NEGOTIATING FOR MEANING ACROSS BORDERS WITH CMC

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Abstract

In our Tandem Language Learning (TLL) project experience using Computer Mediated Communication, fifty students of Spanish at a university in the USA exchanged e-mail and participated in synchronous conversations using Instant Messaging with fifty students of English at a university in Argentina. An analysis of the discourse produced with these two methods of CMC showed that a variety of functions were used by the students to negotiate for meaning. The investigators will refer to the importance of TLL and negotiating for meaning in Second Language Acquisition as well as the students´ opinions after the experience. We will also include examples of the learners' cultural exchange, post study observations, and recommend possibilities for future investigation.

Introduction

As language educators we all know that learning a language is more than just memorizing a vocabulary list and grammar rules. Language learners need communicative competence which has as a feature the ability to use the target language to communicate in a spontaneous situation. Computer technology has created the opportunity to include computer mediated communication (CMC) in our language teaching. Recently, second language (L2) researchers have found that using e-mail and chat rooms is an effective use of technology for a communicative approach to teaching languages (Blake 2000, Lee 2004, Patterson 2001, Toyoda & Harrison 2002, Tudini 2003, Schwienhorst 1997 and 1998, Sotillo 2000, Smith 2003). The increased use of and familiarity with CMC have provided us with the prospect of incorporating computer mediated Tandem Language Learning (TLL) into the classroom.

Tandem Language Learning

TLL involves the interaction of two individuals with different native languages that are learning each other's language. They meet and talk, speaking one language for half the time and the other language the other half. In this way both participants benefit from the exchange.

Schwienhorst (1998) and Little et al (1999) refer to the three principles of tandem learning presented in the Tandem Guide by Little & Brammerts (1996), which have been respected in this project:

· **Bilingualism:** Learners were instructed to use both target languages equally throughout the project.

· **Reciprocity:** Because the learners alternated languages in both forms of CMC, both groups benefited from the interaction.

· **Autonomy:** Rather than switch to their native language students often negotiated for meaning in the target language when they did not understand something. They took the initiative for their own learning and took advantage of the opportunity to learn both language and culture from a native speaker without the guidance of a teacher.

In TLL the learners assume the responsibility for improving their own language skills, facilitating clear communication with native speakers of their target language by asking questions and negotiating for meaning, and helping their tandem partners to understand their native language. The learners have an opportunity to not only practice the target language but also to be exposed to a different culture, first-hand from a native speaker. Each learner takes on the role of teacher or as Donaldson and Kötter explain it, "the partners become in effect 'resident experts' of their own linguistic and cultural community and support the learning process of the other" (1999: 537).

Appel (1999), Lee (2004), and Schwienhorst (1998b) liken the concept of learner autonomy to the social-interactive nature of language presented by the psychologist Vygotsky. As Lee puts it, language is a tool that the individual uses to socialize with others and through this socialization, learners can help each other in performing a shared task. Vygotsky (1978) states that this social interaction promotes learning through the "zone of proximal development" which he explains as the difference in what an individual can achieve solving problems by himself and what he can achieve with the help of an adult or more capable peers. Thus, through social interaction during the course of this investigation, using CMC, the tandem partners enter this 'zone of proximal development' as they interact and negotiate meaning, helping each other comprehend each other's language and learn about their culture under one another's guidance.

We provided our students with the opportunity to participate in this TLL project hoping that as they interacted with native speakers of the target language they would improve their language skills, increase their vocabulary in the target language (TL), learn more about the culture found in their tandem partner's country, and of course increase their language acquisition.

Negotiation for meaning

Second Language Acquisition (SLA) research has shown that interaction and especially negotiation for meaning are essential elements of language acquisition (Gass and Varonis 1994, Gass 1997, Long 1985, Pica 1994, Swain 1998).

Pica (1994: 494) defines negotiation as "the modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility." As the learners negotiate for meaning they modify their speech

linguistically to produce comprehensible TL. They accomplish this task by repeating a message, adjusting its syntax, changing the vocabulary, or modifying its form and meaning.

Long and Robinson (1998) classified the process of negotiation for meaning under the Interaction Hypothesis. This hypothesis states that the conditions for second language acquisition are improved when learners negotiate meaning with other speakers. These negotiations tend to increase input comprehensibility through language modifications such as simplifications, confirmation or clarification requests, elaborations, and recasts. Thus, activities that promote negotiation for meaning create a quality environment for SLA to occur.

Design and methodology of study

The subjects of this study included 50 learners of Spanish from Rice University in Houston, Texas and 50 learners of English from Universidad Tecnológica Nacional (UTN) in Buenos Aires, Argentina. The two groups of 50 learners at the two universities were randomly paired as tandem partners. Throughout one semester, from September to December, the pairs of students communicated with each other by sending e-mails and participating in Instant Message (IM) online chats. In addition, some Rice students created video letters to be viewed by the Buenos Aires students and Buenos Aires students posted digital photographs on-line for Rice students to see.

In September and October the learners exchanged two e-mails every week: one e-mail in Spanish and one e-mail in English. There were, however, no controls or limits on the topics or the amount of language they should write in each e-mail. Because of this there was no consistency in the length of e-mails that were sent. Throughout the month of November, the pairs of learners participated in four IM chats online using the MSN Instant Messaging system. They were told to participate in each chat for a minimum of 15 to 20 minutes, twice in Spanish and twice in English. At the end of the investigation, the learners were given a questionnaire to provide the investigators with feedback and the learners' opinion of the study and its benefits if any.

Data and Discourse Functions

Data were collected in the form of e-mails and saved IM chats. Each written utterance produced by the 50 pairs of learners was analyzed and classified according to its function within the discourse. The categories used to classify the different functions of each utterance in both the asynchronous e-mails and synchronous computer discussions are based on those used by Patterson (2001) in her research on Computer Assisted Class Discussions (CACD). A list of the functions used in the discourse analysis which are considered to reflect negotiation for meaning can be found in the table in Appendix I .

E-mails

After completing the discourse analysis of all e-mails, we totaled the number of times each pair used the specific discourse functions that were previously noted to be associated with negotiation for meaning. These data are located in the following table (Table 1).

FUNCTION	E-Mail
Confirmation check	200
Elicit clarification	106
Elicit vocabulary	40
Comprehension check	9
Reply clarification / definition	104
Reply confirmation	26
Reply vocabulary	30
Reply comprehension	2
State elaboration	352
State correction/self correction	155
Total	**1024**

Table 1: Total Discourse Functions associated with negotiation used in all e-mail

Due to the nature of this TLL project it was not possible to separate the two languages in the e-mail portion. The students often wrote a question in an e-mail written in one language and received a response in the next e-mail in the other language, as can be seen in the examples below. Therefore, the data for e-mails are for both languages combined and there is no distinction between the negotiations found in native or foreign languages.

The following examples are excerpts from e-mail exchanges. Negotiation functions in the examples are written in bold letters and labeled. The Spanish discourse is followed by an English translation.

This first example is taken from e-mails written in English. Student D from Argentina is unsure about some of her phrases in English and asks for confirmation of her wording in one e-mail ("I'm down with flue"). Then in the next e-mail Student H responds by correcting the wording and spelling. Also by repeating the phrase "runny nose" the Rice student is indirectly correcting the expression "running nose". She also confirms that the word "salsa" is also used in the USA.

Example 1:

1   D-UTN says**:** I wanted to tell you that I also know how to dance salsa **(do you say salsa in inglish too????)** *[confirmation check]*
   I'm down with flue, **(is this expression ok?)** *[confirmation check]* so I have a running nose and a headacke.

l   H-Rice says To answer your question, **it's probably better to say you're sick with the flu or you have the flu.** *[reply:correction]* **(Isn't 'a runny nose' the strangest expression in English?** *[confirmation check]* I've always thought it's funny.) The health services on campus is offering flu shots and I should probably get one so I don't get sick. **We do say salsa in English.** *[reply:confirmation]* I'm having so much fun learning.

In the second example student D from Argentina uses the comprehension check function to ask if the Rice student understands the word *copado* because it is a word commonly used in Argentina but possibly not in other countries. Rice student H does not understand and asks for clarification. Then student D answers in English in the next e-mail and gives a definition of the word "copado".

Example 2:

l   D-UTN says: ojalá que conozcas algún chico lindo y ¨copado¨ **(conocías esta palabra?** *[comprehension check]* acá se usa mucho) (*Hopefully you meet a nice cool boy. Did you know this word? It is used a lot here.)*

l   H-Rice says: **¿Qué es esto de un chico lindo y copado?** *[elicit: clarification]* No se que es copado, pero pienso que puedo entenderte. Ahora mismo, no tengo novio. *(What is that about a good looking guy and "copado"? I don't know what "copado" is, but I think I can understand you. I don't have a boyfriend right now.)*

l   D-UTN says: Thanks for your whishes and pieces of advise. **When I said "copado" I meant cool, you know, I hope you will find a cool and handsome boy.** *[reply:clarification]*

Instant Messaging chats

The ability to communicate in English for the UTN students was more advanced than the ability to communicate in Spanish for most of the Rice students because the UTN students had been studying English for a few years longer than most of the Rice students had been studying Spanish. After analyzing the discourse in the IM chats, rather than separate the data by learners of a specific language, we listed the negotiation data separately for Spanish and English chats in order to see if this difference in language ability affected the amount of negotiation.

For reasons unknown to the investigators, six pairs of learners did not complete the chat portion of the study. Some did not chat at all and some chatted once or twice but only in Spanish. Therefore, the data collected from these 12 learners were deleted from the results. The

overall total number of negotiation for meaning functions found through analysis of the English and Spanish chats of 44 pairs can be seen in Table 2 below.

FUNCTION	English	Spanish
Confirmation check	199	249
Elicit clarification	124	175
Elicit vocabulary	25	22
Comprehension check	12	19
Reply clarification / definition	157	180
Reply confirmation	153	167
Reply vocabulary	28	64
Reply comprehension	35	57
State elaboration	129	157
State correction/self correction	66	103
Total	**938**	**1193**

Table 2: Total negotiation for meaning functions in English and Spanish chats

The following excerpts from the chats contain some examples of negotiation for meaning. In example 1 Rice student L is talking about the weather and describes it as "weird". Student M from Argentina interrupts her tandem partner to ask what "weird" is. Rice student L is not sure whether M wants a definition of the word "weird" or clarification of what she thought was weird and immediately clarifies both: "*I was refering to the weather. Weird means unusual.*"

Example 1:

· M-UTN dice: **sorry but what is weird?** *[elicit clarification]*
· L-Rice dice: **the word weird?** *[elicit confirmation]* **Or what I was refering to?** *[elicit clarification]*
· M-UTN dice: and did you have important things inside the car?
· L-Rice dice: no, just some junk, thankfully
· M-UTN dice: **yes,** *[reply confirmation]* **you said It´s weird!** *[reply clarification]*
· M-UTN dice: **I don't understand** *[elicit clarification]*

- L-Rice dice: **I was refering to the weather.** [*reply clarification*] **Weird means unusual.** [*reply definition/clarification*]
- M-UTN dice: **Ah!** *[reply comprehension]*

In the second example the chat is in Spanish. We can see that student L from Argentina uses the expression "*me voy al sobre*" and Rice student J infers the meaning but wants to make sure she is right by saying "*te entiendo*?" (do I understand you?). Then L provides the correct meaning and J confirms she now understands that "me voy al sobre" means "I am going to bed".

Example 2:

- L-UTN says: aca aveces decimos, "me voy al sobre" *(Here at times we say, " I am going to the envelope")*
- J-Rice says: bueno,hablaríamos solo quince minutos. **me voy al sobre por no voy a dormir mucho?** *[elicit confirm]* **te entiendo?** *[elicit:comprehension]* *(Well, we would talk only 15 minutes. I am going to the envelope for I am not going to sleep a lot? Do I understand you?)*
- L-UTN says: **n me voy al sobre significa, me voy a la cama** [*reply definition*] *(no, I am going to the envelope means I am going to the bed.)*
- J-Rice says: ah! **ahora yo entiendo**. *[reply comprehension]* (*Ah. Now I understand.)*

Results

Looking at the data in Table 2 above we see that the numbers of the different functions associated with negotiation for meaning are very similar for the two different languages. The overall number of times that learners used negotiation functions was 938 in English chats and 1193 in Spanish chats. However, there was no control over the length of time for each chat so the chat lengths differed (see Appendix II). Thus, it was not possible to compare numbers of functions related to negotiation between the two languages without finding a common component.   Although the number of utterances and length of utterance as well as the length of chat varied from chat to chat, the common feature for both chats is the word. We therefore counted the number of words per tandem partner for each chat and calculated the number of negotiation functions per 100 words.   Of the 44 pairs of students completing all four chats, two were done in English and two in Spanish. The results of the calculations for the four chats of each pair of students can be found in Appendix II. The overall average numbers of negotiations and words for chats are listed below in Table 3 along with the results for all e-mails together.

CMC	Words	Average negotia-tions in each CMC	Negotia-tions per 100 words

All e-mails	170,914	963	.51
Span chat	43,247	1193	2.99
Eng chat	53,975	938	2.00
All chats	97,222	2131	2.28

Table 3: Average negotiation functions per 100 words in e-mail and chats

We found an average of 2.00 negotiations per 100 words in the English chats and 2.99 negotiations per 100 words in the Spanish chats. This indicates that, even though it appears in Table 2 that the numbers of negotiations were very close, the tandem partners actually negotiated more often in the Spanish chats than in the English chats. As previously indicated, we believe this is due to the fact that the Spanish language skills of the Rice students were not as advanced as the English languages skills of the UTN students. We did find a greater number of Confirmation Checks and Clarification Requests in Spanish chats. A possible indication of the weaker language abilities of the Rice students can also be seen in the more than double vocabulary requests and high number of correction functions in Spanish chats.

In addition to comparing the two languages in the chats, we also wanted to look at the number of negotiations used in e-mail compared to chats. Table 4 below contains the numbers of the individual negotiation functions that were found through an analysis of all discourse in the chats vs. all e-mails of the 44 tandem partners. Looking at the numbers we found twice as many instances of negotiation in the chats than in e-mail. We noted that confirmation and comprehension check, clarification request and the replies to these requests were more common in chats; while e-mails had a slightly higher number of elaborations.

FUNCTION	Chat	E-Mail
Confirmation check	448	200
Clarification request	309	106
Elicit vocabulary	47	40
Comprehension check	31	9
Reply clarification / definition	339	104
Reply confirmation	320	26

Reply vocabulary	92	30
Reply comprehension	92	2
Elaboration	286	352
State correction/self correction	169	155
Total	2131	1024

Table 4: Number of negotiation functions for all chats and e-mails

With this data, we are considering 176 chats (4 chats for all the tandem pairs-2 in Spanish and 2 in English) and 1084 e-mails in Spanish and English. Even though the number of asynchronous e-mails outnumbers the number of chats and the number of words in these e-mails (186,251) was almost double the number of words in the chats (99,115) we found over twice as many negotiation functions in the chats. Again, in order to make a valid comparison, we calculated the ratio of negotiations per 100 words used in the e-mail for each of the same 44 pairs of students and the data per pair are given in Appendix III. The averages found in Table 3 above show that the ratio of negotiation for meaning to words is greater in the chats (2.28 per 100 words) than in e-mail (0.51 per 100 words).

We expected to see more negotiation in the synchronous CMC than in the asynchronous e-mails and our data support this theory. Considering the amount of negotiation we found in e-mails and the amount found in chats, our data support this theory. We found over four times as many negotiation functions in the chats (2.28) than in the e-mails (.51) for every 100 words produced. Thus, in a language class where face-to-face partners are not readily available to carry out a TLL communication project with native speakers, the language teacher might consider organizing a similar TLL project using CMC. In this way learners of both languages would have the opportunity to communicate with native speakers of their target language through synchronous chats.

Videos and photos and a cultural exchange

Some of the Rice students made video letters, which were digitized by the Language Resource Center at Rice. They were then placed on the LRC server to be viewed as streaming video so that the students in Buenos Aires could see them using RealPlayer. The Rice students were divided into groups and each group videotaped and described in Spanish a different aspect of university life at Rice including dorm life, sports activities, shopping, nightlife and eating in the cafeteria. These videos are located online at: http://lang.rice.edu/ppatters/301/SPANVIDEOS_new.htm.

At UTN in Buenos Aires, digital photographs were taken of groups of students in different areas of the building: the computing lab, the Office of Student Services, and the entrance to the building. The photos were then placed on the Net-Learning website so that the Rice students

could see pictures of their e-pals and view a little university life at UTN. You will find the photos at the following site address: http://www.net-learning.com.ar/utnphotos.

Although the Spanish language videos and photos were neither bilingual nor interactive they provided our students with a great deal of information about each other's universities which was then discussed in chats and e-mail.   They commented on differences in the campuses and compared various aspects of university life in the different countries.

This CMC project along with the videos and photos provided our students with a great opportunity for a cultural exchange along with the language interaction.   In addition to the university differences, we found examples of an exchange of other cultural issues in the e-mails and IM chats. Some of the cultural issues dealt with were: university life, nightlife, jobs, families, holidays, food, music, war, basic characteristics of each country, and the most important traditions celebrated there.

Due to limited space we will include only a few examples of the cultural exchange. In the following excerpt from a Spanish chat, the Argentine student M is talking about the Argentine tradition of the 15th birthday party called "la fiesta de quince". She compares it to the tradition of a sweet sixteen party in the USA.

- M-UTN says: Por acá no tengo nada nuevo para contar, salvo que mañana es el cumpleaños de 15 de mi prima.   Acá se estila hacer una fiesta que dure toda la noche para cuando las chicas cumplen los 15 años, igual que en Estados Unidos festejan 'sweet sixteen' *(No news to tell you only that tomorrow is my cousin's 15th birthday. Here it is customary to have a party that lasts all night long when girls turn 15, the same as celebrating "sweet sixteen" in the US.)*

- A-Rice says: Tuviste una grande fiesta? El cumpleaños para quince años es muy especial. Sí,   aquí, tuvimos grandes fiestas para dieciséis años. Tuvo un "Sweet Sixteen," pero hace tres años pasado. *(Did you have a big party? The 15th birthday is very special. Yes, here we had big parties when we turn 16. I had a "Sweet Sixteen" but it was three years ago past)*

In the next example from an English chat, the US student is surprised when she realizes that her partner from Buenos Aires will eat dinner at about 9:00 pm (the time when most Argentineans eat dinner) whereas in the USA most people have dinner around 6:00 pm.

- J-Rice says: so when will you eat dinner
- J-UTN says: At nine or some minutes later, as always.
- J-UTN says: You'll have it now, won't you? [confirmation check] What a strange thing. (As well as it is strange for you my dinner time) [state:elaboration]
- J-Rice says: I am going to eat in about 2 hours [reply:confirmation]
- J-Rice says: at 6 [elaboration]
- J-Rice says: Yes, it's odd to me that you eat so late.
- J-Rice says: My stomach would have eaten itself by then!

Although the major focus of our investigation was the interaction and negotiation that took place while learners communicated with the various forms of CMC, we assumed that an intercultural exchange would also be a part of the tandem interchange. Both O'Dowd (2003) and Kramsch & Thorne (2002) agree that TLL exchanges through CMC contribute to intercultural learning and point out that the language instructor plays an important role in the development of this intercultural learning. As the TLL interchange progressed over the semester and we analyzed the discourse produced by our students we became aware of many examples of a cultural exchange between them. Class discussions about the tandem project and what they learned provided more information about their cultural exchange. We are interested in evaluating the cross cultural learning but due to limited space here and the amount and types of cultural exchange between the tandem partners, we must consider the intercultural learning that took place in this study in more detail at a later date for future investigation and discussion.

Questionnaire results

At the end of the study the learners filled out a short questionnaire to provide the investigators with feedback about their TLL project. The learners' comments provided us with their opinion of the project and the two methods of CMC that were used. The learners were also asked how much they thought they benefited from the TLL exchange of information. The questionnaire can be found in Appendix IV and comments by Rice and UTN students taken from the questionnaires are in Appendix V.

Of the Rice students that answered the questionnaire, 20 said they preferred IM for a variety of reasons. These students thought that IM was more enjoyable and they liked the immediate feedback they got. They thought it was more communicative and more like a real conversation and they believed they learned more. Eighteen Rice students wrote that they preferred e-mail because it was easy to include it in their busy schedules. They liked having more time to compose their messages and it was more flexible. With IM the students had to find time to meet on-line with each other and had to take into account that the time in Argentina was 3 hours later than in Texas.

Of the UTN students that filled out the questionnaire, 32 said they preferred IM for various reasons and 14 UTN students wrote that they liked e-mail best. The reasons mentioned by UTN students are similar to those for Rice students. IM gave more immediate feedback and was more like a conversation. They also liked the informal nature of the IM chat. They had the same to say about e-mail, mentioning that it was easier to fit into their busy schedules. They also believed they learned useful expressions in English. Also, some students in Buenos Aires did not have Internet access at home making IM chats more difficult for them. Not only did they have to match the appropriate time schedule with their Texas partners but they also had to deal with Internet access availability, often using Cyber cafes and paying by the minute.

Conclusion

We found that both e-mail and IM chats provided an environment conducive to negotiation with approximately twice as many functions of negotiation found in the IM chats. This is possibly due to the synchronous nature of chats, which provided the opportunity for learners to receive immediate responses to their questions and requests for clarification.

Learners negotiated for meaning 2131 times in chats and 1024 times in e-mail, requesting clarification and vocabulary, checking confirmation and comprehension, providing clarifications, definitions, and vocabulary and affirming comprehension of their tandem partners. To validate the comparison between these two different methods of CMC we calculated the ratio of number of negotiation functions per 100 words both in e-mails and in chats. This confirmed the students´ responses in the questionnaires stating that they thought they had negotiated more when chatting.

According to our questionnaire and the results of this investigation, students preferred communicating with their partners through IM first and e-mail second. The asynchronous e-mail and particularly the synchronous IM chats provided learners with the opportunity to interact and negotiate with native speakers of their TL, which has been shown by SLA research to facilitate language acquisition.

There are, however, disadvantages to IM chats such as the need for both participants to be online at the same time and to have Internet access available at times which may be difficult for some learners. Another disadvantage is the pressure some non-native learners may feel to keep up with the conversation as they attempt to read, think, and type faster in the target language. By contrast, the advantage to e-mail is that the learners do not have to be on-line at the same time to communicate with each other and they can take their time composing the e-mail without pressure to rush.

We concentrated in this study on the functions related to negotiation for meaning between tandem partners while using two forms of CMC. Our study had several limitations and we see a need for further research. We agree that tandem partners in future exchanges should be more closely matched with regard to their proficiency in the target language, their age, and common interests. We would also like to separate the negotiation functions by native speaker of the language rather than by language spoken, in order to investigate differences and similarities between learners and compare this data with our previous research. In addition, we plan to look more carefully at the cultural exchanges in which these tandem partners engaged during CMC for future evaluation. We also hope to incorporate voice communication into future CMC projects.

Opportunities to interact with native speakers of the target language may be limited for some language learners. CMC provides a chance to communicate with native speakers of the target language outside the classroom which research has shown to be beneficial to language learners. A TLL project where learners communicate with native speakers in their native country also provides a tremendous resource for an authentic cross-cultural experience. Thus, we find that a tandem language learning project using CMC can be a valuable asset to the language learner and language class and beyond.

We typically study language learning in the context of the classroom. Communicating with native speakers through CMC provides the opportunity for developing language skills and exposure to the culture related to the target language that goes beyond the language class. TLL through CMC presents the potential for research in the context of life-long learning for the language learner outside the classroom. A longitudinal study of the long term effects of such an exchange would contribute important data to our current investigation.

Post study observation

When the semester ended in December the students were not required to participate in the CMC any longer. Many pairs of students, however, decided to continue the e-mail exchange and occasional IM chats.   In their final chat many students ended with the agreement to remain in contact through e-mail and chats even though the project had ended. When several Rice students were questioned a few months later about their e-pals, they said that they still exchanged e-mail periodically with their e-pals in Buenos Aires.

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Editor's notes:

This presentation was made as a regular session at theWebheads in Action Online Convergence on November 19, 2005.

- The session took place in the Elluminate presentation room at Learning Times. A recording was made and can be heard at http://home.learningtimes.net/learningtimes?go=1042155.