Article

Researching Learner Self-Efficacy and Online Participation through Speech Functions: An exploratory study

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Abstract

This study explores the potential contribution of Eggins and Slade's (2004) Speech Functions as tools for describing learners' participation patterns in Synchronous Computer-Mediated Communication (SCMC). Our analysis focuses on the relationship between learners' self-efficacy (i.e. personal judgments of second language performance capabilities) and discourse roles displayed in the online medium. A small corpus of data was selected as a sample from a larger study, comprising one face-to-face interaction (FtF2) and one synchronous text-based chat interaction (SCMC2) between two participants: Celine, a high-self-efficacy (HSE) learner, and Concetta, a low-self-efficacy (LSE) learner. The chat-log and conversation transcript were analyzed by employing: (a) quantitative measures of participation; namely words and turns produced by the participants, (b) Dörnyei and Kormos's (1998) taxonomy of Communication Strategies, and (c) Eggins and Slade's (2004) classification of speech functions. Our results suggest that speech functions are indeed effective at describing the social roles enacted by learners during interaction across the two media, in terms of discourse dependence or independence, as well as dominance. Therefore, by complementing other methods, such as quantitative measures of participation and qualitative analyses of communication strategies, speech functions can contribute to provid-

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ing a comprehensive picture of the relationship between SCMC, learners' self-efficacy, and participation patterns.

1.   Introduction

This study explores the contribution of Eggins and Slade's (2004) Speech Functions to research into learners' participation patterns in second language (L2) interaction, with a focus on the relationship between learners' self-efficacy and social roles enacted in the online medium. Eggins and Slade's (2004) Speech Functions have been referred to previously in studies investigating the opportunities for interaction and collaboration afforded by Computer-Mediated Communication (CMC). Some of the variables that have been studied from a systemic-functional linguistic perspective include:

- the construction of social presence and community building, including uses of humor (e.g. Rourke, Anderson, Garrison, & Archer, 2007);
- the dynamics involved in argumentation and, more generally, features of CMC as a medium for communication (e.g. Bock, 2013; Coffin, North, & Martin, 2009);
- interactants' roles in academic discourse, especially in expert–novice relationships (e.g. Jones, Garralda, Li, & Lock, 2006; Yim, 2005).

However, very few of these studies have focused on L2 learners. Furthermore, to our knowledge, Eggins and Slade's (2004) Speech Functions have never been used to describe learner participation patterns with a view to clarifying the relationship between L2 self-efficacy and CMC. This study aims to contribute to filling this gap, in an attempt to arrive at a better understanding of this relationship, for the benefit of L2 learners and practitioners.

2.   Literature Review

According to interactionist perspectives on Second Language Acquisition (SLA), active participation in L2 interaction is a fundamental prerequisite for developing learners' competence in the target language, as it provides opportunities to receive linguistic input, produce output, and engage in negotiation of meaning (Long, 1981). Participation in these interactions can be affected by self-efficacy beliefs, or "personal judgments of performance capabilities in a given domain of activities" (Schunk, 1985, p. 208), which have been described as having a powerful influence over the learning process and, ultimately, over achievement (Bandura, 1997). More specifically, SLA research has identified

links between self-efficacy and: (a) learners' general willingness to actively engage in the learning process (Mori, 1999), (b) amount of L2 output produced (Dörnyei & Kormos, 2000), and (c) selection and use of learning (Pajares & Schunk, 2001) and communication strategies (Wong, 2005).

Communication strategies (CS) are especially relevant to our discussion, given that they have been a popular measure of learners' participation in CMC exchanges (e.g. Kost, 2008; Khamis, 2010). In the present study, CS are defined as mechanisms intentionally employed in order to solve L2 communication difficulties. From this perspective, which is shared by a number of researchers (e.g. Canale, 1983; Tarone & Yule, 1987), CS are used to assist in output, as well as input comprehensibility. More precisely, CS are mechanisms or steps called into action by speakers to compensate for breakdowns in communication due to time pressure, resource deficit, own-output, or other-performance problems.

Due to their emphasis on linguistic means used to negotiate meaning, an exclusive focus on CS as analysis tools may lead researchers to overlook the social and affective aspects of learning. In other words, CS may not be the most effective method of investigating speakers' engagement in self-representation, collaborative meaning and identity construction processes.

CMC studies adopting a sociocognitive approach, on the other hand, have highlighted the strong link between social processes and L2 learning (Gass & Mackey, 2006; Mori, 2004). From this perspective, CMC is viewed as a tool that provides "the opportunity for a group to construct knowledge thus, linking reflection and interaction" (Warschauer, 1997, p. 473).

From an interactional perspective, CMC research has identified several advantages over face-to-face interaction. Benefits reported in the relevant literature include increased output production and more equal participation by all learners, including those limiting their contribution in oral interaction (e.g. Lin, Huang, & Liou, 2013; Sauro, 2009). On the other hand, mixed results have also been produced, with some studies indicating no significant differences between the two modes of communication (Fitze, 2006), and others showing a higher amount of turns (Hussin, 2009; Jones et al., 2006) or words (Lai & Zhao, 2006) in the oral mode. These contrasting results can be related to a number of variables, including typing ability, learners' perceptions of their communication competence (Han, 2003; Thomas, 2012), and learners' communicative goals and social roles adopted (Jones et al., 2006; Vandergriff, 2006).

These inconsistencies, however, also suggest that quantitative measures of participation may only be able to provide limited information and that, overall, research methods could be improved. For example, regardless of the theoretical approach employed, research has suggested that text-based CMC may provide greater opportunities for symmetrical participation for learners who lack confidence in their oral performance capabilities (e.g. Sauro,

2009; Thomas, 2012). Yet, most studies aiming at establishing links between CMC and increased participation have employed general measures of *self-confidence* (e.g. Kissau, McCullough, & Pyke, 2010; Wu & Marek, 2010), rather than robust domain-specific scales of self-efficacy (for further discussion on the measurement of self-efficacy, see Bandura, 1997). Furthermore, as previously noted, much of the focus has been placed on linguistic and interactional aspects, most frequently by analyzing the participants' use of CS, while social processes of meaning and identity co-construction have been overlooked. Thus, partially due to limitations related to the research methods and tools employed, a clear link between the CMC medium and discourse roles adopted in L2 interaction by low-self-efficacy learners has not been established. In this study, therefore, we explore the potential role of Eggins and Slade's (2004) Speech Functions in clarifying such a relationship.

According to systemic functional linguistics, interlocutors jointly and dynamically construct interaction by using language, and, in the process, they negotiate their roles within the exchange activity (Halliday, 1985). Eggins and Slade (2004) classify Speech Functions (SF) into four categories: *Initiate*, *Continue*, *React Respond*, and *React Rejoinder*, depending on the discourse purpose they enact (definitions and examples of SF categories and subcategories are available from http://www.iris-database.org). These categories are linked to discourse roles that can be described in terms of (a) *dominance*, (b) *discourse dependency*, and (c) contribution to the *maintenance of talk*. *Dominance* reflects how speakers display control over the interaction by leading or monopolizing the use of Opening (Initiate moves) and Sustaining SF (i.e. Continue, Respond, and Rejoinder moves). *Independence* is achieved through Opening and React SF, such as Develop and Track moves. Conversely, *dependence* is realized through moves that are elliptically related to prior Opening or Respond SF in the form of answers, grants, or rejections. Degrees of *maintenance of talk* can be observed through the use of either Respond, which completes exchanges, or Rejoinder SF, which expands on propositions made by others, hence encouraging further talk. Rejoinders can also index independence; this is the case of Confront Rejoinders, which indicate negative alignment and assertively confront other participants' positions. Therefore, by providing information on participants' behavior in terms of discourse dependence or independence, and on the social roles adopted in initiating and sustaining discourse, Eggins and Slade's (2004) SF uncover the interactive patterns that may be supported by different kinds of media. This is important as these differences may affect opportunities for interlanguage development, for example, by influencing the amount and quality of the linguistic input, output, and feedback that become available to learners, as well as opportunities for discourse co-construction.

Indeed, some scholars have recognized the potential of SF for researching SCMC in the context of L2 learning. Shokouhi and Hamidi (2010), for

instance, used SF to describe the impact of the medium on discourse patterns during informal discussions by Iranian learners of English. These authors found that CMC facilitated the use of opening and continuing functions, which were employed by the participants for "informational and expressive purposes to regulate conversation, maintain social connections, and express their identity" (Shokouhi & Hamidi, 2010, p. 169). Other studies have taken a comparative approach, and have examined opportunities for participation afforded by face-to-face (FtF) and CMC media. Hussin (2009) analyzed interactions during collaborative essay writing and found a greater quantity of linguistic output in FtF, whereas SCMC facilitated learners' active roles (as evidenced by their use of Initiate and Continue moves). Hussin (2009) also observed that, when interacting online, learners seemed more concerned with managing social roles, rather than with negotiating linguistic input and output as in FtF exchanges. Similarly, Yim (2005) and Jones et al. (2006) found a link between medium and participants' choice of SF. These researchers observed that, when interacting through CMC, L2 learners were more likely to use Initiate moves and take on expert-type roles. On the other hand, in FtF, they preferred Respond moves, hence contributing only marginally to the construction of group knowledge. Among all these studies, Yim's (2005) is perhaps the only one to establish some link, though not explicit, between CMC and L2 self-efficacy through an analysis of Speech Functions. However, Yim's participants had already attained a very high level of proficiency in their L2 and used English for academic purposes; whether similar results would be observed in an L2 classroom at lower levels of competency remains to be seen.

In order to further clarify the role of CMC in promoting social interaction and meaning coconstruction, especially for low self-efficacy learners, more research is needed that examines the relationship between discourse structure and interpersonal roles. Our study aims to contribute to this scholarship by exploring the role of Eggins and Slade's (2004) Speech Functions as tools for the analysis of a small corpus of data, collected during student interaction in Spanish as an L2, both in SCMC and FtF. The research question that guided the design of this study is: What is the contribution of Eggins and Slade's (2004) Speech Functions to our understanding of the relationship between the CMC medium, L2 self-efficacy, and learners' participation patterns in L2 interaction? In particular:

- How can Speech Functions be used to investigate L2 learners' social roles in online and FtF interaction?
- What is the relationship between data obtained through analyses of Speech Functions and other data, namely: (a) quantitative measures of participation (words, turns) and (b) analysis of Communication Strategies?

3.   Research Method

The small corpus used in this article is part of a larger study which was conducted at an Australian University and involved a total of 51 students. The participants were enrolled in two subsequent semester-long courses for intermediate-level learners of Spanish as an L2. Participation was voluntary, and ethical clearance was obtained from the relevant University Committee. Each semester comprised 13 teaching weeks. Over the first semester, learners participated in three synchronous text-based (SCMC) and three FtF in-class communicative tasks designed for this study. Following the classification proposed by Pica, Kanagy, and Falodun (1993), these activities can be categorized as opinion-exchange tasks, also commonly referred to as discussion tasks. For the purpose of the exploratory analyses presented in this article, only data collected in one SCMC and one FtF interaction are included in our corpus. These interactions were recorded towards the end of the semester, specifically in week 10 for the SCMC task (SCMC2) and in week 11 for the FtF task (FtF2). SCMC2 explored what makes people happy, while FtF2 discussed the dreams and aspirations of the protagonist of a story, and how unexpected developments in one's life can affect satisfaction and happiness. Students were provided with open questions as discussion prompts, and were encouraged to exchange their personal views on the topics (task instructions are available from http://www.iris-database.org). Immediately before engaging in the SCMC2 and FtF2 discussion tasks, learners completed preparatory activities: for SCMC2, they read a one-page article titled "Las cuatro formulas de la felicidad";[2] for FtF2, they watched a 20-minute short film titled "Nada que perder," by Rafa Russo. Both the reading and film-watching activities were followed by comprehension tasks. These activities were designed to build learners' vocabulary and to provide contextual information on which to base the open discussions.

Data relative to the participants' self-efficacy beliefs were collected through 13 statements included in a questionnaire distributed at the onset of the study. The questionnaire used a five-point Likert-type scale; the self-efficacy subscale was developed by the first author, based on existing instruments (the self-efficacy instrument is available from http://www.iris-database .org). Internal reliability, calculated on a larger sample of respondents, was tested through Cronbach's Alpha, which returned a satisfactory result, at $\alpha = 0.86$ (for detailed information on survey items and reliability tests, see Sánchez-Castro, 2013). It should be noted, however, that the scale only focused on oral interaction. This is because the students had not used text-based SCMC in Spanish before participating in this study; therefore, they could not reliably assess their self-efficacy in a context with which they were not familiar.

From all the students participating in SCMC2 and FtF2, we selected as the foci of our analyses: Celine,[3] a high-self-efficacy (HSE) learner, and Concetta,

a low-self-efficacy (LSE) learner. The reason why these two participants were selected is purely utilitarian: Celine and Concetta are the only HSE and LSE students who interacted *with each other* on two separate tasks, hence providing the basis for comparative analyses. However, where relevant, we also included data relative to two other students, Charlotte and Cinthia, who formed triads with Celine and Concetta in SCMC2 and FtF2, respectively. The participants' profiles are provided in Table 1.

Table 1
Participant Profiles

Participants	Gender	Age	Self-efficacy index	Self-efficacy classification	Interaction
Concetta	Female	19	2.54	LSE	SCMC2, Ftf2
Celine	Female	20	4.15	HSE	SCMC2, Ftf2
Charlotte	Female	21	3.31	Mid-point SE	SCMC2
Cinthia	Female	23	3.62	Mid-point SE	Ftf2

SCMC data were collected through chat-log transcripts and audio-recorded FtF interactions, which were transcribed using a standard Conversation Analysis notation system (Jefferson, 2004). Chat-logs and FtF transcripts were analyzed quantitatively and qualitatively. Quantitative analyses involved counting the number of words and turns produced by the participants during interaction. Speaker's turns were identified based on Eggins and Slade's definition of *move* as "a unit after which a speaker change could occur without turn transfer being seen as an interruption" (Eggins & Slade, 2004, p. 186). Qualitative analyses of chat logs and FtF transcripts involved coding the data by using Eggins and Slade's (2004) classification of Speech Functions, as described previously, as well as Dörnyei and Kormos's (1998) taxonomy of Communication Strategies (CS). Dörnyei and Kormos's (1998) taxonomy was selected for this study for its process-orientated approach, based on Levelt's (1989) model of speech and on its extended application to L2 communication on the basis of work by de Bot (1992) and Poulisse (1993). Compared to previous proposals (e.g. Faerch & Kasper, 1984; Tarone, 1977), Dörnyei and Kormos's (1998) taxonomy takes a step further, as it provides a comprehensive list of problem-solving mechanisms associated with all four sources of L2 communication problems (i.e. linguistic output deficit, error output, other-communication deficit and time pressure), in both message production and reception. Interrater reliability was calculated by asking two research assistants to code 50% of the transcripts. Cohen's (1969) Kappa coefficients were satisfactory, at 0.75 for

Speech Functions and 0.76 for Communication Strategies (for further information on reliability tests, see Sánchez-Castro, 2013).

4. Results

The results of our analyses are presented and discussed in the following sections. Quantitative data on participation are followed by a discussion of CS and SF employed, to identify the amount and type of information that becomes available through these methods.

4.1 Words and Turns

As shown in Table 2, both Celine and Concetta produced a greater number of words in FtF2 (Celine 1003; Concetta 580) than in SCMC2 (Celine 265; Concetta 194). Celine – the HSE participant – quantitatively dominated output production in both media, accounting for over 40% of words and turns produced within the group. However, the difference between Celine and Concetta is smaller in SCMC2, where Concetta produced approximately 25% fewer words than Celine, whereas in FtF2, the gap was almost double. Interestingly, Concetta's contribution in SCMC2 was not greater in terms of number of turns, which remained fairly stable across the two media, at about 30% of the group's total, but her turns were much longer in SCMC2 than in FtF2. In fact, longer turns were recorded in SCMC2 for all participants. These results could be due to a number of factors, including intrinsic features of the two media, but also differences in discussion topics and group composition across the two tasks.

Table 2
Quantitative Participation: Words, Turns and Words per Turn in SCMC2 and FtF2

	FtF2					SCMC2				
	Words		Turns		Words per turn		Words		Turns		Words per turn
	NR	%	NR	%			NR	%	NR	%	
Celine	1003	41.17	203	41.86	4.94	Celine	265	44.24	34	44.74	7.79
Concetta	580	23.81	151	31.13	3.84	Concetta	194	32.39	23	30.26	8.43
Cinthia	853	35.02	131	27.01	6.51	Charlotte	140	23.37	19	25.00	7.36
Total Group	2436	100.00	485	100.00	5.02	Total Group	599	100.00	76	100.00	7.88

4.2 Communication Strategies

As Table 3 shows, Celine, the HSE participant, recorded greater frequencies of strategy use than Concetta, across both media (SCMC2: Celine 15; Concetta 8; FtF2: Celine 75; Concetta 44). It is also interesting to note that, for both participants, CS were observed much more frequently in FtF2 than in SCMC2, although this result may have been affected by the greater quantity of output produced in FtF2, as discussed in 4.1 above.

Table 3
Communication Strategies across Media in SCMC2 and FtF2 - LSE and HSE Participants

Concetta (LSE)						Celine (HSE)					
	RD	OO	OP	TP	TOTAL		RD	OO	OP	TP	TOTAL
SCMC2	6	0	1	1	8	SCMC2	13	0	1	1	15
FtF2	31	1	2	10	44	FtF2	37	10	8	20	75

Note. RD = resource deficit; OO = own output; OP = other performance; TP = time pressure.

If we focus on the subtypes of CS employed by these participants across the two media, resource deficit strategies record the greatest frequencies overall. Within the resource deficit group, by far the most frequent subtype was code switching, with 24 instances recorded for Concetta and 29 for Celine, in FtF2.

Qualitative analyses, however, point to interesting differences in the use of code switching by these two participants. Code switching is normally understood as a compensation strategy, allowing speakers to convey meaning when linguistic difficulties arise. While Celine uses it for this purpose, she also employs this strategy to display humor, social affiliation, and emotion. This is noted in 9 out of the 29 instances recorded in the FtF2 transcript, and is exemplified in Excerpt 1. In contrast, Concetta uses code switching 21 times out of the 24 recorded instances to compensate for her inability to retrieve lexical items.

Excerpt 1

L194	CINTHIA:	creen en el en el amor a primera vista?
		do you believe in love at first sight?
L195	CELINE:	si↑
		yes↑
L196	CINTHIA:	y tu?

		and you?
L197	CONCETTA:	ah no se (.) no vi: a alguien excepcion
		ah I do not know (.) I I have not seen: someone exceptional
L198	CELINE:	a segunda vez?
		at second sight?
L199	CINTHIA:	haha
		haha
L200	CONCETTA:	no me que um con algunas um chicos hay (.) no se lo que es: pero hay: something
		I do not know that um with some boys there is (.) I do not know what it is: but there is: something
L201	CELINE:	lust at first sight hehe
		lust at first sight hehe

Time-pressure strategies are virtually absent from SCMC2, whereas high frequencies are recorded in FtF2 (10 for Concetta; 20 for Celine). Within time-pressure strategies, results also point to differences between Concetta and Celine in their choices of lexicalized or nonlexicalized subtypes. Specifically, while Concetta mainly uses umming and erring in order to gain processing time, Celine favors lexicalized subtypes including fillers and self-repetition, as shown in Table 4. These subtypes require using the L2, and are therefore more demanding, both linguistically and cognitively.

Table 4
CS -Time-Pressure Subtypes in FtF2

	Filler	Self-repetition	Umming	Other-Repetition
Concetta	0	2	8	0
Celine	4	9	7	1

Own-output and other-performance strategies are also virtually absent from our SCMC2 data. In FtF2, when these strategies are observed, they are used almost exclusively by Celine (own-output: 10 times; other-performance: 8 times). Furthermore, on the few occasions when Concetta did employ other-performance subtypes, she only used Asking for Repetition and Non-Understanding, whereas Celine also used Asking for Confirmation and Other Repair.

Table 5
CS - Other-Performance Subtypes

	Concetta (LSE)		Celine (LSE)	
	SCMC2	*FtF2*	*SCMC2*	*FtF2*
Asking for Repetition	0	1	0	2
Asking for Confirmation	0	0	0	2
Asking for Clarification	1	0	0	1
Other Repair	0	0	1	3
Non-Understanding	0	1	0	0

Interestingly, Celine employed other-performance strategies such as Asking for Repetition, Asking for Confirmation, and Asking for Clarification to repair discourse or avoid breakdown, as illustrated in Excerpt 2.

Excerpt 2

L80	CONCETTA:	no hablar- no hablar
		No to talk- no to talk
L81→	CELINE:	no (.) no hablo?
		no (.) I do not talk
L82	CONCETTA:	no es australiana haha
		He/she is not Australian haha
L83→	CELINE:	soy: (.) what? (.) que?
		I am (.) what? (.) what?
L84	CONCETTA:	los australianos sientan en frente del taxi haha
		Australians sit at the front [*when] in a taxi haha

4.3 Speech Functions

As could be expected due to the proportionally greater production of output in FtF2 (see 4.1), both Celine and Concetta used a higher overall number of Speech Functions (SF) in FtF2 than in SCMC2 (see Table 6).

Table 6
Speech Functions across Media

| | Concetta (LSE) | | | | Celine (HSE) | | | |
| | SCMC2 | | FtF2 | | SCMC2 | | FtF2 | |
	NR	%	NR	%	NR	%	NR	%
Initiate	3	10.00	4	3.51	3	9.68	4	2.08
Continue	6	20.00	11	9.65	7	22.58	38	19.79
Respond	11	36.67	58	50.88	9	29.03	82	42.71
Rejoinder	10	33.33	41	35.96	12	38.71	68	35.42
TOTAL SF	30	100.00	114	100.00	31	100.00	192	100.00

However, while in FtF2 Celine contributed almost double the amount of SF than Concetta (Celine 192; Concetta 114), in SCMC2 the frequencies recorded for these two participants are extremely similar (Celine 31; Concetta 30). This suggests that, while Celine tended to dominate the interaction in FtF2, this was not the case in SCMC2. This view is also supported by the fact that Concetta employed Continue SF very infrequently in FtF2 (only 9.65% of the total SF she contributed), whereas in SCMC2 Continue SF account for 20% of her contribution. In fact, Concetta's frequency of use of Continue SF in SCMC2 is very similar to Celine's (22.58%). Given that Continue SF indicate dominance in sustaining own discourse, these results suggest a more active role for Concetta in SCMC2 than in FtF2.

Quantitatively, Initiate SF are by far the least preferred type in our data, which suggests that topic sustainability is high in both FtF2 and SCMC2 interactions. However, the proportion of Initiate SF in SCMC2 is greater (Celine 9.68%; Concetta 10%) than in FtF2 (Celine 2.08%; Concetta 3.51%), which indicates that, in SCMC2, topics tended to be exhausted more quickly. It is also possible that the participants were able to express their views more efficiently in SCMC2, generating semantically denser, but shorter exchanges. Respond and Rejoinder SF are in contrast, the most frequent types employed across the two modes by both participants, with percentages ranging from 29.03% to 50.88%. The frequent use of Respond SF is an indication of the participants' willingness to cooperate and provide support in conversation by showing a high level of acceptance towards the other speakers' propositions. However, in FtF2, Celine used greater frequencies of both Respond and Rejoinder SF than Concetta (Respond: Celine 82; Concetta 58; Rejoinder: Celine 68; Concetta 41). In contrast, in SCMC2, very similar frequencies were observed in relation

to these types of SF (Respond: Celine 9; Concetta 11; Rejoinder: Celine 12; Concetta 10).

Qualitative analyses point to differences in the social discourse roles taken up by Concetta and Celine in the two media. In FtF2, while Concetta mainly employs Elaborate moves, which simply restate or exemplify information, Celine achieves control by elaborating on her own utterances through the use of Prolong moves, particularly Extend and Enhance subtypes. In Excerpt 3, for example, Celine's use of these SF (in L231 and L235) broadens the focus of the exchange, which moves from a discussion of the film, on to Celine's own love experiences. This has the effect of extending Celine's contributions, while at the same time leading to maintenance of talk by "fuelling" other opinions.

Excerpt 3

L229	CELINE:	cabeza hehe y um me encanta este chico mas porque [hehe]
		head hehe and um I really like that guy [*even] more be-cause [hehe]
L230	CINTHIA:	[haha]
		[haha]
L231	CELINE:	tiene ese personalidad pero no- no es la verdad
		he has that personality but no-no it is not the truth [*true]
L232	CINTHIA:	en su imagina
		it is in your imagination
L233	CELINE:	y cuando
		and when
L234	CINTHIA:	no es saludable hehe
		it is not healthy hehe
L235	CELINE:	si es saludable hehe y cuando conozco a este chico con la primera vez y no tiene esta personalidad pt. estoy muy triste hehe (0.1) si es cierto si (.) se han enamorado alguna vez de un desconocido?
		*it is healthy hehe and when I meet this guy for the first time and [*I realize] he does not have this [*type of] personality pt I am very sad hehe (0.1) yes it is true yes (.) have you ever fallen in love with a stranger?*
L236	CINTHIA:	si↑=
		yes↑=
L237	CONCETTA:	=how↑ you love someone you don't know?
		=how↑ you love someone you don't know?

Celine's discourse also differs in her use of Rejoinder moves. As illustrated in Excerpts 3 and 4, Celine establishes independence by challenging both of her conversational partners (L235 and L476-478 respectively).

Celine further takes on a dominant role by using Repair (L474) and by authoritatively responding to her conversational partner's requests for information (Resolve moves: L490 and L492). Remarkably, Concetta's use of Rejoinder Confront SF is almost absent from the entire FtF2 sequence; the only instance of Rejoinder Confront – a Rebound subtype – is uttered in English (Excerpt 3, L237).

Excerpt 4

L472	CINTHIA:	pero por ah que es el hombre (.) tanto ah agresivo con ella
		but why ah is the man (.) so ah aggressive with her
L473	CONCETTA:	si y loco
		yes and crazy
L474	CELINE:	un <u>poco</u> loco
		a <u>bit</u> crazy
L475	CONCETTA:	un poco loco [hehe]
		a bit crazy [hehe]
L476	CELINE:	un poco loco <u>solo</u>
		<u>only</u> a bit crazy
L477	CINTHIA:	es muy dificil para ella ah to eh se fian con el taxista cuando
		it is very difficult for her ah to eh trust the taxi driver when
L478	CELINE:	no (.) um creo que ella es (0.2) avergonzado (.) porque por su trabaja
		no (.) um I believe that she is (0.2) ashamed (.) for going to her job
[…]		
L489	CONCETTA:	el taxisto sabes: ella es un hooker?
		does the taxi driver know she is a hooker?
L490	CELINE:	si si
		yes yes
L491	CONCETTA:	did he know? did he?
		did he know? did he?
L492	CELINE:	si si si

		yes yes yes
L493	CINTHIA:	si piensas?
		what do you think?
L494	CONCETTA:	no se
		not sure
L495	CELINE:	<u>si</u> con el dinero no da
		<u>yes</u> with the money he does not give (when she hands him the money he holds her hand and does not let go)

In SCMC2, the speaker roles enacted by Celine and Concetta appear more balanced than in FtF2. In Excerpt 5, we can observe that Concetta, the LSE participant, uses different subtypes of Rejoinder SF, including: Clarify (L51, L56, L63, L66) and Probe (L65). These are moves that can be used to maintain interactivity and move the exchange forward, by requesting further elaboration. Moreover, Concetta explicitly challenges her conversational partner's views by using Rebound and Counter (L53, L59). This behavior is very similar to that exhibited by Celine, who also uses these two subtypes of SF. In other words, in SCMC2, Concetta and Celine exhibit independence in a similar manner by asserting their views and confronting each other's positions.

Excerpt 5

L51	CONCETTA:	Pues. Creen es necessario evidarse de la realidad para ser feliZ?
		Do you believe it is necessary to escape from reality in order to be happY?
L52	CELINE:	no, porque no es la feliz verdad
		no, because it is not true happiness
L53	CONCETTA:	Creo a veces necesario a evido realidad por sanity
		I believe that sometimes it is necessary to escape from reality for sanity
L54	CONCETTA:	depediente como se ver realidad
		it depends on how you perceive reality
L55	CELINE:	y pienso que sabemos cuando no estan bien feliz
		and I think that we know when we are not so happy
L56	CONCETTA:	Como nos evidamos realidad?
		How can we escape from reality?
L57	CELINE:	es necesario hacer las cosas que nos hacemos contentas, pero pienso que est necesario stay en la realite

		it is necessary to do those things that make us content but I believe that it is necessary to stay within reality
L58	CELINE:	evidamos realidad cuando cerramos nuestros ojos del mundo
		we escape from reality when we close our eyes to the world
L59	CONCETTA:	Dormir no es quede en realidad. Es una otra estado y cuando no duerme volvemos loco!!
		To sleep is not to remain within reality. It is another state and when one does not sleep we become crazy!!
[…]		
L62	CELINE:	en este momente, tengo ninos cada noche
		at present, I am having children [*babies] every night
L63	CONCETTA:	ninos?
		children? [*babies]
L64	CELINE:	y los ninos leuve todo el noche, y yo los drop mucho
		and the children [*babies] cry all night, and I drop them a lot
L65	CONCETTA:	el suenos te dice tus el cosas son te importa
		dreams tell you things that are important to you
L66	CONCETTA:	Pero no es realidad si tu tiene ninos si?
		but it is not true that you are having babies, is it?

5.   Discussion

With regards to our first question, how Speech Functions can be used to investigate learners' social roles in online and FtF interaction, the analysis of the SF allowed us to arrive at detailed accounts of the roles enacted by the participants in FtF and SCMC interactions: they revealed how interlocutors positioned themselves, and acted on one another through discourse, by exhibiting dependence or independence, as well as dominance. These variables can be related to the participants' self-efficacy, and to the mode of communication, suggesting that SF can be effectively employed as a research method in this area.

    For example, our data shows that, in FtF2, Celine, the HSE participant, employs SF that allow her to control and expand topics. In this mode, Celine also challenges other participants' propositions, and repairs other participants' utterances, hence taking on the authoritative roles described by Yim (2005) as Information Provider and Evaluator. Therefore, it can be said that the FtF medium provides opportunities for Celine to take on a dominant role,

by leading the interaction, elaborating on others' contributions, and sustaining exchanges.

On the other hand, SCMC2 seems to provide a level field for Concetta and Celine. While in FtF2, Concetta – the LSE participant – mainly employs Respond SF, taking on a dependent reactive role, in SCMC2, she also records several Rejoinder subtypes, as she actively participates in collaborative discourse construction. Furthermore, in SCMC2, Celine and Concetta exhibit independence in similar ways, by using Rebound and Counter to challenge other participants' views and to sustain their own arguments. Importantly, while Concetta does not use Continue SF in FtF2, she records similar frequencies of Continue SF to Celine in SCMC2, hence showing her ability to establish dominance by sustaining her own discourse. Yet, it must be acknowledged that Concetta's concern with expressing her ideas and challenging other participants' views in SCMC2 could be linked to factors that are unrelated to the medium of communication, such as discussion topics and roles played by third group members.

Taken together, these results suggest that the online medium may have afforded more equal opportunities for interactional control and discourse management by all conversational participants, including those with lower self-efficacy beliefs, as also suggested by other scholars (e.g. Han, 2003; Kissau et al., 2010; Thomas, 2012). It is possible that SCMC may indeed encourage LSE students' active participation, due to features that include slower pace of interaction, availability of written input for processing and comprehension, and absence of nonverbal cues. These features could make assertive behavior more socially acceptable, and more cognitively and linguistically accessible. While this hypothesis remains to be tested through rigorous studies involving a greater number of participants in a variety of contexts, SF certainly have a role to play in this process.

Regarding our second question, what the relationship is between data obtained through analyses of Speech Functions and quantitative measures of participation (words, turns) and analysis of Communication Strategies, we can conclude that SF provide important information that complements and expands on results obtained through other measures.

Quantitative analyses revealed that, overall, a greater number of words and CS was produced in FtF2 than in SCMC2. This result is consistent with that obtained by Hussin (2009), who suggests that FtF is characterized by a greater use of fillers and other mechanisms employed by speakers to hold the floor, and therefore results in greater quantity of output produced. On the other hand, as previous research has indicated (e.g. Hussin, 2009), SCMC facilitated a focus on meaning and on expressing one's ideas effectively and concisely. Quantitative data also suggests that, while Celine, the high-self-efficacy

participant, tended to dominate production in FtF2, SCMC2 seemed to provide more opportunities for Concetta – the low-self-efficacy learner – to actively contribute to the interaction. The results of our study, therefore, support Lin et al.'s (2013) and Sauro's (2013) findings on the equalizing effect of SCMC in L2 learners' interactions.

Our qualitative analysis of CS partially supports observations based on quantitative data, since it also suggests that Celine took on a dominant role in FtF2, by using CS more frequently overall. These results are consistent with literature linking greater proficiency in the target language to more frequent strategy use (e.g. Graham, 2006; Pajares & Schunk, 2001). In FTF2, Celine also tended to employ CS subtypes that established her competence in the L2, such as localized recasts (i.e. Asking for Clarification) and, in relation to time-pressure strategies, lexicalized subtypes. Interesting differences between Celine and Concetta were also noted in relation to Celine's use of other-performance strategies to repair discourse or avoid breakdown in FtF2. From this perspective, Celine's behavior can be assimilated to that of highly proficient speakers providing assistance or negative feedback to other L2 learners (Chaudron, 1982; Long, 1981; see also Lam & Wong, 2000; Nakatami, 2010). It would have been interesting to compare these FtF2 results with those obtained in SCMC2. Unfortunately, the observed frequencies of CS in the online interaction are so small that it is impossible to make any reliable comparison. This could be due to several factors, including the limited size of our corpus, the amount and type of data available through chat-logs, but also inherent features of the online medium. It is also possible that, due to the lower cognitive demands posed by SCMC compared to FtF interaction, CS are not required as much in this context, as previously reported in CMC research (Kost, 2008). This is especially true of time-pressure strategies, which we only found in FtF2. In other words, given that CS are problem-solving mechanisms, if fewer communication problems are encountered due to the written nature of SCMC and the slower pace of the interaction, then it is to be expected that CS will be used less frequently in SCMC than in FtF.

It is also possible that, due to the semi-permanent nature of the written exchanges, and of the collaborative nature of SCMC, the online medium may affect the frequency of some types of CS. The fact that *code-switching* is the only CS that was observed somewhat frequently in SCMC2 suggests that, for our participants, it may have been more important to express their ideas and personality (e.g. through the use of humor), than to produce pushed output in their L2. Indeed, research has suggested that CMC is inherently collaborative (e.g. Lamy, 2012; Yamada, 2009), and facilitates solidarity and mutual support through the establishment of online communities (Reinhardt, 2008). Therefore, learners' concerns for self-representation and group solidarity could deter them from using strategies, such as other-performance ones, that may be

perceived as face-threatening (Brown & Levinson, 1978). Discourse Analysis research has shown that other-initiated repair is inherently face-threatening (Schegloff, 1979), and therefore is relatively infrequent in face-to-face conversation. In a written mode of communication, other-performance CS may be even more discouraged, since these corrections are more salient and appear to have a more "permanent" status.

Regardless of its causes, the scarcity of CS observed in SCMC2 could have led us to conclude that the online medium does not provide as many opportunities for negotiation of meaning and collaborative discourse construction as FtF conversation. Our analysis of SF, however, tells a very different story. As previously observed, SF data effectively complemented and expanded on other results, by clarifying the differing social roles taken up by the two participants in FtF2 and SCMC2. SF data indeed supports the view that SCMC2 may have provided greater opportunities for the LSE participant to take on an active role in discourse co-construction, and that, conversely, FtF2 interaction tended to be dominated by the HSE learner. A considerable advantage of SF over CS is that they are more likely to be available for observation, given that they describe speakers' roles during interaction, and do not require that the participant engages in conscious problem-solving. This results in more data becoming available for analysis.

6.   Conclusion

While quantitative data and CS analysis provide partial accounts of the participants' behavior, by complementing these results with analysis of SF, a much clearer picture becomes available that advances our understanding of the relationship between SCMC, self-efficacy, and learner participation in L2 exchanges. We can therefore conclude that the methodology employed in this study represents a promising avenue for future research in this area.

Given the exploratory nature of this project, several limitations can be identified. In particular, our observations could be further enhanced through the application of SF to larger data sets collected in a variety of contexts, as well as through the adoption of mixed methods employing complementary data sources and analysis tools. These may include, for example, detailed descriptions of the participants' behavior during CMC, such as analyses of deleted keystrokes and learners' focused attention, documented through eye-tracking technologies (see, e.g., O'Rourke, 2008; Smith, 2010). These types of studies might help explain why CS such as time-pressure and own-performance strategies may be underrepresented in chat-logs, and could provide a different perspective on the participants' use of planning, resourcing, and self-monitoring strategies, among other variables. Finally, measures of self-efficacy could also be strengthened, for example by including survey statements regarding

perceived L2 efficacy in written, as well as oral tasks, to better account for the hybrid nature of CMC discourse.

Notes

1.   The authors wish to thank the anonymous reviewers who provided valuable feedback on earlier versions of this paper.
2.   These audiovisual and reading materials are resources included in Blanco, Garcia, & Aparisi (2004).
3.   Pseudonyms have been used to preserve the participants' anonymity.

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