Online Chat in the Foreign Language Classroom: From Research to Pedagogy [1]

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Abstract

The study was carried out within the framework of second language acquisition (SLA) theory and investigated whether synchronous computer-mediated communication (SCMC) or on-line chat would lead foreign language (FL) learners to engage in a more acquisition-rich discourse than would interaction in the oral mode. During two different class periods, eight university FL (foreign language) students of Spanish were paired to complete a similarly structured interactive language task in each mode of communication. The results revealed that in both the oral and the electronic modes learners spent equally large percentages of their turns negotiating meaning and pushing each other to more comprehensible L2 (second language) production, suggesting that the nature of the communicative activity had a greater impact on the quality of discourse for L2 acquisition than did the mode of communication. This finding provides empirical support for the use of structured interaction through SCMC as a tool to promote L2 acquisition in the FL classroom, while casting doubt on the effectiveness of informal paired and group electronic conversation, such as that which occurs in Internet chat rooms, as a means of obtaining acquisition-rich L2 practice. The study offers several recommendations for using SCMC with FL learners.

Resumen

Este estudio se llevó a cabo bajo el marco teórico de la adquisición de segundas lenguas y comparó la interacción producida por parejas de estudiantes de lengua extranjera mientras trabajaban en tareas comunicativas oralmente y por Comunicación Sincrónica Mediada por Computadora (SCMC, por sus siglas en ingles). El objetivo fue averiguar si el modo electrónico fomentaría un discurso más benéfico para la adquisición de una segunda lengua (ASL) que el modo oral. Durante dos distintas sesiones de clase, cuatro parejas de estudiantes completaron dos tareas comunicativas parecidas, estructuradas para fomentar la interacción, una en el modo electrónico y una en el modo oral. El análisis reveló que el discurso fue igual de interactivo, con parecidas proporciones de las secuencias discursivas que la teoría de ASL postula que promueven el desarrollo lingüístico. Este estudio ofrece apoyo empírico para el uso de SCMC para llevar a cabo tareas comunicativas en el salón de lengua extranjera. Sin embargo a la vez cuestiona la efectividad para el desarrollo lingüístico de los salones de Chat, puesto que allí la conversación rara vez es estructurada para fomentar la interacción. Basado en los resultados, se hacen recomendaciones para el uso de SCMC entre estudiantes de lengua extranjera.

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Introduction

This article explores principled pedagogical applications of text-based synchronous computer-mediated communication (SCMC), also known as online chat, in the foreign language (FL) classroom context. SCMC is a technology that allows two or more people to communicate with each other by typing messages that are exchanged instantaneously over a network and displayed in a shared posting space. Because of SCMC's resemblance to oral conversation, and because of the important role that oral interaction has been hypothesized to play in second language acquisition (SLA), language teachers are incorporating this tool into their courses with increasing frequency as a way to expand their learners' opportunities for L2 (second language) interaction. Research on SCMC and language learning offers some compelling evidence of this technology's potential as a tool for promoting L2 development, and some of this scholarship has either explicitly or implicitly suggested the following two notions, which are also beliefs shared by some L2 instructors: that the mere act of communicating in the L2 through SCMC is beneficial for L2 development, and that SCMC may offer learners a form of language practice that is superior to oral interaction. However, the body of SCMC scholarship, to date, is unable to support either of these notions, in part because the research in this relatively new field has not been unified in its theoretical underpinnings, methods, or contexts of investigation. It is only recently that research has begun to systematically investigate L2 learners' interaction through SCMC within the paradigm of second language acquisition theory, and little research has actually compared the discourse of FL learners as they interact with each other orally and through SCMC. The present study therefore fills a critical need in the field by investigating how the mode of communication through which FL learners interact (oral vs. SCMC) impacts the quantity and quality of learner-learner interaction for L2 acquisition.

In this article, I first review SLA theory and research regarding learner interaction in the FL classroom, and then review the relevant scholarship on learner interaction in SCMC. Next, I present the study and discuss its results, and I conclude by exploring the study's implications for classroom practices with respect to learner interaction in SCMC.

Interaction, SLA Theory, and the FL Classroom

Learner interaction carried out in pairs or small groups is a hallmark of communicative language teaching, justified in part because it provides classroom learners more opportunities for L2 practice than teacher-fronted classroom interaction (Pica, Holliday, Lewis & Morgenthaler, 1989). Justification is also found within SLA theory, where both the more cognitively-oriented interactionist perspective and the sociocultural perspective posit that conditions for language acquisition are optimized when learners are involved in meaningful L2 interaction (Lantolf & Thorne, 2006; Ortega, 2007). But not all forms of language practice are the same, and only certain types of interactions are hypothesized to be meaningful and to promote L2 acquisition (Pica, 1994). One of the most widely studied is the negotiation of meaning, which refers to conversational exchanges that interlocutors use to resolve non-understanding. The prototypical negotiation

sequence involves three distinct moves: it begins with a listener's explicit or implicit indication of a problem in understanding a partner's message (e.g. by an echo question, clarification request, inappropriate response, or statement of non-understanding), which is followed by the initial speaker's response addressing that problem (e.g. through syntactic, morphological, phonological or semantic modifications of the problematic utterance), to which the speaker who indicated the problem can optionally react by acknowledging understanding or requesting further negotiation (Varonis & Gass, 1985). The negotiation of meaning provides learners with meaningful, and thus acquirable, L2 (i.e. input), because it makes target language messages more comprehensible (Long, 1985; Varonis & Gass, 1985), and the linguistic structures that encode them are more transparent and noticeable (Pica, 1994). Comprehensible input has long been argued to be necessary for acquisition, as has conscious attention to L2 form (Krashen, 1985; Schmidt, 1990). At the same time, negotiation can 'push' learners to produce more comprehensible output, which also leads to L2 acquisition (Swain, 1995). This is because signals for negotiation directed at learners' problematic utterances allow them to notice problems in their production, direct conscious attention to L2 form-meaning relationships, test-out hypotheses about these relationships, receive feedback on these hypotheses, move their L2 production in a more target-like direction, and ultimately expand their L2 competence (Pica et al., 1989; Swain, 1995).

In addition to instances of incomprehensibility, the mere need to produce the L2 in meaningful contexts can itself cause learners to notice gaps between what they want to say and what they actually can say, and these instances then become rich territory for language work that leads to L2 acquisition (de Bot, 1996; Swain, 2000). Swain and Lapkin (1998) call these instances language-related episodes (LREs) and argue that they are observable in interaction as those moments when learners "talk about the language they are producing, question their language use, or correct themselves or others" (p. 326). LREs push learners to produce modified and more comprehensible output, and more importantly, they mediate such acquisition-rich processes as conscious reflection on L2 form, hypothesis testing, and the development of new L2 knowledge. Other important discourse moves found in meaningful interaction include those aimed at engaging learners in a task, simplifying a task, and tempering frustration (Anton, 1999; Foster & Ohta, 2005). This type of affective assistance functions as a gateway to language learning as it helps learners engage higher mental processes such as volition (effort) and selective attention (Platt & Brooks, 2002) without which active participation and language learning opportunities would be compromised. Interaction is therefore hypothesized to be meaningful and acquisition-rich, not simply whenever learners and their interlocutors say or write in on-line chat something to each other, but rather when through interaction learners are engaged in understanding language, noticing and reflecting on L2 form, pushing their L2 production beyond the borders of their L2 competence, and creating new L2 knowledge. Negotiation of meaning, LREs, and affective assistance are features of interactive discourse that enable learners to stretch their L2 competence and abilities beyond what they may be able to do alone, thus creating the leading edge of their L2 development.

A good deal of empirical research suggests that the developmental benefits of interaction are not limited to situations in which learners speak with native speakers or teachers; peer interaction can also be a rich context for L2 development (Donato, 1994; Pica, Lincoln-Porter, Paninos & Linnell, 1996; Swain, 2000; Swain & Lapkin, 1998). These researchers argue that during interaction learners are able to share the role of a teacher/expert or a more capable peer, and therefore co-construct L2 meaning and knowledge and collaboratively surpass their individual L2 competence. However, several classroom-based studies have found the negotiation of meaning, and other types of LREs, such as providing corrective feedback and producing pushed or modified output, to be rare, or in some cases non-existent in learner-learner interaction, particularly in the FL classroom (Buckwalter, 2001; Foster, 1998; Foster & Ohta, 2005; Garcia Mayo & Pica, 2000). Foster and Ohta (2005) argue that learners may not be inclined to engage in negotiation work because it can be frustrating, de-motivating, and disruptive to conversation. However, Buckwalter (2001) and Varonis and Gass (1985) posit that in the FL context, negotiation may be less likely to take place because learners share an L1 (first language) as well as other frames of reference. With a shared L1 it is simply easier to switch to L1 to avoid or repair a breakdown. Having similar cultural and learning experiences can enable learners to comprehend each other with less verbal interaction than might be necessary among those who do not share frames of reference. Nevertheless, many researchers argue that these contextual factors can be mitigated, to a large degree, through the careful structuring of the language task in which learners engage (Crookes & Rulon, 1985; Doughty & Pica, 1986). Pica et al. (1993) predict that the discourse of peer interaction will be optimized for acquisition when learners are engaged in language tasks that pose some challenge to their L2 competence and require them to converge on a single outcome that is only possible by sharing unique pieces of information that they separately hold. Such information-gap activities, as they have been called, reduce shared frames of reference by providing participants with information unknown by their partners, and they give learners a purpose for communicating as well as a reason to listen to and comprehend their partners. Gass et al. (2005) offer convincing data from a classroom-based study in which this activity structure promoted the negotiation of meaning and language-related episodes in oral interaction among FL learners.

SCMC and Learner Interaction

L2 instructors and researchers have also explored how SCMC (online chat) might mitigate some of the factors that can hinder classroom interaction. Research has found that SCMC shares important features with the oral mode, including enabling real-time, meaningful interaction between learners (Chun, 1994; Pellettieri, 2000; Smith, 2003), and engaging many of the same cognitive processes that underlie oral language production (Payne & Whitney, 2002). As such, L2 practice through SCMC can be useful for developing L2 skills, including oral proficiency (Kost, 2008). But the real attraction of SCMC may lie in the features that distinguish it from the oral mode, including its non face-to-face interface, the slower pace of typing as compared to speaking, and the visual display and permanence of the language produced. Researchers investigating

SCMC and learner interaction have suggested that these features afford learners reduced anxiety and greater motivation for using the L2 (Beauvois, 1998; Chun, 1994) and enable learners to better notice L2 form (Lai & Zhao, 2006), to produce more L2, and to engage in more meaningful interaction than they might orally (Beauvois, 1998; Freiermuth & Jarrell, 2006; Kelm, 1992; Kern, 1995; Oliva & Pollastrini, 1995). In other words, this research suggests that SCMC may be better for promoting acquisition-rich interaction among FL learners than the oral mode. However, this is a hypothesis that has yet to be systematically tested. Several of the studies mentioned did not compare interaction samples generated in each mode, but rather made impressionistic comparisons based on experiences with learner oral interaction from the perspective of an instructor. Among the small number of actual comparison studies, the results have been contradictory. For example, some of these studies report increased L2 production in SCMC (Kern, 1995; Sullivan & Pratt, 1996) and increased interaction (Freiermuth & Jarrell, 2006; Kern, 1995); while others find that these results are either inconsistent or do not occur at all (Bohlke, 2003; Fitze, 2006; Warschauer, 1996). Unfortunately, the lack of a unifying theoretical and methodological paradigm among these studies complicates the interpretation and comparison of their results.

Two specific methodological factors may be responsible for much of the variability and the contradictions found among the comparison studies: the participant grouping and the language activity used to generate learner interaction. All of the studies relied on open-ended discussion activities, and all but one study focused on groups of learners as opposed to pairs. A fair amount of research, including research on SCMC, has found open-ended discussions to be far less effective in promoting meaning and form-focused interaction than information-gap tasks, which require students to exchange information to arrive at a single solution (Crookes & Rulon, 1985; Pellettieri, 2000; Pica, Kanagy & Falodun, 1993). Moreover, in a group situation, when learners are not required to offer, receive, and manipulate information from the others, it is less likely that the discourse will be interactive (Pica & Doughty, 1985; Pica & Doughty, 1988). This is particularly the case in SCMC, where every user can potentially "speak" (i.e. post their message) at the same time. The more participants within a group, the greater the number of messages that can be posted, and the harder it becomes to read and respond to them, especially since only a limited number of messages can fit on the screen at one time. When the conversation is not goal oriented (i.e. there is no specific outcome to which learners must arrive), topics can change rapidly since each learner can choose to follow up on particular messages in a different manner. Slower typists can find that by the time they compose and post their message on one topic, others in the group have already gone on to one or more different topics. The outcome, noted in several studies of SCMC interaction (e.g. O'Rourke, 2008; Smith, 2003; Warschauer, 1996), can often be disconnected discourse in which learners express themselves more than they pay attention and respond to their interlocutors.

Thus far, Fernández-García and Martínez Arbelaiz (2003) seems to be the only study that has used the SLA theoretical framework to compare oral and SCMC

interaction produced by the same FL learner dyads, or pairs. Their study involved FL learners of Spanish, and investigated whether the mode of communication would impact the extent to which the pairs engaged in the negotiation of meaning. Their data demonstrated that the dyad structure eliminated much of the problem of disconnected discourse found in previous SCMC studies involving groups of three or more participants, and their analysis revealed that the mode of communication did not impact the degree to which learner dyads engaged in negotiation. However, they found that the incidence of the negotiation of meaning among learners was very low in both modes. The researchers offer two explanations for this result. The first is that the learners shared many cultural frames of reference, which, as was discussed earlier, facilitate comprehension and can reduce the need for the negotiation of meaning. Second, they found that when the opportunity for negotiation did arise, the learners did not push themselves to successfully communicate, but rather resorted to their shared L1 to avoid communication breakdown. Fernández-García and Martínez Arbelaiz note that "learners resort to the L1 when they experience difficulties to express an idea in the L2. The use of L1-based strategies helps the learners to keep the flow of conversation going without fully exploiting their resources in the L2" (p. 126). Considering their results with those of other studies suggesting that classroom learners do not exploit the negotiation of meaning or produce pushed output in interaction, Fernández-García and Martínez Arbelaiz conclude that negotiation is not a significant resource for classroom FL learners in either SCMC or the oral mode.

Fernández-García and Martínez Arbelaiz's study (2003) represents a more carefully designed and theoretically motivated comparison than other studies conducted to date, but their conclusions still must be interpreted cautiously. First, their study focused almost exclusively on the negotiation of meaning and not on a wider range of acquisition-rich discourse moves, and like other studies, its data came from open-ended conversation activities rather than structured language tasks. One activity asked learner pairs to find out about each other's lives before coming to the university, and the other asked them to find out about each other's plans after graduation. These activities do require learners to exchange information, but since nothing is to be done with that information, learners are not compelled to listen to or comprehend their partners, nor are they required to engage in extended discussion. If learners do not find the questions or their partners' responses interesting or stimulating, they may legitimately complete the activity in three or four conversational turns, thereby reducing the opportunities to negotiate meaning, engage in LREs, and produce comprehensible output.

Research Questions and Procedures

The present study was carried out within the framework of SLA theory and investigated whether SCMC would lead FL learner pairs to engage in a more acquisition-rich discourse than would interaction in the oral mode. To best study the potential of either mode of communication for promoting acquisition-rich learner discourse, it is necessary to create a context in which this type of language interaction is most likely to occur. This study therefore represents a

more carefully designed comparison than previous research because it utilizes a structured language task, rather than an open-ended conversation, as a data collection tool. As was discussed earlier, learners have been found to be far more likely to engage in acquisition-rich discourse during structured language tasks than during open-ended conversation (Doughty & Pica, 1986; Pellettieri, 2000; Pica et al., 1993).

The participants were all native English-speaking students enrolled in the same university-level intermediate Spanish course in the United States. During two different classroom sessions, learners were paired to carry out similar information-gap tasks. In one session the task was completed orally and in the other it was completed through SCMC. To achieve a valid comparison, learners were paired with the same partner for each task, but due to irregularities in attendance, only four pairs provide the data for this analysis. Seven of these students are female and one is male. All had some level of familiarity with online chat, but only one student claimed to use it somewhat frequently (e.g. to communicate with friends), and none had used SCMC to practice Spanish. Classes met three times per week for 65 minutes each. Both the textbook and the teaching methodology used in the course were communicatively oriented. While class sessions regularly included several short pair and small group activities targeting specific language structures or skills, prior to this study students had not spent the majority of a class session focusing on only one language task involving unrehearsed (i.e. spontaneous) interaction, nor had classroom activities included interaction through SCMC. At the time of the experiment, students were studying the vocabulary of technology and inventions and were learning to express conjecture in Spanish.

Following Pica et al. (1993), the tasks were designed to require learner pairs to converge on a single outcome, which was only possible by sharing the unique pieces of information that they separately held. The SCMC task was called "police sketch artist" and one student played the role of the sketch artist and the other student took on the role of a person who had been robbed of his or her most valuable possessions. The person who had been robbed was given a sheet of paper with five pictures on it, representing the stolen items. This person's objective was to describe in detail the items pictured so that the sketch artist could draw a replica of them for a police search. Learners were given 20 minutes to complete this part, at which time they were asked to switch roles, and five new pictures were introduced. In this way each student had the opportunity to play each role one time during this total of 40 minutes of interaction. The oral task, entitled "catalogue order", was very similar. This task was contextualized as a shopper who never received five items he/she purchased through a catalogue, and therefore had to describe them to a customer service agent. As with the SCMC task, learners switched roles after 20 minutes. These tasks were not tied to any specific topic or language structure that students were studying at that time, rather, they were presented as a way to create an 'immersion' situation in which students had to engage in spontaneous (i.e. unrehearsed) L2 communication without recourse to their L1. In order to provide greater challenge to learners' L2 skills, to reduce shared frames of reference, and to promote negotiation

sequences and language-related episodes, the pictures selected for the tasks were purposely odd (e.g. padlocks, hotdog cookers, special plumbing tools) and represented vocabulary that students had likely not studied previously.

Both tasks were carried out during normal class time. In the oral mode learners were seated face-to-face with a binder placed between their desks to hide the picture sheets from their partners. For SCMC, all students with the same picture sheet were seated on the same side of a campus computer lab, while their partners were visually separated, seated in a different section of the lab. The oral task was completed first, with the SCMC task occurring three days later. Immediately before each task, students were given instructions on how to complete the task and were reminded to use only Spanish. Additionally, they were told to use circumlocution in the absence of knowing exactly how to say something, to feel free to indicate communication with their partners, and to help their partners out when they needed it. They were not permitted to consult their text or a dictionary. Students were allowed the remainder of each class session (approximately 40 minutes) to complete the task. The oral task was videotaped and then transcribed, and the SCMC transcripts were printed directly from the software. Upon completion of the second task, students were interviewed about their experiences interacting in each mode.

Coding and Analysis

The analysis relied on both quantitative and qualitative measures. Transcripts were first analyzed to quantify the number of turns taken and the total number of words produced in each mode. Where turns consisted solely of utterances such as "uh-huh" (i.e. back-channel cues), both the turn and the word were excluded from quantification. This allowed for a comparison of the amount of language produced by each pair in each mode. In accordance with SLA theory, the following sequences were considered examples of acquisition-rich discourse moves: the negotiation of meaning (Varonis & Gass, 1985), language-related episodes (Swain, 2000), and affective assistance (Foster & Ohta, 2005; Platt & Brooks, 1994). Negotiation routines were coded following the Varonis and Gass (1985) model. Though this model was originally conceived to describe oral interaction, several studies have demonstrated its suitability to describe electronic discourse (e.g. Lai & Zhao, 2006; Pellettieri, 2000; Smith 2003). LREs were identified as turns outside of negotiation routines in which learners requested or offered linguistic assistance, modified their own or a partner's previous utterance, or engaged in linguistic metatalk (e.g. explicitly discussed the nature of grammar structures). Affective assistance was defined as any offer of task-assistance, praise or motivation. To compare quantities of acquisition-rich interaction in both modes, an interactive turn percentage was calculated by dividing the number of total turns by the number of turns that involved any of the target discourse features. Though in principle there is an overlap between the categories (e.g. modified output can occur in LREs or in negotiation, and affective assistance can occur within negotiation and LREs or alone), turns with these overlapping features were only counted once. Because the purpose of the analysis was mainly descriptive and the sample size was small, no statistical tests were conducted.

Results and Discussion

TABLE 1: TURNS PER PAIR IN ORAL AND SCMC MODES (N AND %)

	Pair 1		Pair 2		Pair 3		Pair 4	
	Oral	SCMC	Oral	SCMC	Oral	SCMC	Oral	SCMC
Total	292 *+79%*	163	433 *+98%*	218	185 *+49%*	124	349 *+76%*	198
Negotiation	190 *65%*	90 *55%*	225 *52%*	85 *39%*	72 *39%*	34 *27%*	185 *53%*	111 *56%*
LRE	12 *4%*	10 *6%*	13 *3%*	7 *3%*	15 *8%*	11 *9%*	7 *2%*	10 *5%*
Affective	35 *12%*	26 *16%*	87 *20%*	39 *18%*	37 *20%*	37 *30%*	31 *9%*	24 *12%*
Other	55 *19%*	37 *23%*	108 *25%*	87 *40%*	61 *33%*	42 *34%*	126 *36%*	53 *27%*

As Table 1 demonstrates, the analysis revealed that all pairs took more turns in the oral mode (from 49% to 98% more) than in SCMC, but this result is somewhat unsurprising, since one can verbalize utterance turns faster than type them. However, it appears that SCMC's slower pace allowed learners to pack more words into each utterance, because the large difference in turns between the two modes did not translate into large differences in the amount of language produced. Two pairs produced roughly the same number of words in both modes, one pair produced 10% more words in SCMC, and one produced 16% more words orally. The analysis also revealed that learners were highly interactive both orally and in SCMC, with the percentage of interactive (i.e. acquisition-rich) turns ranging from 60 to 81% of each pair's total turn at talk. For three pairs, the interactive turn percentage was higher in the oral mode by 1%, 4%, and 15% respectively, but for one pair it was 9% higher in SCMC. While LREs were frequent, most occurred within negotiation sequences, so the percentage of exclusively LRE turns was not higher than 10% for any pair in either mode. Exclusively affective assistance turns accounted for 9% to 20% of the interactive turns in the oral task, and 12% to 30% of the SCMC interactive turns. Three pairs produced more affective assistance turns in SCMC, 4%, 10%, and 3% respectively, and the remaining pair produced 2% more orally. Thus, as was the case with the number of words produced, with interactive turns there is no clear tendency favoring one mode over the other. The only feature that was not present in great amounts in either task was metalinguistic talk. While students provided each other linguistic assistance with grammatical features, it was not common in either mode for them to explicitly discuss the nature of grammar structures. This is to be expected, since both tasks were primarily meaning focused (Pica, 1994). Tasks with goals requiring more explicit decisions concerning grammar form would likely give rise to more LREs (Swain & Lapkin, 2001).

These results indicate that SCMC itself did not produce changes in the quantity of L2 production and interaction in a manner that would radically impact L2 acquisition. This result partially corroborates the results of Fernández-García and

Martínez Arbelaiz (2003). However, in sharp contrast to that study, and others focusing on FL learners (mentioned above), negotiated interaction and modified or comprehensible output were not scarce. These FL learners spent a large number of their turns, both orally and in SCMC, engaged in acquisition-rich dialogue, with the majority of the interaction dominated by form- and meaning-focused talk. Therefore, in response to the research question posed, the findings suggest that the mode of communication alone does not impact the quantity nor necessarily foment a more acquisition-rich quality of FL learner interaction for L2 acquisition. The following are representative samples from the oral and SCMC data:

A. *Linguistic assistance: help (oral)*

1	GL:	ok y el juego tiene er es…
2	BN:	¿una mesa?
3	GL:	no no

B. *Negotiation: feedback (oral)*

1	RT:	creo que no es, pero es como, el mira como…
2	SP:	¿se mira como ese?
3	RT:	se mira como

C. *Negotiation, linguistic and affective assistance (SCMC)*

1	LJ:	La próxima es una cosa extraña
2	HL:	Dios mío. Que hices con esta cosa?
3	LJ:	Yo hizo para lapieces
4	HL:	Para una lápiz?
5	LJ:	Sí
6	HL:	Es un borrador para corectar?
7	LJ:	No, uso la cosa para cortar el lápiz
8	HL:	Oh, yo entiendo
9	LJ:	Bien!
10	HL:	Para hacer el punto mas agudo
11	LJ:	Si, y la cosa es eléctrico
12	HL:	Es en la forma de una caja?
13	LJ:	Mas o menos, aparece como una caja para gatos
14	HL:	Que chistosa eres! Ok, muy bien.

Each of these examples demonstrates how learners used their L2 resources together and shared the role of the more capable peer to help each other stretch and grow their L2 competence. In line A1, when GL has trouble completing her sentence, BN offers the phrase "una mesa" to assist her. Note that GL did not explicitly request help, but perhaps BN sensed the need from her tone and hesitation and cooperatively offered the help. In B, we see that SP does not fully understand RT's non-target form "el mira como" and asks for clarification by correctly recasting the non-target form. RT acknowledges this correction (line B3) and modifies his original incorrect utterance to the correct form. Example C exemplifies a range of acquisition-rich discourse moves. In C1 LJ implies that her picture will be difficult to describe by stating that it is "una cosa extraña", so in C2 HL begins her utterance with the phrase, "Dios mío", which serves as affective assistance to let LJ know she understands that it might be difficult. She then asks a question to assist LJ to describe the object. In C3 when LJ tries to say she uses the object for pencils, she uses a non-target form "lapieces". Having trouble understanding, HL initiates negotiation with a clarification request that offers a

correct model, "una lápiz". When LJ replies without giving the type of detail HL needs to complete her part of the task, she asks another question, whose form provides a syntactic model for a more elaborate description: modification by a prepositional phrase of purpose.

Interestingly, in C7 we see that with HL's assistance, LJ moves to a more semantically and syntactically elaborate description of her item, and incorporates HL's earlier corrective model. She has moved from "una cosa extraña" to "yo hizo para lapieces" to "uso la cosa para cortar el lápiz", and afterwards LJ continues to use more elaborate expression. In C10, for example, LJ could have responded with a simple "sí", as she did in C5, but instead she responds with more detail, and in C13 she again uses a prepositional phrase to modify "una caja". This is precisely the type of pushed output Swain (1995) argues is necessary for linguistic development, and it was brought about through the learners' collaborative discourse. The affective support exemplified in C2, C9, and C14 played an important role in keeping learners motivated to stretch their language skills, as will be discussed later.

An important contribution of this study's findings to the growing body of scholarship on SCMC is that they strongly suggest that the nature of the language task in which learners engage will have a far stronger impact on learner discourse and its benefit for L2 acquisition than will the unique features of the SCMC mode alone. As was mentioned earlier, some studies of SCMC have suggested that unique features of this technology alone promote more interaction and a superior form of L2 practice than does FL learner interaction in the oral mode. Such an assumption renders the nature of the language task as less important than the mode of communication, and it is perhaps for this reason that the comparison studies conducted to date have relied on open-ended conversation instead of a structured language task to generate samples of interaction. As was noted previously, these studies have often come to contradictory conclusions, and as a result some have found little or no evidence of acquisition-rich discourse to examine. The present study, however, relied on the large body of empirical research on L2 interaction and language tasks (e.g. Crookes & Roulon, 1985; Doughty & Pica, 1986; Pellettieri, 2000; Pica et al. 1993) and assumed that structured language tasks would create a collaborative context which would promote high levels of acquisition-rich discourse. In each of this study's tasks, learners were given a shared goal, and in order to successfully achieve it, they had to exchange specific information in detail. As such, they could not complete the task without extended collaborative interaction, and could not easily avoid taking on linguistic challenges, as exemplified in Sample C. In line C8, HL acknowledged that she understood the object LJ described, yet because the task required her to draw an exact replica of LJ's picture, she went on to seek further clarification and more precise details from her partner (lines 10 & 12). This move resulted in more L2 production practice for HL, and it also resulted in LJ producing additional and more comprehensible L2. The tasks' requirements therefore created a context in which it was not only necessary, but also socially appropriate to question a partner's L2 usage and to offer and to receive help. The context created in open-ended discussions is quite different,

which likely explains why studies of FL interaction (oral or SCMC) which rely on that type of activity find little to no negotiated interaction. Open-ended discussion activities are not collaborative, problem-solving contexts; information is not exchanged for the purpose of jointly working towards a specific outcome or goal, so there is far less of a shared responsibility among participants to ensure the quality of the information and the accuracy of expression. Without this shared responsibility, challenging one's own L2 abilities, questioning a partner's linguistic accuracy, and asking for or offering linguistic help are more likely to be avoided because this requires hard work, and also because it may be perceived as more 'face-threatening' (Goffman, 1967). This study therefore suggests that where the goal of using SCMC is to provide FL students with meaningful L2 practice which is abundant in the types of interactive sequences that SLA theory predicts will aid L2 development, it is not enough to simply send students into cyberspace to have a conversation with others. Their interaction must be structured. Whether learners interact orally or through SCMC, they will be more likely to challenge their L2 resources, to negotiate meaning, and to ask for and to offer assistance to their partners when the task they carry out requires them to do so.

In principle then, the more this type of discourse can be promoted in learner interaction, the better the L2 experience should be for learners. However, Aston (1986) argues that in classroom practice, "tasks designed to maximize negotiation for meaning may end up de-motivating and discouraging students by making them feel unsuccessful and ineffective" (p. 134). The present study's data, which show learners engaging in negotiated interaction in an average of 54% of their turns at talk, offers a good case for testing this argument. If such a large amount of negotiated interaction were discouraging, we should expect to find large numbers of turns in which learners produced minimal L2 responses, such as, "no comprendo", and perhaps a high incidence of L1 usage; we should also expect some pairs to have given up on completing the task. But the data reveal quite the opposite result. Throughout their interactive turns, learners demonstrated sustained efforts at modifying and producing more elaborate L2 utterances and at cooperating to co-construct meaning with partners, all of which allowed all four pairs to successfully complete each task. Furthermore, only 23 L1 words were found among all the transcripts; these were mostly words such as "like" and "ok", produced mainly in the oral task. Post-task interviews offered additional evidence that these high levels of negotiated interaction were not de-motivating. All eight learners said that despite experiencing some frustration trying to communicate with their partners, they enjoyed doing the tasks, found them to be fun, and would like more of this type of L2 practice in their Spanish classes. It seems that the collaborative nature of this FL learner context, filled with both linguistic and affective assistance, was crucial in tempering learners' frustration and sustaining their motivation. One student noted, "It got really hard sometimes, but my partner and I just laughed at it because it was so funny the things we had to say when we didn't know how to say something"; while another stated, "I was trying to understand her as much as she was trying to understand me, so we were in the same situation and could sympathize with each other. We joked a lot and it was fun, and that made it easier". Perhaps most importantly, all eight learners said they felt more confident about their L2 skills after completing

the tasks. These findings indicate that extensive negotiated and pushed L2 production is not necessarily counterproductive for motivation or meaningful interaction, and that learners can appreciate conquering challenges to their L2 abilities. Tasks can be designed to maximize these opportunities, provided that the challenges they include are reasonable, given the learners' level of L2 development.

The post-task interviews offered other valuable insights for structuring FL learner interaction. For example, seven of the eight learners stated that they tried harder to use only Spanish in these tasks than they normally did in their classes. When asked why, five learners said that it was because these activities were more fun than those they normally did in classes, so they felt more motivated. Six learners said that the combination of being explicitly told not to use English (their L1), and knowing that they were being recorded and given credit for the activity were also motivating factors. Learners were also asked about the modes of communication used. All eight learners said that they enjoyed the SCMC experience, but that they felt more comfortable, or simply preferred, doing the oral task. One learner did note that using SCMC helped temper his frustration level because it gave him more time to think about what to say. Three other learners said they preferred the oral mode because it was easier. They felt that they did not have to express themselves as precisely when speaking orally as they did through SCMC: that is, they did not worry so much about verb endings or how words were spelled when they were speaking orally. These students touched on one of the bigger acquisition-related benefits of SCMC: its visual display of language may make learners more consciously aware of L2 form, and as a result, attend to the structure of their own production more than they do orally (Lai & Zhao, 2006; Smith, 2008).

Conclusion

Although no appreciable differences were found in terms of the amount and types of acquisition-rich discourse learners produced in the two modes of communication, and although most of the learners involved expressed a preference for communicating orally, this does not suggest that SCMC is of no benefit for FL learners. On the contrary, this study points to both benefits and advantages of using this form of communication to enhance FL learners' language learning experience. This study's data suggest that, given a structured language task, FL learners will be likely to engage in a great deal of meaningful L2 practice of the type that SLA theory posits to be necessary or beneficial for L2 development. And while most students in this study, when asked to choose, stated they preferred interacting orally, they also stated that they enjoyed communicating through SCMC. Thus, SCMC can provide a pedagogically sound and enjoyable supplement to in-class oral interaction. One clear benefit of SCMC is that, unlike face-to-face oral interaction, it does not require that students be physically co-present to interact with each other, so FL learners can engage in L2 interaction outside of class time with classmates, with other learners across the globe, or even with native speakers. However, this study cautions instructors against relying on Internet chat rooms, as they often pose obstacles that hinder learners from engaging in acquisition-rich interaction. These rooms often involve

large numbers of chatters in open-ended communication, where topics change rapidly and messages often go without a response. In this type of context, even the most motivated learners can find it difficult to engage in negotiated interaction or push their own L2 production in extended conversation. Instructors should therefore structure chat sessions by setting up learner pairs or small groups, and assigning them goal-oriented, collaborative language tasks designed to challenge their current L2 developmental level.

This study provides other implications for using SCMC with FL students. Instructors should be explicit about their expectations for learners' performance, telling them, for example, to find alternate forms of expression when they do not know how to express themselves, to avoid using the L1, to ask for clarification when necessary, and to help each other. This study also suggests that learners may be more motivated to work hard and challenge their L2 resources in interaction when they know they will be accountable for their performance. This is one particular area where SCMC offers clear advantages over oral interaction because the discourse is automatically recorded and transcribed. Instructors should use these transcripts to evaluate the quality of learners' interactions, and offer learners credit for their efforts at participation. It is not advisable to give credit for accuracy, however, since the purpose of these interactions is developmental. The number of errors may increase when learners are stretching their L2 abilities, given the cognitive challenge involved (Robinson, 2001). Nevertheless, the transcripts can be exploited to promote metalinguistic talk through peer collaboration. Learner pairs can be asked to work with their transcripts, identify the forms with which they struggled in interaction, and discuss the correct L2 forms.

Another area where SCMC may offer an advantage over oral interaction is in promoting noticing. This study offers some additional evidence that the visual display of SCMC may heighten some learners' attention to L2 form, making them more likely to consciously attend to gaps in their abilities than they might orally. Recall that three students in this study stated that SCMC was harder for them because they had to pay more attention to correct verb endings, spelling, etc. Therefore, even in those FL classrooms where ample time is available for extended oral interaction, there is reason for instructors to consider incorporating task-based SCMC. Task-based oral interaction and SCMC may together offer a more complete and richer developmental experience for FL learners than oral interaction alone.

Finally, instructors who engage FL learners in SCMC should analyze their experiences and share their findings in scholarly publications. There is a great need to learn more about the actual processes and outcomes of interaction among learners in this unique context. This study constitutes an important contribution, but like much classroom-based research, it has several limitations. The number of participants was small; it is possible that greater differences in the amount of language and interaction generated in either mode may have been found among a larger number of learners. This study also focused on a rather homogenous group of learners at the intermediate level. It is possible that a more diverse group of FL learners at different proficiency levels would interact

differently in each mode of communication, and such differences may be of consequence for L2 development. To conclude, there is indeed much more that needs to be studied in this area.

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