. Yanguas (2010) argued that these conclusions might have far-reaching implications for the practice and development of oral skills in the L2 classroom because "learners could practice oral skills that they will need in the real world which are difficult to replicate using traditional chatting applications" (p. 86). Finally, Yanguas (2012) investigated possible differences in L2 vocabulary acquisition in AudCMC, VidCMC, and FTF groups. In addition, this study explored learners' attitudes toward OCMC. He found that learners in the three groups significantly increased their scores on the recognition vocabulary tests through interaction. This increase was maintained after two weeks. No such effect was found for the production tests, as participants in all three groups significantly increased their immediate ability to produce the target vocabulary words, but this effect did not remain after two weeks' time. The most interesting results were regarding the listening comprehension tests because a significant difference was shown among the groups in this measure. Learners in the AudCMC group outperformed the other two groups immediately after interacting, but this effect did not last.

2.2 Willingness to Communicate and CMC

The status of affective variables in the field of SLA changed drastically after the publication of Crookes and Schmidt's (1991) influential article. They argued that these variables may have a very important effect on the learning process because they have a direct influence on students' behavior and therefore they might impact the learning process. Sheen (2008), for instance, investigated classroom anxiety in relation to the students' capacity to process corrective feedback. Results of this study showed that language anxiety is a factor that has certain influence on how recasts help students produce modified output and on learning. In the field of CMC, one of the most widely investigated affective variables has been anxiety. Several researchers (e.g., Abrams, 2003; Arnold, 2007; Kern, 1995) have argued for the potential of CMC to reduce anxiety when it comes to interacting in the L2. A recent study (Baralt & Gurzynski-Weiss, 2011) empirically tested the effect of FTF and written CMC in student/instructor dyads on state anxiety. Results showed that state anxiety is comparable across groups in this context.

Regarding WTC, this construct has been defined as "a composite ID variable that draws together a host of variables that have been well established as influences on second language acquisition and use" (Dörnyei, 2005, p. 210). MacIntyre, Clément, Dörnyei, and Noels (1998), however, emphasized its state characteristics and acknowledged that variables related to the specific communication context can potentially change an individual's WTC. Furthermore, these authors believe that motivational and attitudinal variables are part of the WTC construct and consider it an immediate antecedent to the actual initiation of communication, since having the competence to start communicating in the L2 does not necessarily translate into actual communication (Dörnyei, 2005).

WTC was initially applied to L1 research in the 1980s (see for example Chan & McCroskey, 1987; McCroskey, 1984; McCroskey & Baer, 1985). It was defined at this time as "an individual's tendency to initiate communication when possible" (McCroskey & Richmond, 1991, p. 74), and it was generally viewed as a stable, unchanging personality characteristic (i.e., a trait-like characteristic). A recent study by Yashima and Zenuk-Nishide (2008) appeared to reinforce McCroskey's initial stable conceptualization, as WTC remained rather stable throughout their two-and-a-half-year longitudinal study. In another study, Yashima (2002) examined possible relationships between L2 learning and L2 communication variables with students of ESL in Japan. Her results indicated the potential for WTC to account for L2 communication. It should be noted, however, that these authors were not specifically focusing on WTC as a situational construct. However, most researchers nowadays believe that WTC is closely linked to the context in which communication takes place (e.g., Kang, 2005; MacIntyre et al., 1998) and argue for an interpretation of WTC that accounts for both stable (trait-like) and situational (state-like) factors. For example, Cao and Philp (2006) investigated both trait-like WTC and situational WTC, and they found a number of factors that influenced their WTC in class. More importantly, results from this study suggest that WTC is dynamic in nature and it depends on the actual context.

Despite the crucial implications that WTC can potentially have for the field of CMC, very few studies (Arnold, 2007; Freiermuth, 1998; Freiermuth & Jarrell, 2006; Jarrell & Freiermuth, 2005; Lloyd, 2012) have set out to investigate how this variable impacts learners' communicative performance in a computer-mediated context. For example, Freiermuth (1998) examined whether chatting electronically promoted equal group participation among 18 ESL graduate students. He compared the number of words produced and the

number of turns taken by two groups ($N = 9$) of participants (FTF vs. synchronous written CMC) in a problem-solving task. This researcher utilized a one-tailed *t*-test to examine whether the number of words and turns were distributed significantly more equitably between the group members in the FTF group. These analyses showed that the number of words and turns were more equitably distributed in the CMC group than in the FTF group. He concluded that this type of program appeared to give students who might not participate as much in oral discussions the opportunity to interact with their classmates in the L2. Jarrell and Freiermuth (2005) investigated whether Internet chat motivated 69 female Japanese L2 learners and increased their WTC. As in the present study, these authors utilized a counterbalanced research design to control for order effects (i.e., a random half of the participants performed one task while the other carried out the second task to then switch tasks so that both groups do both tasks). Their tasks were also very similar to those used in our study. In particular, these authors explored learners' preferences for task resolution (CMC or FTF) and sought the medium that elicited more language. They also analyzed the data gathered for any evidence indicating the more motivating medium. Analyses of the data showed that participants preferred Internet chat for the following reasons: they had more time, they could work at their own pace, they felt more relaxed, and they remained anonymous. Overall, learners felt less pressure when chatting than when interacting FTF. Participants also emphasized the fact that they used the L2 more when chatting, which was interpreted by the authors as "motivational inasmuch as it seems to increase students' WTC" (Jarrell & Freiermuth, 2005, p. 70). As far as language production, results showed that learners took more turns in WCMC and the turn-taking patterns were more equitably shared in the Internet chat sessions than in FTF sessions. Given these results, the authors concluded that the Internet could be used effectively in the L2 classroom to practice interaction among students. In a similar study, Freiermuth and Jarrell (2006) explored how nine groups of female Japanese ESL learners communicated through online chat and FTF. The authors concluded that online chatting "reduces social constraints and reconfigures the ways students interact in the L2 [...] enhancing their willingness to communicate" (p. 207).

In turn, Arnold (2007) investigated communication apprehension in a semester-long study in which 56 German L2 learners participated. This study's research design included a control group that interacted FTF, a synchronous CMC group, and an asynchronous CMC group. Using a repeated-measures pretest posttest design, this study compared the communication apprehension scores of the three groups on the questionnaires administered at the beginning and at the end of the semester. The relevant questions of the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986) were used in their original five-point Likert-type scale format. Results from the analyses carried out showed no significant differences in reduction of communication apprehension among the groups. It was concluded, however, that "regular student-centered discussions can trigger a permanent reduction in communication apprehension" (Arnold, 2007, p. 482).

In the present study, we hold the view that WTC includes both state and trait characteristics as well as psychological and linguistic factors (see, for example, Clément, Baker, & MacIntyre, 2003; MacIntyre, Clément, Dörnyei, & Noels, 1998). Thus, we operationalize WTC as "a readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (MacIntyre et al., 1998, p. 547). In order to measure WTC, we utilize Cao and Philp's (2006) 25-item questionnaire, which has been used to measure trait WTC and has been shown to have high reliability (Asker, 1998). Scores on this questionnaire were analyzed in relation to the two different situations in which participants interacted

(OCMC and FTF) so that conclusions could be reached as to the validity of trait-like WTC measures in these contexts.

3. Research Questions and Statement of the Problem

In past years, several studies have investigated synchronous written CMC and its consequences for L2 learning. Some scholars, however, have expressed the need for the field to start investigating OCMC as a medium through which L2 learners can practice the language orally and develop the L2. Since only a handful of studies have explored OCMC to date, numerous issues remain to be addressed in the literature in relation to its implementation in the L2 classroom and its validity as a learning tool. In this study, we explored two of these issues so that future studies can build on our results for more in-depth investigations. First, we investigated differences in performance between these two modes of communication. Second, we explored the relationship between trait-like WTC and language performance in both modes. Specifically, we sought an answer for the following research questions:

RQ1: Is there a significant difference between the FTF and Audio CMC (Skype) groups in terms of the number of words spoken and/or the number of turns taken?

RQ2: Is there any significant relationship between participants' trait-like WTC, as measured in this study, and the number of words and turns produced by participants in either mode?

4. Method and Materials

4.1 Participants

Two intact intermediate Spanish classes from a major Southern California university participated in this study. Students in these classes had taken an average of 2.75 semesters of college or university-level Spanish classes. One of the classes had 40 enrolled students, and the other had 31; excluding students who were disqualified, there were 31 participants in the study. Students were disqualified for any of the following reasons: being absent on one or both of the study's sessions, having major technical difficulties during a task that impeded communication by all three parties involved, and having any number of participants in a group other than three. Of those who were included in the study, 11 were male and 20 female; they ranged from second-year to graduate students.

4.2 Procedure

On the first day of the study, one class met at its usual time and place, and the other convened in the university's language acquisition computer lab where each student had access to an individual computer station. In both situations, the researcher was introduced to the class by the instructor and proceeded to explain the broad scope of the study. Time was taken to answer questions, though unnecessary details about the study and the research questions were omitted to avoid affecting the participants' performance. Each potential participant was presented with an informed consent letter and given time to review it. It was emphasized that though all students were required to do the assigned tasks for class

participation, their inclusion in the study was optional and their data would be excluded from the results if for any reason they wished it to be. No students approached the instructors or the researcher in order to opt out of inclusion in the study.

After the introduction of the study, each person was given two questionnaires to complete. The first was a background questionnaire used to elicit some basic relevant information about the participants. The second questionnaire, the WTC questionnaire, was adapted from Cao and Philps' (2006) study (see Appendix A). It presented the learners with 25 different situations in which it was assumed that the people involved would be able to speak Spanish and all communication would take place in Spanish. Participants had to decide how willing they would be to communicate in each one on a four-point Likert-type scale.

Following the collection of both questionnaires, learners were given approximately three minutes as warm-up time to read the task instructions and note ideas individually before being randomly placed in a group of three (refer to task prompts in Appendices B and C). It was decided that triads were appropriate for this study because in dyads, there is some level of forced language production in order to sustain conversation, while in groups of four or more, there may be too many speakers to allow for ample opportunity for each individual to fully demonstrate WTC. Following a counterbalanced research design, the two classes received different tasks on both days, as shown below in Table 1.

Table 1: Schedule of Tasks and Modes

	Day 1	Day 2
Class A	Task 1: Prize Money; OCMC	Task 2: Peruvian Visitors; FTF
Class B	Task 2: Peruvian Visitors; FTF	Task 1: Prize Money; OCMC

The task that took place in the classroom was administered in two sections; the researcher took roughly half of the class into another classroom to conduct the study with less ambient noise, while the instructor remained with the other half of the students. For each section, the groups of three were seated with their desks clustered closely together in a classroom, as far away from other groups as possible. A small digital recorder was switched on and placed in the middle of each group after all questions were addressed and group clusters formed. There was a time limit of 12 minutes allocated, and the students were asked to discuss each of their five individual ideas and then reach a mutual group agreement as to the three best ideas for each task. The time limit of 12 minutes was decided upon after two instructors of intermediate Spanish piloted the activities and suggested an optimal time limit. The participants were asked to talk about their ideas and reasons in as much detail as possible, and they were told to sit quietly at their desks until the end of the 12 minutes if they happened to finish early.

The same process was followed in the computer lab on the first day with the other class, except that they were given a brief tutorial on using Skype before the warm-up. As mentioned above, OCMC could use either audio- or videoconferencing. In the present study, the former was chosen, because most programs do not allow for more than two people videoconferencing. Skype, in particular, one of the most universally used and easily accessible programs for OCMC, did not offer this capability when this study was conducted (though the latest version, Skype 5.0, does offer this feature for a fee). When they were assigned to their random groups of three, they were asked to use Skype to initiate a conference call

between all group members. Given the counterbalanced design of this study (shown in Table 1), on the second day, the classes convened in the location that they had not previously used, and they did the activity that they had not yet done. Most participants had previous L2 classroom experience with Skype, and the researcher, instructor, and lab assistant circulated throughout the session assisting with all questions and issues that arose. Some groups had technical difficulties and therefore had to be excluded from the study results.

At the end of the second day, a debriefing questionnaire was administered (see Appendix C; adapted from Freiermuth & Jarrell, 2006) to assess their reactions to the distinct modes by which they performed the two communicative tasks.

4.3 Tasks

There are several definitions of task in the L2 literature, but Ellis (2003) asserts that *tasks* require students to function as *language users* in more real-world communication situations, whereas *exercises* require them to function as *language learners* in more artificial and intentional learning situations. Many kinds of tasks are commonly implemented in L2 classrooms, including narrative, information gap, opinion gap, and decision-making tasks, among others. In the present study, two decision-making tasks were utilized in order to allow for free choice to produce language or not; in other words, these tasks did not oblige participation. Decision-making tasks have been shown to be more effective than other types of tasks because they provide many opportunities to speak (Pica, Kanagy, & Falodun, 1993). In addition, since tasks that are enjoyable have been suggested to increase students' motivation and therefore, theoretically, lower anxiety and promote WTC (Freiermuth & Jarrell, 2006), our aim was to give participants two inherently similar tasks, each of which provided an interesting topic and allowed for a range of L2 competencies and any level of contribution desired.

The tasks in this study were adapted from Jarrell and Freiermuth (2005). Task 1 (Appendix B), Prize Money, required participants to think of five ways in which they would like to spend \$10,000 with their group of three. Task 2 (Appendix B), Peruvian Visitors, required individuals to think of five places in the USA that the group of three Spanish students would like to take a group of teenage Peruvian exchange students for a two-week, unlimited-expense trip with their group serving as the guides.

4.4 Analysis

In order to find an answer to RQ1, two separate independent samples *t*-tests were carried out. In the first one, *Task* was entered as an independent variable in order to explore whether there were any significant differences between the tasks as far as the dependent variables (number of words and number of turns) were concerned. Since no significant differences were shown, a second independent samples *t*-test was run under the assumption that the tasks were comparable. *Mode* was then entered as an independent variable to test for differences between performance in Audio CMC (AudCMC) and FTF and, in this manner, answer RQ1. Regarding RQ2, correlation analyses were conducted to examine the possible linear relationship between WTC, as measured in this study, and the outcome variables utilized (i.e., number of words and number of turns). Additionally, answers to the debriefing questionnaire were also analyzed in order to be able to better explain the results from the quantitative analyses.

All conversations, both actualized via Skype and recorded in the classroom, were carefully transcribed and analyzed for number of turns and number of words per participant. Regarding words, L1 words and “fillers” (such as *um, uh, yes, so,* etc.) were not included in the count. For example, Turn 1, Participant A was counted as seven words. A turn was considered a completed utterance of any length by an individual. Excerpt 1 is a sample passage from one of the conversations that illustrates how turns were counted. Some single turns have pauses in the middle, because the speaker is completing the thought that he or she is trying to express (see Turn 1, Participant B). Other times, even if the same speaker comments back-to-back, separate turns were counted if the two contributions are clearly different thoughts (see Turns 3 and 4, Participant A). Conversational turns that contained no L2 utterances were not counted (see two examples, labeled “o Turn” below); furthermore, even if an utterance contained only one L2 word, it was considered a turn (Turn 2, Participant A).

It has to be borne in mind that this study focuses primarily on the quantitative analysis of turns and number of words (i.e., significant differences among groups in terms of production). In other words, we have not looked into the nature of the turns and words produced by the learners. In terms of L2 learning, the amount of turns and words produced is still very relevant because, as seen in Excerpt 1, much of the production involved some degree of negotiation of meaning. In the case shown in this excerpt, there was some negotiation of meaning as to how to say “to invest” in Spanish, and both the correct and incorrect vocabulary words were counted, as the interlocutors were both attempting to communicate and negotiate meaning in the L2.

Excerpt 1

- Turn 1 A: So, yo pienso que “invertar” es más mejor.
[So, I think that to invest (incorrect word) is better.]
- Turn 1 B: Invertir. I wanna ask... (pause) Uh, me parece que es invertir.
[To invest (correct word). I wanna ask (pause) Uh, I think that it's to invest (correct).]
- Turn 2 A: ¿Invertir?
[To invest?]
- Turn 2 B: Sí, porque es un palabra diferente.
[Yes, because it's a different word.]
- Turn 1 C: Invertir...
[To invest...]
- Turn 3 B: ¿Sí o no?
[Yes or no?]
- o Turn C: Uh...sounds right.
- o Turn A: What is it? Inver...

Turn 4 B: Me parece que es invertir, pero no estoy seguro.
[I think that it's "to invest," but I'm not sure.]

Turn 3 A: Yo voy a poner los dos: invertir o invertir el dinero. (laughs)
[I'm going to write both: to invest (correct) or to invest (incorrect) the money.]

Turn 4 A: So ¿estamos terminados?
[So, are we finished?]

Turn 5 B: Sí.
[Yes.]

Turn 2 C: Sí.
[Yes.]

5. Results

For clarity's sake, the results of the analyses carried out will be presented separately as responses to the research questions that were posed and that drove the study.

RQ1: Is there a significant difference between the FTF and AudCMC groups in number of words and number of turns?

Prior to conducting the *t*-test that would answer this research question, another *t*-test was carried out with *Task* as the independent variable to check whether both tasks were comparable on the variables of interest (*number of words and number of turns*). Results of this analysis revealed that there was not a significant difference in the number of words for Task 1 (M: 196.5, SD: 128.2) and Task 2 (M: 170.9, SD: 119.5) conditions: $t(60) = .814$, $p = .419$. In a similar vein, no significant difference was found in the number of turns for Task 1 (M: 36.1, SD: 16.7) and Task 2 (M: 30.2, SD: 15.4) conditions: $t(60) = 1.433$, $p = .157$. Therefore, research question 2 was tackled based on the assumption that both tasks that were utilized were sufficiently similar.

As mentioned, another independent *t*-test was conducted with *Mode* (FTF vs. AudCMC) as the independent variable and number of words and number of turns as dependent variables. Results showed a significant difference in the number of turns for FTF (M: 26.9, SD: 14.1) and AudCMC (M: 39.5, SD: 15.9) conditions: $t(60) = -3.278$, $p = .002$, $d = -.83$. On the contrary, the results of this analysis did not show a significant difference in the number of words for FTF (M: 161.1, SD: 125.7) and AudCMC (M: 206.3, SD: 119.2) conditions: $t(60) = -1.450$, $p = .152$. In other words, it was shown that participants in the AudCMC group took significantly more turns than participants in the FTF group. This statistically significant difference was not found for number of words, though the AudCMC group did actually produce more words than the FTF group.

RQ2: Is there any significant relationship between WTC, as measured in this study, and the number of words and turns produced by participants in either mode?

Prior to the correlation analysis, Cronbach's alpha coefficients were computed for the items on the questionnaire utilized to measure WTC. Results showed the alpha coefficient

to be .97, which is very high and indicates strong internal consistency among the items on the questionnaire. Put in other words, this coefficient shows that participants' answers to the items on the questionnaire can be predicted from their answers to the other items. Table 2 shows the descriptive statistics for the correlation analysis carried out.

Table 2: Descriptive statistics of correlation analysis

	N	Mean	Std. Deviation
Turns FTF	31	26.9355	14.17024
Words FTF	31	161.1935	125.77027
Turns OCMC	31	39.5161	15.99556
Words OCMC	31	206.3226	119.22343
WTC	26	2.1185	.78371

The results for the correlation analysis carried out (see Table 3) show two significant correlation coefficients, both at the 0.01 level. First, there is a significant relationship between WTC and number of words used in FTF communication ($r = .597$). Second, the results show a significant relationship between WTC and number of turns taken in FTF communication ($r = .705$). In other words, the more WTC, the more participants took part in the FTF conversations, as shown by the number of turns and words they produced. In the same manner, the less WTC, the fewer words they produced or the fewer turns they took in the traditional conversations. Interestingly, however, this positive linear relationship was not found between WTC and the number of words and number of turns in the AudCMC mode.

Table 3: Correlation Coefficients

Variable	Statistics	Turns	Words	Turns	Words
		FTF	FTF	OCMC	OCMC
WTC	Pearson Correlation	.705**	.597**	.340	.314
	Sig. (2-tailed)	.000	.001	.089	.118
	N	26	26	26	26

Note: ** Correlation is significant at the 0.05 level (2-tailed).

Results for this research question seem to support those scholars that hold a situated view of WTC, since there exists a linear relationship between WTC and traditional FTF communication, but this relationship does not hold in a different situation or context of communication (i.e., AudCMC).

6. Discussion and conclusion

The stance under which this study was carried out places great importance on learners' interaction with other learners because this context is thought to be a "fertile environment for SLA to occur" (Blake, 2000, p. 121). In this environment, input, negotiation of meaning, attention to form, and output are believed to play crucial roles in the L2 acquisition

process. Furthermore, learners' affective variables are deemed very important in this process, because they are defined as some mental state that translates into certain behavior involving effort and persistence (Crookes & Schmidt, 1991). In this view, affective variables are seen as the antecedent of behavior; in other words, how learners feel about the interactive task or the context in which it occurs might determine how much effort they invest in the task and how persistent they are.

A descriptive analysis of word and turn counts revealed that the majority of the participants actually produced more language in the AudCMC mode, both in terms of number of turns and number of words. A deeper quantitative analysis of the results revealed a significant difference in the number of turns produced between FTF and AudCMC groups but not in the number of words. This seems to indicate a greater WTC (i.e., they participated more often in the discussion) even if it does not imply a greater *quantity* of language produced. These results must be interpreted with care, since previous studies have not addressed these issues. However, it is plausible to conclude, based on these results, that Skype might be a valid instrument to foster communication in the classroom. Satar and Özdener (2008), in their comparison of text- and audio-chat groups to a control group, found that both CMC groups increased their L2 proficiency while the control did not. Though that particular study did not consider WTC, the fact that there was a proficiency increase in the AudCMC group could indicate that more communication might have taken place in order to achieve that L2 progress. In addition, as several studies have shown, based on the interrelatedness of different IDs such as motivation, anxiety, and WTC (Dörnyei, 2005; Freiermuth & Jarrell, 2006; Kang, 2005; MacIntyre et al., 1998; McCroskey & Richmond, 1991), it could be hypothesized that other related individual factors might indicate an individual's WTC to some extent. In other words, the significant increase in turn taking that resulted in the AudCMC task might indicate that participants were less anxious, were more motivated, or perhaps had a more desirable interlocutor.

The potential anxiety-reducing effect of CMC is a recurring argument in the literature (e.g., Abrams, 2003; Kern, 1995). It is believed that CMC contexts create "a low stress, low anxiety setting, which enables all learners to be a part of the discussion" (Arnold, 2007, p. 472). Needless to say, all these studies only considered written CMC, and only two of them empirically addressed this issue (Arnold, 2007; Baralt & Gurzynski-Weiss, 2011); neither of these investigations found statistically significant differences among the groups investigated in relation to the affective variables under exploration. The fact that we could explain our participants producing more language and taking more turns in the AudCMC mode by referring to lower anxiety levels in this mode is in actuality very interesting and warrants further investigation, since no studies have addressed this issue. It could very well be that even if learners had as much time to contribute to the conversation as they have in FTF, the very fact that they are behind a computer makes anxiety levels go down. This reasoning would lead us towards a very interesting area of research, given that it has been argued that speaking in front of the class might be a source of increased anxiety (Sheen, 2008). We can safely state, however, that whatever combination of affective factors and IDs accounts for the increase in language production and participation, it is likely that those factors are all closely related to each other and to WTC, given the communicative nature of the assignment.

Furthermore, some of the participants' comments are very revealing and indicate increased WTC in AudCMC. Some of these comments imply external motivation ("We were able to carry our skill over and not regress to English as easily, because we were being

recorded.”), increased ability to communicate (“I could think about the topic without having the group anticipate my answer.”), increased L2 support offered by the mode (“I was able to use the Internet to look up words while Skyping.”), and decreased anxiety (“I liked that we weren’t seeing each other’s faces, which gets me nervous.”). These comments and their qualitative interpretation seem to further indicate that “Skyping” on the computer did indeed foster oral communication on the part of the learners, while decreasing their anxiety and supporting the use of the oral language.

As far as the relationship between WTC and the number of words and turns in both modes is concerned, the present results are also very interesting: WTC scores are only significantly correlated to the number of words and number of turns in the FTF mode; in other words, trait WTC as measured here is neutralized by the context in which AudCMC occurred. Furthermore, since the positive significant relationship between this ID variable and language performance in different communicative contexts does not remain constant, it could be argued that WTC should be measured taking into account the context in which communication occurs. This interpretation of the results validates the arguments posed by MacIntyre et al. (1998), further validated by Clément et al. (2003), in their discussion of WTC in which situational factors and the context of occurrence are given prominence, and it is in accordance with contemporary views of other ID variables such as motivation. According to our results, it appears that WTC should be defined as a dynamic situational concept that changes with the context in which communication occurs (Kang, 2005). Kang (2005) further proposed that situational WTC is influenced far less by trait-like WTC and far more by both situational variables and psychological antecedents. Her model places great importance on the influence of diverse IDs – including security, excitement, and responsibility – and takes into account important situational variables such as topic, interlocutors, and context. This researcher further recognized the importance of WTC in the classroom in order to produce more active language learners, especially as the instructional emphasis continues to shift further away from traditional methods and emphasizes more heavily the importance of authentic communication. Along the same lines, Yashima (2002) claimed that “when communication is a goal of language instruction, such questions as ‘communication with whom?’ and ‘for what?’ arise, and a social psychological perspective becomes relevant in answering them” (p.54). This perspective must then be bound by the context in which communication occurs and the participants that take part in the conversation.

Given that our participants participated significantly more and produced slightly more language in AudCMC, it could be argued that the neutralization of WTC by AudCMC performance could be due to factors that could be extremely beneficial for the SLA process, such as anonymity or positive attitudes toward technology. Data in Freiermuth and Jarrell (2006) also supported the assertion that for some, learners’ privacy, or anonymity, is a key factor that directly influences comfort level and WTC; over 52% of their participants stated that their CMC preference “stemmed from not being in a face-to-face setting” (p. 196). In the present study, several examples illustrate a common appreciation of the same sense of anonymity:

- ✧ “I got to use a dictionary, and nobody knew.”
- ✧ “I liked that nobody could see my face.”
- ✧ “Less stressful than actually facing someone.”
- ✧ “I was less shy to speak.”

specifically, could have a direct effect on the neutralization of WTC in AudCMC. We have already mentioned that other studies have shown learners' generally positive attitudes toward technology for L2 CMC (e.g., Freiermuth & Jarrell, 2006; Yanguas, 2012). In our study, many participants praised the novelty factor or "coolness" of using technology. Some illustrative comments include the following:

- ✧ "It was cool."
- ✧ "I got to wear headphones."
- ✧ "Headphones make it easier to cancel out background noise."
- ✧ "I liked the environment."
- ✧ "(I liked) being on the computer."

The present results warrant further investigation in order to explore this issue more deeply, as they could have very positive consequences for L2 learners. If Skype, and AudCMC in general, does indeed neutralize trait WTC in some contexts, and makes learners speak more and contribute more to the conversations, as has been shown here, it has the potential to promote L2 learning under an interactionist view (Long, 1996). OCMC provides a new and exciting path for a different type of L2 interaction in which internal variables such as motivation, attitudes, anxiety, and WTC should be investigated. Lastly, a very important aspect that should also be investigated in future studies is the nature of the language produced by the learners and the type of negotiation that occurs. This type of analysis could help us ascertain what mode of communication and what type of tasks are more beneficial for L2 learning.

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Appendix A

Communication questionnaire

Directions: Below are 25 situations in which a person might choose to communicate or not to communicate in Spanish. Presume that you have completely free choice, and indicate what percentage of time you would choose to communicate in Spanish in each type of situation by circling the percentage range.

1 Talk with an acquaintance in an elevator.

0%–25% 26%–50% 51%–75% 76%–100%

2 Talk with a stranger on the bus.

0%–25% 26%–50% 51%–75% 76%–100%

3 Speak in public to a group (about 30 people) of strangers.

0%–25% 26%–50% 51%–75% 76%–100%

4 Talk with an acquaintance while standing in line.

0%–25% 26%–50% 51%–75% 76%–100%

5 Talk with a salesperson in a store.

0%–25% 26%–50% 51%–75% 76%–100%

6 Volunteer an answer when the teacher asks a question in class.

0%–25% 26%–50% 51%–75% 76%–100%

7 Talk in a large meeting (about 10 people) of friends.

0%-25% 26%-50% 51%-75% 76%-100%

8 Talk to your teacher after class.

0%-25% 26%-50% 51%-75% 76%-100%

9 Ask a question in class.

0%-25% 26%-50% 51%-75% 76%-100%

10 Talk in a small group (about five people) of strangers.

0%-25% 26%-50% 51%-75% 76%-100%

11 Talk with a friend while standing in line.

0%-25% 26%-50% 51%-75% 76%-100%

12 Talk with a waiter/waitress in a restaurant.

0%-25% 26%-50% 51%-75% 76%-100%

13 Talk in a large meeting (about 10 people) of acquaintances.

0%-25% 26%-50% 51%-75% 76%-100%

14 Talk with a stranger while standing in line.

0%-25% 26%-50% 51%-75% 76%-100%

15 Present your own opinions in class.

0%-25% 26%-50% 51%-75% 76%-100%

16 Talk with a shop clerk.

0%-25% 26%-50% 51%-75% 76%-100%

17 Speak in public to a group (about 30 people) of friends.

0%-25% 26%-50% 51%-75% 76%-100%

18 Talk in a small group (about five people) of acquaintances.

0%-25% 26%-50% 51%-75% 76%-100%

19 Participate in group discussion in class.

0%-25% 26%-50% 51%-75% 76%-100%

20 Talk with a garbage collector.

0%-25% 26%-50% 51%-75% 76%-100%

21 Talk in a large meeting (about 10 people) of strangers.

0%-25% 26%-50% 51%-75% 76%-100%

22 Talk with a librarian.

0%-25% 26%-50% 51%-75% 76%-100%

23 Help others answer a question.

0%-25% 26%-50% 51%-75% 76%-100%

24 Talk in a small group (about five people) of friends.

0%-25% 26%-50% 51%-75% 76%-100%

25 Speak in public to a group (about 30 people) of acquaintances.

0%-25% 26%-50% 51%-75% 76%-100%

Appendix B

Tasks

Appendix B.1 Task 1: Prize Money

Su grupo ganó \$10.000 en la lotería en la cafetería de la universidad. La única condición es que tienen que gastar el dinero juntos. **Ustedes juntos (su grupo) van a gastar el dinero.** Piensa en cinco maneras en que **te gustaría gastar el dinero a ti.**

English translation (not provided to the participants in the study): Your group won \$10,000 in a lottery at your university. The only condition is that you must spend the money together as a group. **All of you (your group) are going to spend the money together.** Think of ten ways in which **you would personally like your group to spend the money.**

1. _____
2. _____
3. _____
4. _____
5. _____

Ahora discutan en el grupo cuáles son los tres mejores planes para gastar el dinero y por qué.

English translation (not provided to the participants in the study): Now, with your group, discuss which are the three best ideas for how to spend the money and why.

1. _____
2. _____
3. _____

Appendix B.2 task 2: peruvian visitors

Un grupo de cuatro jóvenes peruanos de dieciocho años va a llegar a en San Diego el 2 de diciembre. **Ustedes (su grupo) van a ser sus guías.** Piensa en cinco lugares que te gustaría visitar a ti con el grupo.

English translation (not provided to the participants in the study): A group of four 18-year-old Peruvians is going to arrive in San Diego on December 2. **Your group is going to be their guides.** Think of five places that you personally would like to visit with the Peruvian group.

1. _____
2. _____
3. _____
4. _____
5. _____

Ahora discutan en el grupo cuáles son los tres mejores lugares para que los chicos peruanos visiten y por qué.

English translation (not provided to the participants in the study): Now, with your group, discuss which are the three best places to take the Peruvian group to visit and why.

1. _____
2. _____
3. _____

Appendix C

Debriefing questionnaire

Rate your experience working in the face-to-face conversation group.

- a. very unfavorable
- b. slightly unfavorable
- c. average
- d. slightly favorable
- e. very favorable

1. What did you like about discussing an issue in the face-to-face conversation group?
2. What did you dislike about discussing an issue in the face-to-face conversation group?
3. Rate your experience working in the Skype conversation group.
 - a. Very unfavorable
 - b. Slightly unfavorable
 - c. Average
 - d. Slightly favorable
 - e. Very favorable
4. What did you like about discussing an issue in the Skype conversation group?
5. What did you dislike about discussing an issue in the Skype conversation group?
6. Which type of group communication do you prefer?
 - a. Face-to-face conversation
 - b. Skype conversation
7. Explain your answer from Question 7: