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Teletandem vs. Face-to-Face in the L2 Classroom: The Effect of Type of Media on Complexity and Accuracy

Teletandem vs. face-a-face na sala de aula de L2: O efeito dos tipos de meios na complexidade e acurácia

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ABSTRACT

In the past decades, foreign language classrooms at the university level have witnessed an ever-growing presence of technology. Teletandem, a collaborative and virtual medium for foreign language learning (TELLES, 2009; BENEDETTI; CONSOLO; VIEIRA-ABRAHÃO, 2010), offers language learners opportunities to receive modified input, negotiate for meaning, receive corrective, and produce modified output, all essential to second language (L2) development (LONG, 1996; GASS, 1997; GASS; MACKEY, 2007). However, an assessment of Teletandem empirical studies has revealed not only a dearth of empirical evidence in regards to the effects of this medium on L2 development, but, furthermore, a lack of research comparing Teletandem and face to face (FTF) contexts as effective media for L2 development. The present study investigates whether type of medium (Teletandem vs. FTF) has an effect on L2 learners' oral development of lexical accuracy and global complexity. Participants were 40 advanced learners of Spanish who were randomly assigned to either a Teletandem group or a FTF group over the course of two months. The results revealed that both Synchronous Computer-Mediated Communication (SCMC) and FTF interaction had positive impacts on oral complexity, with no significant difference between the two groups. However, the results indicate that there was an advantage for Teletandem in terms of the L2 development of lexical accuracy.

Keywords: Computer-Assisted Language Learning, Telecollaboration, Teletandem, Accuracy, Complexity, Synchronous Computer-Mediated Communication

RESUMO

Nas últimas décadas, salas de aula de língua estrangeira em universidades têm testemunhado uma crescente presença de tecnologias. Teletandem, um meio colaborativo e virtual para aprendizagem de língua estrangeira (TELLES, 2009; BENEDETTI; CONSOLO; VIEIRA-ABRAHÃO, 2010), oferece aos aprendizes de língua oportunidades para receber input modificado, negociar significados, receber correção, e produzir output modificado, todos essenciais para o desenvolvimento de segunda língua (L2)

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(LONG, 1996; GASS, 1997; GASS; MACKEY, 2007). No entanto, uma avaliação de estudos empíricos sobre Teletandem revela não apenas uma escassez de evidências empíricas em relação aos efeitos do meio no desenvolvimento de L2, mas, além disso, uma falta de pesquisas comparando Teletandem e contextos face a face como meios efetivos para desenvolvimento de L2. O presente estudo investiga se o tipo de meio (Teletandem x Face a face) tem um efeito no desenvolvimento oral de acurácia lexical e complexidade global de aprendizes de L2. Os participantes foram 40 aprendizes avançados de Espanhol que foram aleatoriamente designados ou a um grupo de Teletandem ou a um grupo face a face durante um curso de dois meses. Os resultados revelaram que ambos, comunicação síncrona mediada por computador (CSMC) e interação face a face, tiveram impactos positivos na complexidade oral, sem diferenças significativas entre os dois grupos. No entanto, os resultados indicam que houve uma vantagem para o Teletandem em relação ao desenvolvimento da acurácia lexical em L2.

Palavras-Chave: *Aprendizagem de Línguas Assistida por Computador, Telecolaboração, Teletandem, Acuidade, Complexidade, Comunicação Síncrona Mediada por Computador*

1. Introduction

In this technological age, Computer-Assisted Language Learning (CALL) has become increasingly common in higher education classrooms. This may be the result of a variety of logistical factors, including its cost-effectiveness, its minimal demand for classroom space, and its ability to reach a larger population of students. Pedagogically, CALL can be utilized to assist students in developing skills like time management, autonomy, and computer literacy, or to combine language and content courses (CEREZO; BARALT; SUH; LEOW, 2013).

CALL research has grown extensively since the 1960s. A myriad of studies have concluded that CALL can be just as effective, if not more so, compared to face-to-face (FTF) instruction, both in the fields of general education (KULIK, 2003; MEANS; TOYAMA; MURPHY; BAKIA; JONES, 2010) and second language acquisition (GRGUROVIC; CHAPELLE; SHELLEY, 2013; ZHAO, 2013). While some meta-analyses have concluded that CALL holds an advantage over FTF (e.g. ZHAO, 2013; TAYLOR, 2009; GRGUROVIC; CHAPELLE; SHELLEY, 2013; ZIEGLER, 2016), other studies have proposed that there is no significant difference in efficacy between CALL and FTF media in L2 development (e.g. CEREZO; BARALT; SUH; LEOW, 2013; SUH; LEOW, 2020). As a result of this controversy, there is still no convincing argument about whether or not the medium matters in L2 development (CEREZO; BARALT; SUH; LEOW, 2013; LEOW; SUH, 2015). Furthermore, much of CALL research has lacked a solid theoretical foundation (CEREZO, 2015; CHAPELLE, 2009; THORNE; SMITH, 2011; YOUNGS; DUCATE; ARNOLD, 2011).

Some CALL applications allow learners to perform operations such as retrieving, processing, producing, or disseminating information (CEREZO; BARALT; SUH; LEOW, 2013). A common example is Synchronous Computer-Mediated Communication (SCMC), which enables simultaneous

communication between human interlocutors. SCMC can be visual, oral, textual, or a combination. According to Cerezo, Baralt, Suh and Leow (2013), SCMC can promote L2 development since it allows learners to negotiate for meaning and reformulate output, and receive and incorporate feedback from the other interlocutor.

Teletandem research (e.g. TELLES, 2009), a sub-strand of tele-collaboration and a type of SCMC, has been dedicated to describing learner approaches within the online medium and offering suggestions for implementation in university-level courses (e.g. CAVALARI, 2010, CANDIDO, 2010). An assessment of Teletandem empirical studies has revealed not only a scarcity of empirical evidence regarding the effects of this medium on L2 development, but furthermore a lack of research comparing Teletandem and FTF as effective media for L2 development. The present study sought to investigate whether type of media, in this case Teletandem and face-to-face interaction, had an effect on L2 learners' lexical accuracy and global complexity in their oral production.

2.   Review of Literature

2.1 Interaction: FTF vs. SCMC for L2 development

Telecollaboration is an application of global networks that fosters language learning in addition to intercultural understanding and communication (BRINCKWIRTH, 2012). It enables communicative relationships across geographical and cultural borders without the need for travel (BELZ, 2003), and all participants are able to mutually benefit since each partner has something to learn and offer (KÖTTER, 2002; LITTLE; BRAMMERTS, 1996; TELLES; VASALLO, 2006). Belz (2003) defines tele-collaboration as "institutionalized, electronically mediated intercultural communication under the guidance of a languacultural expert (i.e., a teacher) for the purposes of foreign language learning and the development of intercultural competence" (p. 2).

Currently, a rising number of educational institutions are redefining L2 learning in the classroom by supplementing, and at times replacing, traditional FTF interaction and instruction with tele-collaboration. One of the many forms of tele-collaborative interaction is Teletandem, which involves pairs of native speakers whose goal is to learn each other's language by way of online conversation sessions. The Teletandem language learning model encourages authentic language via online writing, reading, audio, and video resources (TELLES; VASSALLO, 2006). Very few, if any, articles were published on tele-collaboration in the late 1990s, and it was not until the early 2000s that the strand began to gain slight notoriety. Nevertheless, it continues to be a relatively novel and under-researched strand. With the exception of Suh & Leow (2020), many of the empirical studies that have been published have been qualitative, and very few of them have had larger numbers of participants. The focus of tele-collaboration

research has included corrective feedback (LEE, 2011; O'ROURKE, 2005; SAURO, 2009, 2013; SCHWIENHORST, 2000; SOTILLO, 2009; VINAGRE; MUÑOZ, 2011; WARE; O'DOWD, 2008; WARE; PÉREZ-CAÑADO, 2007), negotiation for meaning (BOWER; KAWAGUCHI, 2011; KÖTTER, 2003; O'ROURKE, 2005), negotiation eliciting tasks (HAUCK; YOUNGS, 2008), morphological development (DUSSIAS, 2006), and type of task (SUH; LEOW, 2020). Furthermore, studies have rarely addressed L2 grammatical and lexical development, instead addressing the effects of Teletandem on learners' scaffolding (CAPPELLINI, 2012), intercultural discourse (TELLES, 2015), interactional leadership (LEONE, 2012), learner independence (GARCIA, 2012), and rhetorical structure (ARANHA; BRAGAGNOLLO, 2012).

A key consideration for this research strand has also been the efficacy of CALL when compared to face-to-face interaction. For instance, Leow and Suh (2015) sought to address the effects of CALL on reading comprehension, vocabulary learning, and listening comprehension. Their findings revealed no significant difference in the effectiveness of CALL in comparison to the FTF medium. Similarly, Grgurovic, Chapelle and Shelley (2013) meta-analysis of 37 CALL studies concluded that the utilization of computer technology in tandem with second language instruction was at least as effective as instruction *sans* technology. Moreover, in those empirical studies with solid research designs, the CALL groups outperformed the traditional instruction groups. Most recently, Suh and Leow (2020) sought to fill the gaps in this strand of research by empirically investigating the effects of interaction in Teletandem and FTF contexts situated within a language curriculum on oral grammatical accuracy across time as well as the effects of type of task. 25 Advanced-level learners of Spanish participated in one of the two experimental conditions (FTF or Teletandem) where they engaged in pair discussion throughout the semester. Measured by two oral production tasks, they found that interaction in both modalities is beneficial for L2 development with no significant differences between either communication media. The results suggest that type of medium may not play a role in positive learning effects associated with interaction. However, further empirical research is needed to be able to generalize these findings. The present study sought to address the lack of research on the effects of Teletandem on lexis and complexity in the L2.

As mentioned previously, robust evidence for the superiority of CALL vs. FTF is still warranted (CEREZO; BARALT; SUH; LEOW, 2013; LEOW; SUH, 2015). More particularly, research comparing the FTF and Teletandem media in L2 development is practically nonexistent, with only one recent quantitative study conducted by Suh & Leow (2020). Craig and Kim (2012) is one of the few studies that has sought to compare the **effects** of FTF vs. Teletandem on L2 oral production performance and anxiety. Participants were 40 L1 Korean learners of English from a private, mid-sized Korean university. They

were separated into two groups: FTF and videoconferencing. Results revealed no significant difference between oral production performance in FTF vs. videoconferencing modes. Furthermore, there was a significant correlation between the scores on FTF and video-conferenced interviews. Despite the lack of significance found in the results of this study, the question still remains whether or not there is an effect by type of media (Teletandem vs. FTF) on lexical L2 development or global complexity.

In spite of the scarcity of Teletandem research, there have been numerous empirical studies that have investigated how SCMC in general compares to FTF interaction. For example, Ziegler's (2015) meta-analysis found a small advantage for interaction in SCMC on measures of overall L2 learning outcomes, interaction on productive and written measures, and a small advantage for FTF interaction on receptive and oral learning outcomes. A myriad of empirical studies in SCMC have investigated L2 development, including unfocused grammatical items (SHEKARY; TAHRIRIAN, 2006), focused grammatical items (SHINTANI; AUBREY, 2016; BARALT, 2013; SACHS; SUH, 2007; YILMAZ, 2012; YILMAZ; YUKSEL, 2011), grammatical accuracy (SUH; LEOW, 2020), L2 lexical development (DE LA FUENTE, 2003; SMITH, 2004, 2005), and awareness (SACHS; SUH, 2007; GURZYSNKI-WEISS, AL KHALIL; BARALT; LEOW, 2015).

Despite the extent of qualitative research on SCMC vs. FTF, to date there have only been a few published empirical studies (AKIYAMA; SAITO, 2016; BARALT, 2013; SAITO; AKIYAMA, 2017; SUH; LEOW, 2020) that have compared the efficacy of SCMC and FTF on L2 grammar development. In her study, Baralt (2013) included 84 adult L1 English learners of Spanish who completed cognitively simple vs. cognitively complex tasks in FTF vs. SCMC, while receiving implicit corrective feedback for their errors. Participants in the FTF group who performed the cognitively complex task exhibited significantly more learning of the Spanish past subjunctive form than those who performed the simple task, while in the SCMC group the opposite effect was discovered. While the SCMC group participants who performed the cognitively complex class task did not learn much at all, the SCMC participants who completed the simpler task performed best out of all the groups. Thus, we can conclude that it is not necessarily the type of media that determines L2 outcomes, but possibly the type of task.

In terms of lexical gains in FTF vs. computer mediated communication (CMC), de la Fuente (2003) sought to address whether CMC interaction was as effective as FTF interaction in promoting productive and receptive lexical knowledge. The results indicated that participants in both groups experienced productive and receptive gains in the development of L2 vocabulary. Additionally, the study revealed that while the CMC group did not produce the same results, the FTF group demonstrated significantly higher productive skills on the immediate and delayed post-tests. The findings suggest that FTF might be more favorable than CMC for immediate oral productive acquisition. On the other hand, however, are studies

such as Payne and Whitney (2002), whose findings revealed higher oral proficiency scores for learners participating in online and FTF interactions in comparison with learners who partook only in FTF interaction. These findings provide encouraging evidence in favor of technology in the classroom.

In addition to lexical accuracy, this study will also focus on complexity which can shed light on the richness, elaborateness, and diversity of a learner's interlanguage system (HOUSEN; KUIKEN, 2009). Complexity, accuracy, and fluency (CAF) measures have mostly been used to evaluate L2 written and oral performance resulting from task complexity (e.g., JACKSON; SUETHANAPORNKUL, 2013; SKEHAN; FOSTER, 2012); task repetition (e.g., AHMADIAN; TAVAKOLI, 2011; BYGATE, 2001; KIM; TRACY-VENTURA, 2013), and planning time (ELLIS; YUAN, 2005; FOSTER; SKEHAN, 1999; HSU, 2015; ORTEGA, 2005), with only a handful of studies having examined the development of these linguistic measures in oral production across time in a pre-post design (e.g., FERRARI, 2012; POLAT; KIM. 2014; VERCELLOTTI, 2015). Moreover, type of media (FTF vs. Teletandem) as it relates to the development of CAF features has not been addressed in the Teletandem strand of research, and few empirical studies have sought to investigate CAF in SCMC in general. One of the few studies that has addressed both accuracy and complexity in a computer-mediated environment is Sauro (2012), who compared oral and written SCMC interactions of L2 speakers. The results revealed no significant differences between the two modes. In summary, although research into CAF seems to suggest that the triad appropriately captures relevant aspects of L2 performance, research that addresses the effect of type of media on CAF–specifically complexity and accuracy in oral performance–is still needed.

Considering the mixed findings in this strand of research, it is important that the effects of these two modes of interaction continue to be researched, always keeping in mind that the findings may vary based on the dependent variables being investigated or the assessment tasks being employed, among other factors.

2.2 Aims of the present study

The present study aimed to address the effects of type of media on L2 learners' gains in both lexical accuracy and grammatical complexity.

The following research questions guided the present study:

1. To what extent does type of media (Teletandem vs. FTF) affect L2 learners' lexical accuracy gains?

2. To what extent does type of media (Teletandem vs. FTF) affect L2 learners' global complexity gains?

3. Methodology

3.1 Participants

Participants were 40 adult learners of Spanish, all native speakers of English enrolled in a fifth semester Spanish course at an American university. To supplement this course, students used the textbook *Puntos de Encuentro: A cross-cultural approach to advanced Spanish* (DE LA FUENTE; COBETA, 2014). Using a communicative approach, the course was designed with the objectives of improving oral and written expression, reviewing, and expanding basic structures of Spanish, developing an educated vocabulary, and learning about the histories and cultures of Spanish-speaking countries. To accomplish these aims, instructors promoted grammar, vocabulary, linguistic awareness, and intercultural competence in the classroom. The course curriculum comprised collaborative activities and debates, online blogging, oral presentations on historical, political, and social issues, and cross-cultural and cross-societal comparisons on areas such as political systems, environment, science and technology, colonization and independence, dictatorships and democracies, violence, poverty, and cultural products (e.g., music, cinema, art, literature).

3.2 Assessment Tasks

To measure participants' lexical accuracy and global complexity in oral production, one oral production assessment task was employed. It was a descriptive task that asked participants to recount the story of a set of four drawings related to computer education for children and some of the possible repercussions. Participants completed the oral production assessment task once shortly after the beginning of the semester prior to the first conversation session, and once at the end of the semester after the last conversation session. The task was recorded, and the recordings were transcribed by multiple researchers.

3.3 Procedure

Prior to the start of the experimental period, all participants were given a consent form and completed the pre-test, an oral production task. At the beginning of the academic semester, participants were separated into two equal-sized groups: a face-to-face (FTF) group and a Teletandem group. Both groups were provided with the same set of conversation topics related to the syllabus. The FTF group remained in a classroom, formed pairs, and had a 20-25 minute conversation in Spanish. All discussions were recorded. The Teletandem group reported to the language laboratory, where each participant was assigned a conversation partner from a Mexican university, and spoke with the partner for 50 minutes (25

minutes in Spanish, 25 minutes in English) via Skype. These conversations were also recorded on the computer. Both participants in every Teletandem pair were native speakers of their respective languages. Out of an original eight sessions scheduled over a two-month period, two sessions were lost due to a strike in Mexico and a national holiday. At the end of the experimental period, all participants completed the post-test, an oral production task.

3.4 Coding
3.4.1 Oral production tasks: Complexity

The oral production task was transcribed and coded for overall complexity. Analysis of Speech unit, or AS-unit, was used as the main unit of analysis, as proposed by Foster, Tonkyn, and Wigglesworth (2000). Foster et al. (2000) argue that this is an improved option for oral discourse, since it allows the inclusion of independent sub-clausal units, common in spoken language. The AS-unit consists of an independent clause or sub-clausal unit along with any subordinate clauses associated with either. False starts, functionless repetition, and self-corrections were all excluded from the analysis. Global complexity was accounted for by determining the mean length of unit (MLU), calculated as words per AS-unit (see Foster et al., 2000)

3.4.1 Global lexical accuracy

A lexical item was coded as an error if: 1) the word did not exist in Spanish, including utterances produced in the participants' L1 English and words invented by participants (e.g. *la picture*, 'the picture'), or 2) the word existed in Spanish but was used in the incorrect context. The latter often occurred with false cognates such as *discutir* ('to argue') or *realizar* ('to achieve', 'to carry out'). The percentage of lexical errors was calculated by dividing the word count of the transcription by the total number of lexical errors.

3.5 Data Analysis

All statistical analyses were conducted using SPSS statistical software (SPSS Inc., 2010). The statistical tests utilized included an independent samples t-test, one MANOVA, and one ANOVA. An independent samples t-test was employed in order to analyze if the values of the two groups (FTF and Teletandem) for each dependent variable were significantly different at the time of the pre-test. To address the first research question regarding the effect of type of medium on accuracy gains, a MANOVA was

used with group (FTF vs. Teletandem) as the independent variable and lexical accuracy as the dependent variable. To answer the second research question about the effectiveness of type of medium on gains in complexity, a repeated measures analysis of variance, ANOVA was used with type of medium (Teletandem vs. FTF) as the between-subject factor and time (pre-test vs. post-test) and type of task (descriptive vs. open-ended task) as the within-subject factors.

4. Results

An independent samples t-test confirmed that the means of the two groups (FTF and Teletandem) for each dependent variable were not significantly different at the time of the pre-test (lexical accuracy: $t = -.985$, $p = .331$; mean length of AS-unit : T=1.09, p=.28)

Research Question #1

The results revealed a significant difference in lexical **accuracy gains** between groups, with the Teletandem group experiencing significantly more lexical gains (F (1, 38) = 5.02, p = .031). Descriptively, since the Teletandem group only improved slightly from pre- to post-test ($M = -.056$, $SD = 1.40$), it would seem that the statistical significance resulted from the FTF group getting worse from pre- to post-test ($M = 1.03$, $SD = 1.66$).

Research Question #2

Means and standard deviations for the mean length of AS-unit before and after the treatment are reported in Table 1. The repeated measures ANOVA analysis revealed that learners showed a significant increase in the mean length of AS-unit across time, F(1,38) =9.74, p=.003, partial η2 = .204. The between subjects test determined a main effect for group, F (1,38) = 4.87, p = .03, partial η2 = .11, with the SCMC group outperforming the FTF group at both stages. While there was a significant main effect for group, no statistically significant interaction between time and group was revealed by the analysis, F (1,38) =.19, p=.16, partial η2 = .052. In other words, while both groups improved over time, type of medium did not have an effect on language complexity gains.

Table 1: *Descriptive information on Mean length of AS-unit at Stage 1 and Stage 2*

	Stage 1 Mean	Stage 2 Mean
Teletandem (n = 20)		
Task 1	18.02 (4.92)	20.81 (5.56)

Task	20.77 (5.48)	24.30 (6.99)
FTF (n=20)		
Task 1	16.38 (4.60)	18.15 (5.18)
Task 2	18.82 (6.08)	19.38 (4.88)

5. Discussion

With the growing presence of technology as part of the L2 curriculum, the main goal of the study was to examine how type of medium embedded in the language curriculum may affect L2 oral development, particularly as it relates to lexical accuracy and overall complexity.

Regarding research question one, the statistical analyses revealed that type of media (Teletandem vs. FTF) appears to have a significant effect on L2 learners' lexical gains. Although descriptively it would seem that the Teletandem group experienced very slight lexical gains, the FTF group significantly worsened. Overall, the results of the present study indicate that there is an advantage for Teletandem in terms of the L2 development of lexical accuracy, a finding also supported by Bueno-Alastuey (2011), Payne and Whitney (2002), Akiyama and Saito (2016), and Saito and Akiyama (2017). This particular finding provides empirical support for the use of interaction in video-based telecollaboration (Teletandem) across six sessions during one semester in the L2 curriculum on L2 development of lexical accuracy.

The second research question asked whether type of media (Teletandem vs. FTF) had an effect on learners' oral production, as measured by global complexity on two different oral production tasks. According to the results, both groups (FTF and Teletandem) experienced significant improvement in complexity by the end of the treatment. Fine-grained meta-analyses with strict inclusion criterion of mostly methodologically sound designs, have also found no significant difference between SCMC and FTF on L2 development (SUH, 2015; ZIEGLER, 2013), in addition to Suh & Leow's (2020) recent study.

After two months of participating in tele-collaborative and FTF interaction, participants' mean length of AS-unit was statistically longer, which could be due to several factors. It appears that participants in the Teletandem group were able to receive rich input from native speakers containing elaborate grammatical structures as well as opportunities to produce output and negotiate meaning, key components of L2 development (MACKEY, 2012). Meanwhile, it seems that the FTF group was able to benefit from peer interactions with nonnative speakers, with similar opportunities to receive input, receive corrective feedback and produce modified output (e.g. SAITO; LYSTER, 2007), which could have played a facilitative role in helping students develop more complex language structures.

While type of medium does not seem to matter for global complexity, Teletandem appears to have a significant effect on L2 learners' lexical accuracy, which could be explained by the inherent differences

of interlocutor type. While the FTF group interacted with fellow L2 learner peers, the group that participated in tele-collaboration interacted with native speakers of the target language who presumably may use richer and more complex vocabulary than nonnative speakers. Akiyama and Saito (2016), found that while telecollaborative interaction with native speakers led to significant development in vocabulary, there were no significant gains in grammar. Along the same lines, Bistline-Bonilla (2020) also found patterns indicating that those who interacted via SCMC with a more proficient speaker demonstrated greater lexical accuracy gains and retention.

Although native speakers may have also used more complex language overall, the Teletandem group did not benefit more in terms of global complexity than the FTF group; only lexical accuracy was impacted by type of medium. This finding is not surprising given that previous research has shown that interaction in FTF (KECK et al., 2006; MACKEY; GOO, 2007) and CMC environments (BLAKE, 2000; FERNÁNDEZ-GARCIA; MARTÍNEZ-ARBELAIZ, 2002; PELLETTIERI, 2000; TUDINI, 2003) yield more instances of negotiation of lexical items than grammatical items. In other words, the majority of language related episodes (LREs) are related to lexical items, with learners frequently failing to notice morphosyntactic structures (WILLIAMS, 1999). Furthermore, Mackey and Goo's (2007) meta-analysis found that interaction was more effective in fostering lexical development than grammatical development. Future studies may consider exploring this issue further by examining L2 learners' interactional opportunities afforded not only by telecollaboration but also by type of interlocutor and how specific aspects of interaction in telecollaboration could draw learners' focus toward certain aspects of vocabulary learning.

While previous research on SCMC has found that this type of medium supports learning of lexical items (e.g. SMITH, 2004; DE LA FUENTE, 2003) and grammatical features, (SACHS; SUH, 2007; SAURO, 2009; SUH; LEOW, 2020), this study adds to the evidence of L2 development as measured by lexical accuracy and global complexity. Overall, this study, along with others previously mentioned, lends support to the notion that not only do SCMC and FTF contexts elicit similar interactional moves (including negotiation for meaning, provision and reception of feedback, production of modified output), but that interactions in both mediums lead to similar L2 complexity gains and even greater lexical accuracy gains.

6. Limitations and suggestions for further research

The limitations of this study should be addressed in any further replications or similar research. Most importantly, only one oral production assessment task was employed, and it was only somewhat structured, since it included explicit instructions and accompanying drawings to prompt a certain line of

thinking in the participants. As Skehan (2009) points out, structure tends to lead to greater accuracy. De Jong and Vercellotti (2016) highlighted the importance of investigating features that constitute task complexity when they found unexpected task differences in participants' lexis and fluency after using a number of picture-based narrative prompts. Therefore, it is difficult to discern if the results of this study were subject to task effects and future research should include a second oral production task that allows for an open-ended response.

In addition, only one measure was used to analyze the accuracy measures: number of errors. This affects the internal validity of the study, and any future research should consider using more than one measure of accuracy, such as error-free T-units or weighted error-free units. Along the same lines, only one complexity measure was used in this study, which may be too broad to adequately capture this construct. Norris and Ortega, (2009) and Foster et al. (2000) argue that complexity is not a one-dimensional construct; thus, future studies should include additional measures, such as subordination, to provide a more fine-grained analysis of gains in complexity. Future studies should also examine fluency, the last component of the CAF triad, in order to achieve a more comprehensive assessment of L2 development.

Furthermore, since the Teletandem group only participated in six, 20-25 minute interaction sessions with their Mexican counterpart, due to external factors, it is difficult to tell whether or not Teletandem impacted L2 development. More interaction time over a longer period of time might be needed to make any claims about the superiority, or lack thereof, of this type of medium over FTF interaction.

Finally, any replication of this study should consider a larger participant sample size.

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