

# *The Role of Linguistic Affordances in Telecollaborative Chat*

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## **ABSTRACT**

This study examines synchronous computer-mediated communication (SCMC) discourse in a bilingual chat setting consisting of Spanish-speaking learners of English and English-speaking learners of Spanish. Participants were members of a telecollaboration involving 80 students at North Carolina State University and the University of Puerto Rico. Data were derived from two chat groups, one of four students and the other of five students, engaged in nine 1-hour chat sessions (a half hour in English and a half hour in Spanish). The ecological affordance construct (van Lier, 1996, 2000) frames three research questions: (a) What types of linguistic affordances emerge in the bilingual chat sessions? (b) How do learners respond to linguistic affordances provided by native speakers? and (c) What are learners' perceptions regarding linguistic affordances in their chat discourse? Findings reveal that participants provide a range of affordances to each other, although affordances appear to have a limited role in the overall telecollaborative context.

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## **KEYWORDS**

Synchronous Computer-mediated Communication (SCMC), Telecollaboration, Linguistic Affordances, Learner Perceptions

## **INTRODUCTION**

Telecollaboration, defined by Belz (2002, p. 61) as the "application of global communication networks in foreign language education," unites learners from two linguistic backgrounds such that some are native speakers (NSs)<sup>1</sup> of language A who are learning language B, and vice versa. Telecollaborative arrangements often involve participation in synchronous computer-mediated communication (SCMC) in both languages, giving learners opportunities to alternate between the language "expert" role and language learner role.

The growing body of literature on SCMC boasts a wealth of findings on social and linguistic aspects of L2 chat room discourse. Research cast in sociocultural and related frameworks, for example, sheds light on macro- and microsocial issues, as well as participation and community building in chat rooms (Basharina, 2007; Belz, 2001, 2002; Belz & Kinginger, 2003; Belz & Thorne, 2005; Darhower, 2002, 2006, 2007; Kinginger, 2004; Thorne, 2003). Interactionist studies illustrate the negotiation of meaning in the chat room setting versus negotiation in face-to-face discourse (Blake, 2000; Pellettieri, 2000; Smith, 2003). As far back as 10 years ago, Ortega (1997) qualified feedback and grammatical accuracy as promising areas for research on SCMC due to greater opportunities for planning and monitoring in SCMC as compared to face-to-face settings. Yet studies focused on feedback and grammatical accuracy during free discourse (versus controlled tasks) in SCMC have only recently emerged (Fiori, 2005; O'Rourke, 2005; Sotillo, 2005). Clearly more research needs to be carried out in this area.

In 1996, van Lier introduced into second language acquisition (SLA) theory a construct from ecological psychology called an "affordance," defined by van Lier as "a relationship between an organism [a learner, in our case] and the environment, that signals an opportunity for or inhibition of action" (van Lier, 2004, p. 4). The affordance construct is a fruitful analytical tool for analysis of L2 discourse because it allows the researcher to identify an array of discourse moves and their functions related to research questions. Affordances, then, provide the lens through which the present study examines bilingual discourse in telecollaborative SCMC.

## LITERATURE REVIEW

### *Linguistic Affordances*

In the extant SLA literature, the construct that most closely approximates linguistic affordances is feedback. Long (1996) teases apart feedback into positive evidence, which provides learners with models of what is grammatical and acceptable in the L2, and negative evidence, which provides learners with information about what is unacceptable. The provision of feedback to learners has been a central object of SLA research for decades because it is generally believed that feedback can help learners along their journey of becoming proficient in their L2. Negotiation of meaning in the interactionist literature is centered upon negotiation of meaning which provides feedback that might motivate learners to "notice the gap" in their interlanguage (Schmidt, 1990). Research on the negotiation of meaning typically involves controlled tasks such as the jigsaw puzzle or information gap in which the proficient speaker employs planned linguistic moves such as clarification requests, confirmation checks, and recasts to encourage learners to pay attention to certain linguistic forms (see Pica, 1994, for a review of studies). Only recently has incidental focus on form (i.e., that which occurs in open-ended conversation) been a source of interest in the interactionist literature (Ellis, Basturkmen, & Loewen, 2001), presumably because opportunities to provide feedback are hit or miss in tasks that are not specifically structured for feedback provision.

Social views of SLA, such as Vygotskian sociocultural theory, draw on broader analytical constructs than the negotiation of meaning. In sociocultural theory, learners are viewed as active agents in their learning and coconstructors of meaning, rather than processors of language input (Lantolf & Pavlenko, 2001). Feeling restricted by the prominent input and interaction constructs, van Lier borrowed the concept of affordance coined by ecological psychologist James Gibson (1979). For Gibson, affordances refer to reciprocal relationships between an organism and particular features of its environment. An affordance is what is available to a person to do something with, or what the environment "*provides or furnishes*, either for good or ill" (italics in original) (Gibson, 1979, p. 127). van Lier explains that the environment includes "all physical, social, and symbolic affordances that provide grounds for activity" (2004, p. 5). In the ecological framework, language is seen as a system of relations in an "ecosystem" in which learners are allowed to define their own meaning in their own social context (van Lier, 2004). As active autonomous agents, learners can seek affordances on their own in addition to receiving affordances offered by the environment. van Lier called for replacing the ubiquitous term "input" with "engagement" (1996) and later with "affordance" (van Lier, 2000), situating input and negotiation of meaning in a wider communicative context (van Lier, 2004).

van Lier (2004) delineates four levels of affordances. A Level 1 affordance is an "unmediated" relationship between the organism and the environment. In other words, the environment provides *potential* affordances, some of which do not actually become affordances for a given organism. In SLA, this might equate to that portion of language to which an L2 learner is

exposed to but does not attend to. A Level 2 affordance is noticed by the aware and engaged organism. A Level 3 affordance, according to van Lier, adds active control to the awareness, and Level 4 adds a critical perspective. Learner engagement plays an important role in determining which potential (Level 1) affordances become Level 2 or higher affordances (van Lier, 1996). If language learners are active and engaged, they are more likely to become aware of linguistic affordances and use them for linguistic action.

As the affordance construct has only recently been introduced to SLA research, researchers are challenged to operationalize it. In her dissertation study of ESL students engaged in the revision of compositions, Miller (2005) operationalized affordances in terms of a feedback cycle coconstructed by learner and instructor during collaborative discourse. Miller suggested that the notion of affordance may unite input, interaction, and output. Miller's data analysis delineated a difference between an affordance rich environment and an affordance constrained environment. An affordance rich classroom, according to Miller, is characterized by organization, abundant feedback loops, and prominent learner agency versus affordance constrained classrooms which lack these qualities. In the current study, *linguistic affordance* is operationalized as any discursive move that provides linguistic information to a learner or that intends or appears to activate a learner's awareness of specific language structures and/or lexical meaning. (see Tables 1 and 2 for examples). A NS might intentionally provide an affordance to a learner, for example, which may or may not activate the learner's awareness. A NS utterance could also *unintentionally* activate the learner's awareness. Linguistic affordances may be initiated by NSs or by learners themselves and may be necessary for comprehension of interlocutor(s) and/or for learners to accurately express themselves in the L2.

van Lier affirms that "The environment is full of meaning potential, especially if it has a rich semiotic budget, which may not be true of all classrooms, textbooks, or pedagogical interactions" (2004, p. 98). Telecollaborative chat, with its unique bilingual and electronic nature, is an interesting forum in which to explore semiotic budgets of linguistic affordances.

### **Telecollaboration**

Telecollaboration is a relatively recent object of study in the United States, although the well developed tandem learning model in Europe has been in place since the mid 1990s (O'Rourke, 2005). (For a review of telecollaboration and tandem learning and a discussion of the differences between the two, see Thorne, 2006). Telecollaboration provides a robust research environment with the extended social discourse opportunities found in naturalistic learning, while making possible a pedagogical sphere of L2 use such as in the L2 classroom. In other words, chat rooms link the linguistic with the social.

Researchers have exploited the uniqueness of the telecollaborative environment, illuminating the intricate connections between linguistic and social aspects of L2 use in the development of L2 pragmatic competence (Belz & Vyatkina, 2005; Belz, 2003, 2005; Belz & Kinginger, 2003; Kinginger, 2000) and intercultural communicative competence (Belz, 2003, 2005; Furstenberg, Levet, English, & Maillet, 2001; Thorne, 2003). Belz's extensive research into telecollaboration brings insight into the benefits and drawbacks of the complex social relationships that evolve in telecollaboration (Belz, 2001, 2002). Belz demonstrates, for example, how relationship building in intercultural collaborative discourse is played out via one fundamental type of linguistic resource—question formation (Belz, 2005). Belz and Kinginger (2003), as well as Belz and Vyatkina (2005) and Kinginger (2000), unveil the potential for learners in telecollaboration to appropriate such consequential pragmalinguistic elements as pronouns of address in French and German and modal particles in German as both component

and product of fostering intercultural social relationships. The complex interrelations between the linguistic, social, pragmatic, and intercultural bring about a richness in telecollaborative communication which Thorne classifies as “compelling, problematic and surprising” (Thorne, 2003, p. 38)

In telecollaborative chat rooms, there is a great potential for activation of language awareness via linguistic affordances. Native speakers can serve as language models, offer reformulations of L2 utterances, and help learners express their ideas in their L2. Learners can also be active agents in their language learning, seeking and making use of the linguistic resources at their disposal via the NSs. Several researchers report, however, that learners in SCMC (including chat rooms, MOOs, and instant messenger) focus more on overall meaning than on linguistic form and lexical precision (Beauvois, 1998; Kötter, 2002; Sotillo, 2005). Participants in Beauvois’ (1998) chat study preferred to communicate without concern for complete grammatical accuracy, although 85% of them indicated that it was helpful to have a printout of the chat log after the fact in which errors were highlighted by the professor. Beauvois concluded that delayed error corrections “helped learners focus on their errors without the stress of immediate teacher intervention or communicative time constraints” (p. 102). Similarly, Lee’s (2002) participants were more interested in exchanging ideas than in correcting linguistic forms. Lee nevertheless advocates the importance of accuracy as well as fluency stating that “students should be advised of the need to write correctly to maintain a balance between function, content, and accuracy” (2002, p. 275).

Findings regarding the provision of language feedback in L2 chat rooms are varied. Fiori (2005), for example, found that “when students were instructed to focus on both form and meaning, they not only focused on *ser/estar* but on grammar as a whole.” (p. 592). Sotillo (2005), on the other hand examined feedback behavior in chat discourse among NS/learner dyads and learner/learner dyads and found that out of 159 opportunities for error correction, NSs acted upon only 65 of them. In fact, Sotillo’s learner/learner dyads focused on form more than the NS/learner dyads did. Sotillo’s and Lee’s (2002) studies also concur in that the NSs most often provided feedback indirectly rather than explicitly.

The current study aims to complement the growing body of literature on telecollaboration by examining the role of linguistic affordances in a telecollaborative setting as participants build and maintain intercultural relationships via bilingual discourse.

## **THE STUDY**

### ***Research Questions***

Three research questions drive the current study:

1. What types of linguistic affordances emerge in bilingual chat sessions?
2. How do learners respond to linguistic affordances provided by native speakers?
3. What are learners’ perceptions regarding linguistic affordances in their chat room discourse?

### **Participants and Context**

Participants were selected from a group of approximately 80 students enrolled in two advanced level Spanish classes at North Carolina State University and three intensive English as a second language classes at the University of Puerto Rico during the fall 2006 semester. The two universities had been engaging in bilingual telecollaboration as an integral component of advanced conversation courses in English and Spanish for five years prior to the study, calling their collaboration the "Bilingual Chat Community." The purpose of the collaboration is to provide learners with opportunities to engage in discourse with native speakers of the learners' L2, in this case Spanish for the US students and English for the Puerto Ricans. The open-ended weekly assigned topics (see topics in Appendix A) encourage learners not only to practice their language skills but also to get to know their chat partners on a personal level and to discuss issues which would allow them to discover cultural differences and similarities between them. Learners were required to engage in the chat sessions, and the chat component was worth a portion of their final course grades.

The chat sessions were hosted in the *WebCT* chat server at North Carolina State University. Using the group assignment feature of *WebCT*, learners selected the group in which they wished to participate according to the day and time that they were available to chat. One hour chat sessions, a half hour in English and a half hour in Spanish, were held each week at the assigned day and time (outside of class). Transcripts of each chat session were automatically collected by the *WebCT* server. The instructors of the five language classes did not typically participate in the chat sessions, although they did visit briefly on a few occasions.

During the preparation phase, instructors of all five language classes engaged learners in a consciousness-raising activity which demonstrated examples of language feedback provided in chat sessions of previous semesters (see Table 1 for examples). Participants were asked to consider how they might serve as linguistic models of their L1 during chat sessions and draw their L2 counterparts' attention to appropriate language form and meaning. It is important to note that learners were not required to provide linguistic affordances, and, although they knew that their chat sessions were recorded, they were not informed of the specific nature of the study of their chat discourse until the end of the telecollaboration.

To reduce the enormous amount of chat log data (approximately 900 pages), the researcher followed purposive sampling commonly used in qualitative research (Miles & Huberman, 1994). There were 15 chat groups in the telecollaboration, two of which were chosen for analysis based on two characteristics. In both groups, participants had nearly perfect attendance and cooperated with each other, providing a stability that facilitated analysis of their ongoing discourse. The second characteristic was contrastive: one of the groups appeared to generate relatively frequent affordances, and the other, relatively infrequent affordances. In this way, the data analysis illustrates two distinct discourse patterns that unfolded in the Bilingual Chat Community that semester, providing a thicker description than what would have been yielded by analyzing only one group.<sup>2</sup>

The cohort consisted of nine students aged 19-22, five males from North Carolina and four females from Puerto Rico. Pseudonyms were assigned to participants to protect their identities. Group 1 consisted of Andy and Sam (L1 English); and Carmen and Teresa (L1 Spanish). Group 2 consisted of Alan, Paul, and Wayne (L1 English); and Claudia and Juanita (L1 Spanish). Alan, Andy, and Sam were taking the Spanish course as part of a their minor, and Paul and Wayne as part of their major. All four Puerto Rican students were fulfilling a language requirement. The proficiency levels of the participants were estimated to be intermediate mid to intermediate high on the ACTFL scale (ACTFL, 1999). Nearly all participants were present for all of the nine chat sessions.

## DATA ANALYSIS

### Data Coding

Two major sources of data inform the study: weekly chat transcripts for Research Questions 1 and 2 and postchat questionnaires for research question 3. The postchat questionnaire used to answer research question 3 was designed to obtain an emic (participant-based) perspective (Pike, 1967) and to triangulate the data extracted from weekly chat logs. Prior to data collection, the researcher prepared a start list (Miles & Huberman, 1994) based on the types of linguistic affordances noted in previous semesters of chats. (This same start list was used in the consciousness-raising activity discussed above.) While making an initial pass through the first weeks of chat logs, the researcher counted occurrences of the items on the start list and rounded out the analytical categories by noting in each pass additional behaviors that could be counted as linguistic affordances.

Coding affordance categories was particularly challenging because it required the researcher to make subjective interpretations of the chatters' utterances.<sup>3</sup> Since the chats took place in a simultaneously pedagogical and a social environment, some utterances were multifunctional or ambiguous as to whether they primarily served to raise learner awareness or to simply ensure comprehension so that the conversation could continue to flow (or both). Difficulties in coding speak to the richness of chat room communication and chatters' unique employment of bilingual linguistic resources to coconstruct meaning. Table 1 provides a typology of NS-generated affordance categories in the data set, and Table 2 provides the same information for learner-generated affordances.

Table 1  
NS-generated Affordances

Affordance	Definition	Example
Check Comprehension	NS asks learner if s/he understands an utterance.	SSP: <i>saben a puerto rico le dieron la ciudadania americana hace muchos anos paraluegoobligar a todos los hombres a ir a la guerra</i> 'you know that they gave American citizenship several years ago to later force all the men to go to war' SSP: <b>entienden?</b> 'do you understand?'
Clarify noncomprehension	NS clarifies the meaning of an utterance not comprehended by learner.	SSP1: waht did you want to say whit "Ireally know of"? ESP1: <b>None that I am aware of.</b>
Provide confirmation	NS confirms learner's guess at the meaning of an L2 utterance or learner's inquiry about the appropriate form of an L2 utterance.	SSP: <i>si no querias ir ibas a la carcel y alli era peor</i> 'if you didn't want to go you went to jail and there it was worse' ESP: <i>carcel signigica jail?</i> 'does carcel mean jail?' SSP: <b>si</b> 'yes'



Provide translation	NS tells learner how to say something at word level or beyond in the learner's L2.	SSP: How do you say : <i>Estoy exagerando?</i> 'I'm exaggerating' ESP: <b>I'm exaggerating</b>
Provide word meaning	NS defines a word for learner, either in the learner's L2 or L1.	ESP: <i>que es verguenza?</i> 'what is shame/embarrassment?' SSP: <b>ashame</b>
Reformulate explicitly	NS directly tells learner how to say something more grammatically or lexically appropriately	SSP: How's going your semester? ESP: My semester is going pretty well. <b>And it would be: How is your semester going?</b>
Reformulate implicitly	NS rephrases a learner's utterance more appropriately, embedding the rephrasing in the conversation.	SSP: In Big Daddy one man "Adopta" a one children with very problems. ESP: <b>so he adopts a child with a lot of problems. wow, interesting!!!</b>
Request confirmation of meaning	NS rephrases a learner's utterance and asks learner if the rephrasing is what s/he meant to say.	SSP: well, it what were we? ESP: What are you trying to ask? <b>where were we?</b> SSP: tank you, Eric
Use learner's L1	NS uses learner's L1 during the conversation, usually for some explicit purpose such as defining or explaining	ESP: Que es golpes? 'what is hits/strikes' SSP: <i>golpes es lo mismo que:</i> <b>When someone hit you 'golpes is the same as:' When someone hits you'</b>

Note: SSP = Spanish NS; ESP = English NS

Table 2  
Learner-generated Affordances

Affordance	Definition	Example
Check comprehension	Learner asks NS if s/he understood the learner's utterance.	SSP: 1 of my friends represent the globalization, other the bad side and the other the good side. <b>understand me?</b> ESP: yea
Indicate noncomprehension	Learner asks NS to explain what they mean to say in a certain utterance. Usually indicates NS use of words or structures unfamiliar to the learner.	SSP1: <b>wahht did you want to say whit "Ireally know of"?</b> ESP1: None that I am aware of.

Request confirmation of meaning	Learner asks NS to confirm if learner guessed correctly the meaning of an utterance, or if the learner formulated an L2 utterance appropriately.	SSP: <i>si no querias ir ibas a la carcel y alli era peor</i> 'if you didn't want to go you went to jail and there it was worse' ESP: <b>carcel signigica jail?</b> 'does carcel mean jail?'
Request help	Learner overtly asks NS to help the with some aspect of learning the L2.	SSP: I need feedbacks because i want to learn...
Request translation	Learner asks NS how to say something in the learner's L1.	SSP: <b>How do you say : Estoy exagerando?</b> 'I'm exaggerating' ESP: I'm exaggerating
Request word meaning	Learner asks NS the meaning of an L2 word.	ESP: <b>que es verguenza?</b> 'what is shame/embarrassment?' SSP: ashamed
Use L1	Learner uses her or his L1 during the L2 half hour of chat, usually for some strategic purpose such as requesting a translation or because of inability to express something in the L2.	SSP: yeah thats right, that's the reason that I always have problems with my roomates , <b>como se dice acostumbrada?</b> 'how do you say "accustomed to?"'

In Research Question 2, coding for responses to affordances resulted in four categories: (a) no acknowledgement of the affordance, (b) acknowledgement of affordance with an expression such as "OK" or "thank you," (c) repetition of the affordance, and (d) full response to the affordance (beyond "OK" or "thank you"). The data for Research Question 3 were extracted from a postchat questionnaire containing 26 Likert-scale items relating to participation in the chat sessions.

### **Research Question 1**

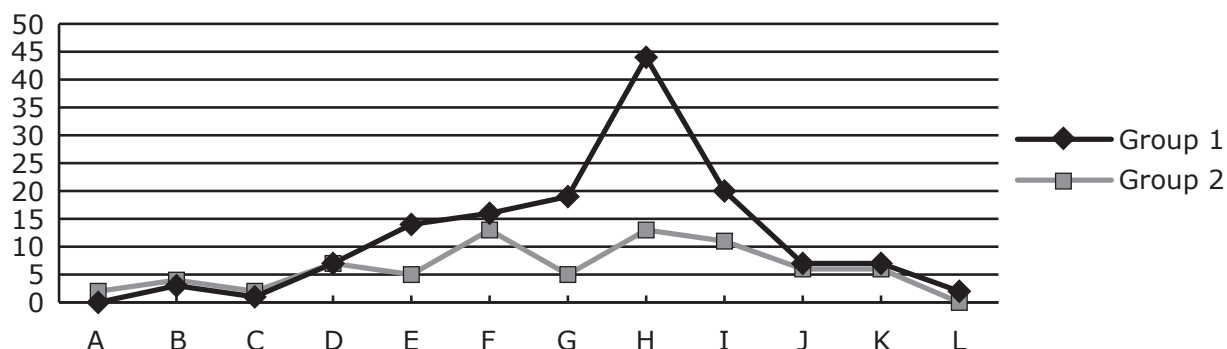
Research Question 1 sought to identify discourse moves in the chat sessions whose purpose was to make L2 learners aware of certain structural and/or lexical features of their L2. The affordance data were divided into two general categories: those provided by the NSs, either solicited or unsolicited by learners (Figure 1), and those generated by the learners (Figure 2). These two categories were delimited to enable observation of affordance patterns when participants were in the language "expert" role as well as in the learner role. Following the presentation of NS and learner affordances, some examples of coconstructed affordance cycles will be presented.



### NS-generated affordances

Data analysis for Research Question 1 is reported on a group, rather than individual, level because the individuals were engaged in collaborative group discourse. Figures 1 and 2 display the total frequency of each type of affordance coded in the chat logs.

Figure 1  
NS-initiated Linguistic Affordances



Key:

A = Check comprehension of utterance	G = Reformulate explicitly-English
B = Clarify non-comprehended utterance	H = Reformulate explicitly-Spanish
C = Confirm meaning of word/utterance	I = Reformulate implicitly-English
D = Indicate noncomprehension	J = Reformulate implicitly-Spanish
E = Provide translation to learner's L2	K = Request confirmation of meaning
F = Provide word meaning	L = Use learner's L1

Figure 1 draws a very similar profile for both groups in terms of linguistic affordances provided by the NSs, despite the fact that there were a total of 139 affordances calculated in Group 1 but only 74 in Group 2. Both groups generated a number of types of linguistic affordances in their chat sessions.

Reformulations (G-J in Figure 1) were separated into English and Spanish because a distinct difference was noted between the two languages. The Spanish NSs most often reformulated nontarget-like L2 Spanish utterances explicitly in both groups, more dramatically so in Group 1 (44 occurrences) than in Group 2 (13 occurrences). The English NSs in Group 1 offered a balance of implicit (20 occurrences) and explicit reformulations (19 occurrences), whereas the English NSs in Group 2 offered implicit reformulations (11 occurrences) more than twice as often as explicit reformulations (5 occurrences). The preference for explicit versus implicit reformulations may find its genesis in the consciousness-raising instructional activity carried out in the language classes and/or some sort of cultural expectations regarding language learning.

After reformulations, the most popular affordance was the provision of word meanings, which each group carried out at a near equal frequency (16 and 13 occurrences, respectively). Indications of noncomprehension were equal between the groups (7 and 7 occurrences). A difference between the two groups' profiles is that Group 1 provided more translations (14 occurrences) than did Group 2 (5 occurrences), the explanation for which is to be found in the discussion below of learner-generated affordances.

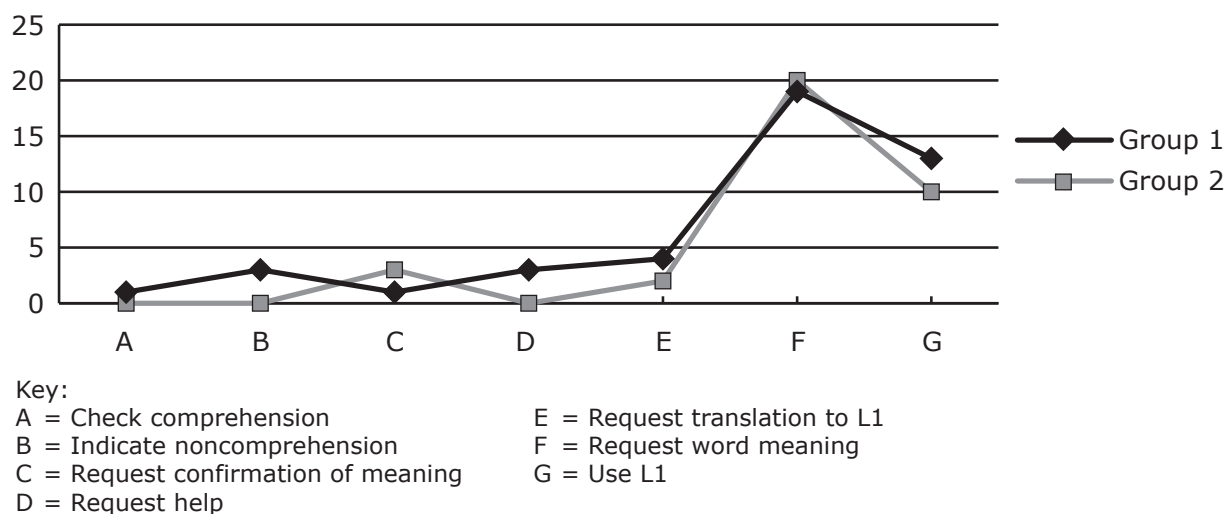
In summary, it can be said that linguistic affordance behaviors in Group 1 and Group 2 were quite similar, with the main difference being that Group 1 engaged more often in refor-

mulations than Group 2. Both groups made use of a range of affordances with similar frequencies in most categories. The other side of the coin is learner-generated affordances, to which the discussion is now directed.

### Learner-generated affordances

Figure 2 illustrates the range of learner generated affordances found in the data set.

Figure 2  
Learner-initiated Linguistic Affordances



As in Figure 1, Figure 2 reveals similar affordance profiles between the two groups. In fact, the groups are nearly equal in every category, including the total number of affordances offered (43 and 37 occurrences, respectively). A few observations can be made on the information in Figure 2. First, the most often sought affordance in both groups was the meaning of unknown words. This corroborates previous findings in the literature that attribute communicative breakdowns more frequently to lexical items than grammatical structures (Pellettieri, 2000). Other than word meaning requests (19 and 20 occurrences, respectively) and L1 use (13 and 10 occurrences, respectively), the participants in both groups sought affordances from the NSs relatively infrequently. The NSs offered unsolicited affordances much more frequently than learners requested affordances. This may have some important implications for chat discourse as a mediator of L2 learning, a point which will be taken up in the discussion section.

In both groups, codeswitching occurred from time to time (13 and 10 occurrences, respectively), usually involving the use of the L1 on the part of the NS or the learner, to mediate learner L2 discourse. Antón and DiCamilla (1998) demonstrated that use of the L1 can serve as a sociocognitive resource to mediate L2 tasks. The bilingualism in the chat rooms in the project described here enabled participants to consciously use their L1 or their partners' L1 for specific communicative purposes. When a learner requested a clarification or word meaning in the L2, for example, the NS would choose whether to provide the answer in the learner's L2 or L1. Some learners also put forth utterances or parts of utterances in their L1 because they lacked the linguistic resources to produce the utterance in the L2. In Group 1, for example, Carmen and Andy created a dynamic in which Carmen would use a Spanish word for something that she did not know how to say in English, and then Andy would give Carmen

the translation without her overtly requesting it. This became an affordance cycle for Carmen, a linguistic resource that she knew she could rely on. This partly explains why there are 12 provisions of translations among the NS affordances in Figure 1, but only five learner requests for translations in Figure 2. To conclude the analysis of learner generated affordances, then, the overall finding was that both groups sought the same types of affordances and in nearly identical frequencies.

### Coconstructed affordances

Whereas the affordances reported above consisted mainly of one to three utterances, also present in the data were collaborative affordance cycles—lengthier coconstruction of meaning episodes in which affordances were freely exchanged. There were 14 affordance cycles coded in the discourse of Group 1 and Group 2 (seven in each) during the 9 weeks of chat. Excerpts 1 and 2 illustrate two example affordance cycles.

#### Excerpt 1: Affordance Cycle 1 (Group 2, Week 3)

1. Juanita: on<sup>4</sup> the past i do that for incapacity guys, but in the future i don t know
2. Paul: what do you mean by incapacity?
3. Juanita: i don t know how to say, but special guys
4. Juanita: that need more attention
5. Paul: ohh do you mean people with special needs or people who are handi-caped?
6. Juanita: yes
7. Paul: or you could say people with dissabilities
8. Juanita: yes that (dissabilities) sound better

The affordance cycle begins when Paul indicates noncomprehension of Juanita's utterance (line 2) and Juanita provides clarification (lines 3-4). Paul requests confirmation to make sure he is correctly interpreting Juanita's clarified meaning (line 5). Juanita confirms Paul's interpretation. Paul's confirmation request in line 5 provides Juanita with the lexical item she needed, and in line 6 Paul provides an additional alternative. In these seven utterances, the chatters coconstructed affordance cycles which helped them come to an understanding and then continue with their conversation.

#### Excerpt 2: Affordance Cycle 2 (Group 2, Week 5)

1. Claudia: something like that there is a differents between guys , they dont tried to like a girl beside the way that they really are
2. Alan: I'm not sure i understand what you mean
3. Claudia: can I said in spanish?
4. Alan: are you trying to say that there is a difference between guys?
5. Claudia: yah
6. Paul: she's saying that the difference between guys and girls is that the guys are themselves
7. Claudia: that's what I mean [Paul]
8. Alan: ah yeah i agree, most of the time, guys will act like idiots for a girl though

Claudia utters an incomprehensible utterance (line 1) and Alan indicates noncomprehension (line 2). Claudia asks if she can express the idea in Spanish (line 3). Alan seeks con-

firmation for his interpretation of what Claudia meant in line 1. Claudia confirms the interpretation, but Paul has a different interpretation and provides this interpretation (line 6). Claudia again confirms the correctness of Paul's interpretation, which is probably more accurate than Alan's interpretation. Then an understanding is reached and Alan responds to the content of Claudia's utterance.

### **Nontarget-like affordances and failure to provide and notice affordances**

According to Gibson (1979), affordances are provided by the environment, "either for good or ill" (p. 127). As such, there could be social and linguistic conditions in chat room discourse that have the potential to inhibit, or at least misguide, L2 awareness and development. For example, affordances can include nontarget-like language which is picked up and used by a learner, as shown in the exchange below extracted from Group 1.

Andy: *te gustaba los legos?*  
 'did you like legos' (verb should be *gustaban*)  
 Sam: *sim me gustaba los legos tambien*  
 'yes I liked legos too'

Andy uses the incorrect form of the verb *gustar* and Sam imitates the incorrect form. The NSs who were present did not say anything about these incorrect verb forms. The mere fact that both learners use the incorrect verb form does not necessarily mean that they have incorrectly internalized this form; however, this is one aspect of chat room discourse which might merit pedagogical intervention on the part of language instructors. In another example, Teresa (Group 1) spelled "thank you" as "tank you" throughout the entire chat collaboration, in spite of the fact that the correct spelling appeared on numerous occasions in the exposure language. Since this dynamic occurred in textual, rather than oral communication, it cannot be determined if Teresa also pronounces the word incorrectly (/t/ versus /θ/) or only misspells it. Nevertheless, neither English NS in Group 1 took the opportunity to explain to Teresa the possible pronunciation consequence of her repeated misspelling of this frequently used word. There were numerous examples in every chat session of missed opportunities to provide affordances. This concurs with Kötter's (2002) findings that tandem learners overtly corrected each other's errors an average of once per chat session, and indirect correction occurred in only about one third of the chat episodes.

### **Research Question 2**

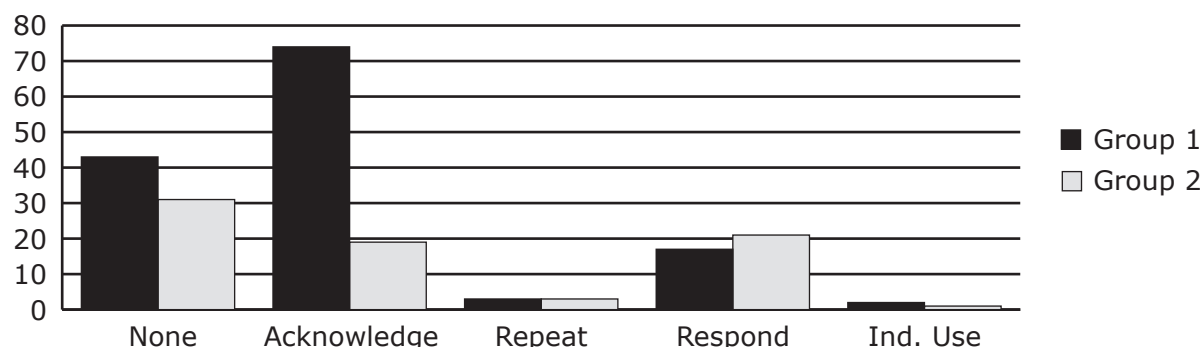
The objective of Research Question 2 was to explore learner responses to affordances. Figure 3 shows frequencies of five types of learner responses to affordances:

1. no response,
2. acknowledgement of affordance with a short response such as "OK" or "I understand,"
3. repetition of affordance,
4. response beyond a simple acknowledgement, indicating comprehension of affordance, and
5. subsequent independent use of the affordance.

In sociocultural and ecological views on language learning, it is believed that the more active learners are in the learning process, the more likely they are to learn. Learner responses were therefore categorized on a continuum from least active to most active. If there is no

acknowledgement, there is no way of knowing if a learner noticed an affordance or found it relevant. In other words, there is no way to tell if a potential (Level 1) affordance actually became an affordance (Level 2) for the learner. Simple acknowledgement suggests, but does not guarantee, awareness. By repeating or responding to the content of an affordance, however, learners demonstrate active engagement.

Figure 3  
Responses to NS Affordances



The response profiles for Group 1 and Group 2 are similar except for two notable differences. First, in Group 1, an affordance-“thank you” routine occurred repetitively in the discourse. The NS would provide an explicit reformulation, the learner would say “thank you,” and the conversation would continue. This explains the high number of one-word acknowledgements in Group 1 (74 occurrences [54%]) versus those in Group 2 (19 occurrences [26%]). The second difference is in responses to affordances beyond the one or two word “thank you” or “OK.” The participants in Group 2 made more of this type of response than those in Group 1 (17 occurrences in Group 1 and 21 occurrences in Group 2), and the ratio of this type of response to the total of all responses constitutes only 12% in Group 1 versus 28% in Group 2. This contrast seems to indicate that although Group 2’s number of affordances was lower than Group 1, Group 2 embedded affordances and responses to them more into the overall communicative context than did Group 1. In other words, the affordance patterns in Group 1 seemed to have more of a pedagogical purpose, whereas in Group 2 affordances appeared to be more for comprehension and social purposes.

While the one-word acknowledgement category claims the largest number of responses to affordances, the second largest category is no response (43 occurrences in Group 1 and 31 occurrences in Group 2). These data stand in strong contrast to those reported by Lee (2006), whose participants responded to 90% of the feedback that was offered to them (the vast majority of which was implicit). Many of the affordances that did not receive a response in the project described here were implicit reformulations. The researcher thus concluded that the participants were either not noticing or not deeming the reformulations relevant. The two categories with very infrequent occurrences are repeat (3 occurrences in Group 1 and 3 occurrences in Group 2) and independent use (2 occurrences in Group 1 and 1 occurrence in Group 2). If learners take the time to repeat a structure or word that is provided for them, that demonstrates that they noticed the structure or word and will have a better chance of remembering it than if they do not repeat it. The most conclusive way to know whether learners internalized affordances is their independent use of the same structure or word later in the chat dialogues. There was very little independent use in the current data set. This could be because a context never evolved in which learners would have had a chance to use the newly learned linguistic elements or because they did not internalize the elements.

One cannot conclude that learners did not notice potential affordances simply because they did not respond to them or repeat them. Nor can one conclude that a simple acknowledgement means that the affordances became relevant to the learner. Nonacknowledgement of affordances could also be a function of the altered turn-taking system in chat rooms. An utterance can quickly become irrelevant due to the rapid flow and multiple strands of conversation in chat rooms. It is also possible that learners were not completely focused on the chat session since the researcher had no way of knowing whether participants were engaged in other tasks such as chatting with friends on instant messenger or watching television.

The response patterns uncovered here are a reflection of the social dynamic created in each group, which includes a role for linguistic affordances, although it appears to be a limited, unsystematic role (except for the reformulation-“thank you” cycle in Group 1). Learners seldom sought affordances in this data set. Affordances were more frequently directed to learners by the NSs, and learners might or might not have found the affordances relevant. We now turn to the final component of the study, learner perceptions.

### **Research Question 3**

Learner perceptions help triangulate the data presented in Research Questions 1 and 2. Students completed a postchat questionnaire with Likert-scale items, and Table 3 includes the results of students’ responses to the 14 items related to linguistic affordances in the chat sessions (see additional questionnaire items in Appendix B). Table 3 displays for each item the number of responses to each level of the Likert scale as well as the mean for the item. Responses for each level of the Likert scale are provided because, due to the small number of participants and the uneven balance of the two groups, the means do not always reveal important patterns in the data. The rows in white represent the responses of the participants in Group 1, and the rows in gray represent those of the participants in Group 2.

Table 3  
Summary of Students’ Responses on Postchat Questionnaire

Frequency: 5 = always, 4 = frequently, 3 = sometimes, 2 = seldom, 1 = never	5	4	3	2	1	Mean
1. The native speakers provided feedback on my language use.	1	3				4.3
		3	2			3.6
2. The feedback given to me by the native speakers was helpful.	2	2				4.5
		4	1			3.8
3. I noticed my errors when I saw the native speakers model structures or words correctly.	1	2	1			4.0
	1	2	2			3.8
4. I noticed my own errors when I saw them on the screen.	2	1	1			4.3
	1	1	3			3.6
5. When I did not understand a native speaker’s utterance, I asked for clarification.	2	2				4.5
	4	1				4.8
6. I noticed new words in the native speakers’ utterances.	1	2	1			4.0
	3	2	1			4.2
7. I noticed new grammatical structures in the native speakers’ utterances.	1		3			3.5
	1		4			3.4



Frequency: 5 = always, 4 = frequently, 3 = sometimes, 2 = seldom, 1 = never	5	4	3	2	1	Mean
8. I attempted to model appropriate conversational English/Spanish for the learners of my native language.	2	1	1			4.3
	3	1	1			4.4
9. I corrected the non-native speaker students' errors.	1	2	1			4.0
	1	1	3			3.6
5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree						
10. I like having the native speakers directly correct my language errors.	3	1				4.8
	2	2	1			4.2
11. I prefer to receive language feedback indirectly.			3	1		2.7
			3	1	1	2.4
12. I later used outside the chat room new grammatical structures that I learned in the chats.	2	1	1			3.3
	1	3	1			3.0
13. I later used outside the chat room new words that I learned in the chats.	2	1				3.7
	1	4				4.2
14. Trying to communicate ideas is more important than accuracy or correcting errors.	2	1	1			3.3
	3	1	1			4.4

In a global comparison of the two groups, differences in means are less than .5<sup>5</sup> in all items except Items 1, 2, 4, 10, and 14. Also noticeable is that the means for Group 1 are higher for all items except Items 5, 6, 8, 13, and 14.

Overall the learner perception data suggest that linguistic affordances played a slightly greater role in Group 1 than in Group 2. Whereas all members of Group 1 believed that the NSs had provided them with linguistic affordances frequently or always (Item 1, labeled "feedback" on the questionnaire), Group 2 was split between frequently and sometimes. This resonates with the frequency of reformulations reported in Research Question 1 (63 explicit and 27 implicit occurrences in Group 1, 18 explicit and 17 implicit occurrences in Group 2). Group 1 also reported a higher frequency of correcting L2 speakers' errors (Item 8), whereas both groups are nearly equal in their reported attempt to provide appropriate language models to the learners (Item 9). The response to Item 14 makes it clear that Group 2 was more focused on meaning than on linguistic form in the chat sessions. Both groups found the feedback given frequently or always helpful, however. Both groups also had a strong preference for explicit rather than implicit affordances.

There were some patterns in the items with respect to noticing (Questions 3, 4, 6, and 7). The majority of participants in both groups reported frequently noticing the correct way to say things in their L2 when they saw it in NS discourse (Item 3), but the majority of the participants in Group 2 were able to notice their errors on the screen only sometimes as compared to frequently in Group 1 (Item 4). Both groups noticed new words in the exposure language (Item 6) more frequently than they noticed grammatical structures (Item 7). This concurs with their reporting in Items 12 and 13 that they used words they learned outside of the chat room more often than they used structures they learned. This finding is consonant with previous findings in the SLA literature that lexical items tend to spark negotiations of meaning more than structural items do (in synchronous CMC as well as face-to-face discourse (Blake, 2000; Lee, 2005). Also noteworthy is a bit of a mismatch between Research Question 2 and Research Question 3 analyses, in that learners failed to acknowledge many affordances yet reported in the questionnaire that they frequently did notice new words and structures.

Part 2 of Table 3 in Appendix B contains information on additional questionnaire items which further anchor the data in an emic perspective. All of the Group 1 members (except one who did not respond to Item 16) opined that the chat experience helped them to be able to speak, write, and read better in their L2. In Group 2, some participants believed the same, but the majority was neutral about transfer to the speaking skill, two were neutral about transfer to the writing skill, and one disagreed that there was any transfer to the reading skill.

The majority of participants in both groups believed that their ability to write longer sentences in their L2 improved during the time of their participation in the study and that they better understood the culture of their NS counterparts. On an affective level, the majority felt more confident communicating in their L2 and that their attitude toward their L2 improved as a result of the chat experience. Learners in both groups were divided about whether they would prefer to receive feedback from their professors instead of their chat partners, but most clearly did not want their professors to become part of their learner chat community. Finally, the majority felt that the chat experience was a valuable part of their language course and that they would continue chatting with NSs of their L2 in the future.

## **DISCUSSION AND PEDAGOGICAL IMPLICATIONS**

Bilingual telecollaborations are complex communicative environments which provide participants with extensive opportunities to coconstruct meaning with each other and build discursively mediated interpersonal relationships. This study revealed that learners do focus to some extent on structural and lexical properties of language during bilingual chat sessions when their potential to do so is brought to their attention. Learners and NSs exchanged a variety of linguistic affordances, responded to affordances in various ways, and reported overall satisfaction with the linguistic affordances that were made available to them during the chat sessions.

Noticeable in the data, however, is a hit or miss pattern of providing and responding to affordances, which indicates that (a) participants are only partially aware of their potential to assist each others' appropriate use of target language patterns, (b) participants are simply more interested in coconstruction of general meaning than promoting linguistic accuracy, or (c) both. This is especially evident in the relatively small number of learner-initiated affordances in each group (52 and 47 occurrences). It can be a challenge for chatters to balance their attention between communicating and focusing on learning language forms (Brammerts & Calvert, 2003). Kötter stresses the importance that "each partner is prepared to act as an expert for the linguistic and cultural community of his or her native language" (2003, p. 147), even though, it should be cautioned, one cannot assume that NSs, simply by virtue of being NSs, are necessarily the best teachers. Kötter suggests that learners should negotiate when and how to help their peers, including "how often and in how much detail they should comment on each other's potentially flawed output" (Kötter, 2003, p. 147). It should be noted that, other than a general request by the two Spanish-speaking learners in Group 1 in the beginning that the English speakers provide them feedback, the participants in this study did *not* negotiate when and how to help each other.

The years of experience behind the European tandem learning model can be enlightening here (Brammerts, 1996; Brammerts & Calvert, 2003; Kötter, 2002, 2003). Two fundamental principles in tandem learning are reciprocity and autonomy. The reciprocity principle refers to the participants' willingness to be good language models and pay attention to the learning needs of their partners, whereas the autonomy principle puts learners in charge of their own learning. Combining the principle of reciprocity with the principle of autonomy, it becomes very possible that tandem partners have different goals (Lewis & Walker, 2003),

including level of focus on linguistic forms. The most successful tandem learners, according to Lewis and Walker, are those who implement effective learning strategies which include recognizing phrases that their partner uses that might be useful to them, asking or showing that they have not understood, and learning from explicit and implicit corrections. In other words, tandem learners, and by extension telecollaborative learners, are encouraged to make good use of linguistic affordances available in the chat discourse.

van Lier asserts that language learning is “mediated by all the semiotic resources that are available in the learning environment” and that such resources are not ‘just there’ but rather must be “actively brought in and created, shared and used ... under guidance from the teacher and other learners” (2004, p. 97). The semiotic budget in this telecollaboration was rich in terms of potential (Level 1) affordances, but somewhat impoverished in terms of potential affordances becoming (Level 2) affordances.

Language instructors, then, face choices regarding the tension between learner autonomy in telecollaboration and expectations that learners will acquire specific types of linguistic structures or lexical items. On the one hand, pedagogical intervention might be successful in helping chatters become more aware of their potential to provide and notice linguistic affordances. Pedagogical tools such as chat reports that learners complete after each chat session, as well as the use of chat transcripts in classroom activities, can provide additional mediation of language learning in chat room discourse. On the other hand, pedagogues might embrace the telecollaborative context as the complex communicative forum that it is—not quite as naturalistic as social discourse with NSs, yet not quite as pedagogical as the L2 classroom. Either way, it is desirable to link the telecollaborative community and the classroom community in a way that each can support the other.

## LIMITATIONS

As with any research study, this study has limitations. First, as an exploratory case study of a specific communicative context, its results should be cautiously generalized to other learning contexts. Second, the operationalization of “linguistic affordances” was a subjective determination made by the researcher. As such, other researchers could potentially examine the same data set and generate a different interpretation of the data. Finally, the researcher is fully aware that the focus on *intentional* linguistic affordances does not speak to the fact that *any* linguistic elements or discourse moves in telecollaborative SCMC discourse could be a potential affordance regardless of whether or not the interlocutors intended their utterances to be affordances. Other types of research instruments would be necessary to capture what cannot be detected in chat transcripts and learner questionnaires. The researcher is also aware that affordances can be exchanged from learner to learner, not only NS and learner, although these types of affordances were not included in the data set.

## CONCLUSION

One conclusion that can be taken from this study is that telecollaborative chat rooms might not be the optimal forum for raising awareness of specific linguistic structures and lexical meanings since the greater benefit is to be found in the building of intercultural social relationships. In the words of Lam and Kramsch, who speak of the benefits of telecollaborative chat, “The increase in self confidence, the acquisition of medium-appropriate register of English, the skillful representation of self, the ability to play multiple roles and adopt multiple voices ... are all part of an SLA process” (2003, p. 156). Linguistic affordances, as conceived of in

this study, appear to have a relatively reduced role in light of all the benefits that participants in telecollaborative chat stand to reap. The process of relationship and community building in telecollaborations might often take precedence over pedagogical roles. Language learners need practice in coconstructing meaning with interlocutors in their L2. The participants in this study employed the bilingual linguistic resources at their disposal to coconstruct meaning with each other, incorporating linguistic affordances into their discourse when they found it relevant to do so. The ecological affordance construct provided a useful framework in which to critically examine the relations among organisms/participants in the telecollaborative ecosystem.

## NOTES

<sup>1</sup> The native speaker construct has received criticism in the SLA field on a number of counts. The researcher does not wish to imply that learners are deficient communicators as compared to native speakers, nor that *only* native speakers can serve as language models.

<sup>2</sup> Note that the purpose of analyzing two groups was not to explore their differences as much as it was to provide two different scenarios existing in that semester's chat community.

<sup>3</sup> Coding was verified by a colleague who was made familiar with the objectives of the study (Miles & Huberman, 1994). In Research Question 1, initial interrater reliability was 93%. For Research Question 2, interrater reliability was initially 95%. Nearly all discrepancies were later resolved by consulting a third rater. Research Question 3 did not require an interrater reliability measure because the scoring of Likert scale items resulted in quantitative means rather than qualitative coding. In Research Question 1, "use of L1" was double coded when the utterance also served one of the other categorized functions.

<sup>4</sup> In all chat excerpts, language is left in its original form, including errors and misspellings.

<sup>5</sup> This value (.5) is not meant to attempt to demonstrate any type of statistical significance, since this is a qualitative study. The researcher subjectively selected this value to be able to report general qualitative patterns in the data.

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**APPENDIX A**

Weekly Assigned Chat Topics

1. Getting to know you
2. What is culture?
3. My childhood
4. Movies/novels/stories
5. Masculinity/femininity/love relationships
6. Politics in the U.S. and Puerto Rico
7. Illegal immigration and/or religion in society
8. Alcohol/drug consumption and abuse
9. The chat experience

**APPENDIX B**

Table 3 Part 2

Additional Likert-scale Items on Postchat Questionnaire

(The rows in white represent the responses of the participants in Group 1, and the rows in gray represent those of the participants in Group 2.)

5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = disagree	5	4	3	2	1	Mean
15. I believe that the chat experience has helped to improve my ability to SPEAK more accurately in my second language.	1	3				4.2
		2	3			3.4
16. I believe that the chat experience has helped to improve my ability to WRITE more accurately in my second language.	1	2				4.3
	1	2	2			3.8
17. I believe that the chat experience has helped to improve my ability to READ in my second language.	3	1				4.3
	1	3		1		3.8
18. I feel that I can speak and/or write in longer sentences in my second language after having chatted this semester.		2	2			3.5
	2	2		1		4.0
19. I believe that I understand better the culture of Puerto Rico after having chatted with Puerto Ricans.	2	2				4.5
	3	1			1	4.0

5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = disagree	5	4	3	2	1	Mean
20. Because of the chat, I feel more confident communicating in my second language.		3	1			3.8
		3	1	1		3.4
21. Because of the chat experience, my attitude toward my second language improved.	1	3				4.3
	1	2	1	1		3.6
22. Overall, I liked my chat partners and we got along well.	4					5.0
	3	2				4.4
23. I prefer to receive feedback from my teacher rather than the native speaker students.			2	2		2.5
			3		2	2.2
24. Our professors should participate in the chats			1	3		2.3
		1		1	3	1.8
25. The chat was a valuable part of my experience in this course.	4					5.0
	2	1	2			4.0
26. I plan to chat with native speakers of my second language in the future.	2	2				4.5
	3	1	1			4.4

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