

Visual input facilitates acquisition in voice CMC: a Korean case study

Saeko Komori ^{*}, Shioko Yonezawa ^{**}, and Erica Zimmerman ^{***}

ABSTRACT

Recently, language learners have the possibility of communicating with target language speakers and peer learners using online voice and text chat communication programs. In order to examine the process of learning, voice and text chat programs were used simultaneously to facilitate communication and assist in the acquisition process. This study examines the effectiveness of visual input and noticing which may assist in the acquisition of Korean. The learners of Korean in this project interacted with their teachers using both voice and text chat programs. The text chat was used during the voice interactions for two purposes: 1. asking questions among one another and their teachers, and 2. as a form of visual input feedback to each other. The data for this study consists of 1. text chat data, 2. voice communication transcriptions, and 3. learners' journals and reflections. Examining places where noticing occurred, the results show that the learners incorporated the visual input into the interaction in the voice communication sessions.

Keywords: Visual Input, Korean language learning, Voice Communication, Chat, Noticing

1. INTRODUCTION

Computer-mediated communication (CMC) has developed to the point where language learners have access not only to web pages for reading authentic materials, but also to tools for

^{*} College of Humanities – Associate Professor of Japanese as a Second Language

^{**} Department of East Asian Languages and Literatures, University of Hawai'i at Manoa – Lecturer of Japanese

^{***} Language Studies Department at the United States Naval Academy - Assistant Professor of Japanese

communicating with target language speakers and peer learners via email, text chat, and voice and video communication programs. Examinations of text chat sessions indicate that foreign language learners benefit from these interactions through negotiation for meaning (Blake, 2000; Kitade, 2000; Toyoda and Harrison, 2002). Studies of the use of CMC have been limited for learners of Korean as a foreign language to asynchronous communication such as the Korean 399 class¹ at the University of Hawai'i at Manoa. Our project was designed to examine the use of voice communication and text chat sessions. The goal was to enable learners of Korean as a foreign language, who had only learned Korean in the classroom, to use the language in a less constrained setting to develop their communication skills in the target language. This specific study examines the use of voice and text CMC as well as learners' reflections to determine if visual input and negotiation for meaning assisted in the acquisition of Korean for learners.

2. PREVIOUS RESEARCH

2.1. Collaborative Learning

When deciding what kind of project we wanted to carry out during the spring semester of 2001, all the participants in the project believed that creating an occasion to use Korean in a setting outside of the classroom would allow us to explore our learning potential. As Wertsch (1985) suggests using Vygotsky's theory, providing learners with an opportunity to interact with other learners and NSs (native speakers), facilitates their learning within the zone of proximal development. Wertsch (1985) explains that the zone of proximal development is the range in ability that the learner has, both with and without assistance. DiNitto (2000) and Ohta (1995, 2001) demonstrated that collaborative learning, which can be found in interaction among peer learners and/or native speakers of a language, is a process which provides learners with a positive environment for fostering negotiation for meaning. Ohta (2001) examines classroom interactions among L2 Japanese learners to determine if pairs with weaker and stronger members can benefit from peer interaction activities. She concludes that learners benefit from peer L2 interactive tasks because it assists in learning not only vocabulary, pronunciation, and grammar, but also interactional style. She found that students would engage in other-repair, co-construction, prompting, and explaining to assist their partners during the interaction. Her study demonstrates that peer interactions can assist learners' language development. In this project, we felt that the process that allows the learners assistance from teachers of Korean along with the other learners would provide not only opportunities for negotiation for meaning, but also a setting for

collaborative learning and acquisition of the target language. Thus, we designed this project so that the learners could interact with each other and also created an environment where text chat would allow for simultaneous voice communication and visual input feedback to assist the learning process in the zone of proximal development.

2.2. CMC and Negotiation for Meaning

As discussed above, the collaborative learning process allows for learners to engage in practices such as other-repair, co-construction, prompting and explaining. This is related to the process of noticing and negotiation for meaning. Schmidt (1990) discusses the importance of noticing for language learning based on recent psycholinguistic research as well as his own experience of learning Brazilian Portuguese. He argues that noticing is a necessary and sufficient condition for the language learning process. This appears to be the first step in entering a situation that allows for negotiation for meaning. That is, first the learner needs to notice something that s/he did not realize before. The next possible step is that s/he may make an explicit attempt to clarify or ask for a repetition of the target form. This is what Long (1996), reviewing several recent empirical studies on negotiation for meaning (Gass & Varonis, 1994; Loschky, 1994; Pica, Doughty, & Young, 1986) argues; the main benefit of interactions with negotiation for meaning is that negotiation for meaning focuses learners' attention on linguistic form, specifically when there is a communication breakdown and repair occurs as the result of noticing a mismatch between non-native speaker output and native speaker input. This process can lead to a restructuring of the interlanguage. Therefore, Long (1996) suggests that negotiation for meaning facilitates acquisition because it connects input (internal learner capacities) and output. He further explains that semantically contingent speech of various kinds (i.e., utterances by a competent speaker, such as repetitions, extensions, reformulations, rephrasing, expansions and recasts) is important for acquisition.

One of the areas of research that focused on making this connection between SLA and the use of CMC is research discussing whether negotiation for meaning, a condition necessary for SLA, occurred in the CMC interactions. For CMC studies examining the use of text chat sessions by L2 learners, the overwhelming conclusion is that negotiation for meaning does occur. In five studies examining negotiation for meaning in CMC text chat sessions, Blake (2000), Fernandez-Garcia and Martinez-Arbelaiz (2002), Kitade (2000), Pellettieri (2000), and Toyoda and Harrison (2002) all found that negotiation for meaning occurs in CMC text chat interactions of L2 learners. Thus, our study following this tradition examined the data for how negotiation for meaning played a role in the learning process specifically in cases where visual input was supplied.

2.3. Orthographical Knowledge and Visual Input

Voice and text chat were used as communication tools in this project. Studies show that the orthography of a language can affect the acquisition process. (Kelly 1992; Koda, 1989; 1993; 1997). The effects of the Korean language orthography need to be considered since this project included a written component. While the Japanese orthography is different from Korean, studies of the acquisition of the Japanese orthography indicate that the development of L2 reading is different for those with different L1 backgrounds. Koda (1989) examined the effects of vocabulary knowledge transferred from one's first language in the target language development. She compared test scores in L2 reading among a kanji group and a non-kanji group. She concluded that L2 learners with different orthographical background develop their L2 reading skills differently. L2 learners with similar orthographical system were able to transfer their L1 orthographical knowledge.

Koda (1993, as cited in Koda, 1997) also discusses the strong influence of orthographical knowledge on L2 reading skills. She compared the backgrounds of the ESL learners of Korean and Chinese and found that there were differences between these two groups of learners when they processed English phonology. She found that Korean ESL learners utilize more phonological information when reading in the L2 than Chinese ESL learners do. She attributes this difference to variances in their respective L1 orthographic systems. While the Korean Hankul² writing system, which is a non-Roman alphabet, has a more regular symbol-to-sound corresponding system, Chinese characters do not correspond to sounds in such a manner. The Korean Hankul may be considered as being easier to recode sounds when reading text. Thus, from these studies, it can be inferred that the writing systems one acquires during previous language learning experiences affect one's ability to acquire a new target language system.

Further evidence of the necessity of linking the correlation between the target language writing system and the auditory sound is provided by Kelly (1992). He designed a series of studies to examine the relationship between visual and auditory stimulus for vocabulary learning using two groups. The first group was allowed to use only visual means such as using a dictionary and reading to understand a text, while the second group used both visual and aural means to understand the same text. The second group was allowed both to read the text aloud and ask questions. He concluded that auditory input had a positive effect on the retention of lexis. However, he did not examine the effect of aural comprehension by itself. Although this study does not directly discuss visual input, the learners who were able to use both visual and auditory means performed better and he suggests both visual and auditory means can play roles in vocabulary learning. It shows that both visual and auditory information of lexis is important for foreign language learning, especially in the case of vocabulary retention. Thus, we analyzed our data to

examine how visual input assists with vocabulary learning in our Korean learning project.

3. METHODOLOGY

3.1. Participants

There were five participants in this online project: two teachers of Korean as a foreign language and three learners of Korean as a foreign language. The learners in this project were also the researchers, which provided us with the opportunity to examine our own needs and desires for learning Korean.³

Table 1: Participants

Learners:	Native language	L2	Location during project	Sex of the participant	Formal instruction of Korean ⁴
S1	English	Japanese	Hawaii	F	101–102 completed 201 in progress
S2	Japanese	English	Japan	F	101–102 completed 201–202 home study with tutor
S3	Japanese	English	Hawaii	F	101–201 completed
Teachers:					
T1	Korean	English	Hawaii	M	
T2	Korean	English	Hawaii	M	

3.1.1. The teachers

T1 and T2 were both graduate students in the same department pursuing a degree in Korean linguistics and pedagogy and both were graduate assistants teaching Korean as a foreign language. Although both have studied Japanese, their levels of understanding and actual production were very different. T1 had audited a Japanese 101 level class, while T2 was an advanced learner of Japanese with near native fluency. T2 had the ability to assist the learners in the interactions by code-switching to Japanese for lexical items.

3.1.2. *The learners*

S1 was a native speaker of English with Japanese as her L2 who resided in Hawaii during the project. She had obtained an advanced level of Japanese and was pursuing a degree in Japanese linguistics and pedagogy. At the beginning of this project, she had completed Korean 201 and was taking Korean 202 while the project was being conducted.

S2, a native speaker of Japanese, was also pursuing a degree in Japanese linguistics and pedagogy. During the project, she lived in Japan and did not meet with the other learners or the teachers face to face.⁵ She had completed Korean 101 and 102 during the summer of 2000 and continued her study of Korean with the assistance of a Korean native-speaker in Japan during the fall semester while the project was being conducted. She was able to complete and pass the Korean 202 exam in March of 2001.

S3, also a native speaker of Japanese, while pursuing a degree in Japanese linguistics and pedagogy, resided in Hawaii during the project. She also completed Korean 101 and 102 during the summer of 2000 and audited Korean 201 during the fall semester. She was a classmate of S2 during the summer courses and with S1 during the fall semester. She did not continue her formal study of Korean during the spring semester. However, she did have a copy of the Korean 202 textbook, which she referred to during the first month of the project. She watched Korean dramas during the six months prior to the beginning of the project.

4. DATA

There were four sources of data collected over the course of the spring semester of 2001 and all of the data were posted on WebX (Web Crossing) (<http://www.kalama.doe.hawaii.edu/webx>):

1. Voice communication recordings (PalTalk audio);
2. Chat log during the voice communication sessions;
 - a. MSN Messenger and
 - b. PalTalk text chat;
3. Journals in Korean; and
4. Reflection journals in English.

The ten voice communication sessions were conducted using a voice communication program called PalTalk (<http://www.paltalk.com/PalTalkSite>) (See screen shot in Appendix 2), which allowed participants to communicate via voice in real-time.⁶

The next data set was the text chat log that co-occurred with the voice communication sessions. Chat sessions were first suggested by our advisor for this project. In another project that he was involved with, the teacher and a student started to chat in another room while the main chat was occurring. The student used this space to ask for vocabulary and help. We wanted to have a similar space to assist us during the voice interaction. Thus, we used the text chat mode as a secondary means of communication along with the voice communication.

The two chat programs were used. The first program was PalTalk text chat which included a text chat box. This allowed participants to type when they were not speaking. However, double-byte characters, which are necessary for Asian languages such as Korean, could not be used because the program only allowed for entry of single-byte characters. The following learners' opinions concerning the choice of input system suggest the need of double-byte input system for Korean learning.

-Visual input in Hankul would be more helpful in learning vocabulary because it helps visualize spelling (S2: February 2).

-Visual input in Hankul would be more helpful than Romanized transcription because of its familiarity (S1: February 16).

As we see above, S1 and S2 had high expectations about visual input in Hankul before they had started using MSN Messenger (February 2 and February 16). It was not until February 23 that MSN Messenger was used for text chat sessions.

To circumvent the double-byte character input problem, a second text chat program (MSN Messenger, see screen shot in Appendix 3) located at <http://www.msn.com> was utilized for some of the text chat sessions during the voice communications (see screen shot in Appendix 4). This program allowed the participants to type in Korean Hankul only in a written chat mode without voice communication. There were a total 10 voice and text chat sessions.

From the data collected, we transcribed four voice interaction sessions one month apart (January 26, February 23, March 23, and April 20). Each transcribed session was about 1 to 1 1/2 hours long. In addition, the audio data of one session on February 16 was also used to examine the process of learning a certain expression. This will be explained in more detail later. The text chat transcripts from both PalTalk and MSN Messenger were also examined. In addition, the learners' weekly journals in Korean, reflections in English, and the vocabulary box, which were posted, on the WebX during the semester were investigated. Finally, in order to verify our analysis, interviews with the instructors were conducted.

The transcripts are organized so that the PalTalk spoken conversation excerpts appear first,

followed by the MSN Messenger transcripts. For the spoken conversation transcripts, we used the Korean Yale Romanization system. However, in order to preserve the nuances of the text chat transcripts, the Korean Hankul font was used and then a Romanized version is provided. The spoken conversation and the text chat sessions were conducted using independent programs, however, it is important to note that the spoken conversations and the text chat sessions were concurrent sessions.

The Korean journals and the reflection journals in English were posted on the web server “WebX.” Posting this data on the web server allowed all project members to share various data sources in a common online folder. There were a total of 28 entries for the Korean journals (S1: 9; S2: 11; and S3: 8) and 35 reflection journal entries (S1: 15; S2: 11; and S3: 9). The Korean Journals were an opportunity for the learners to do free writing on topics of their choice and get feedback from the teachers. The English reflection journals expressed not only the learners’ concerns, observations, and thoughts about their progress using Korean, but also their opinions and suggestions for the use of the technology.

5. CODING METHOD

The original impetus for this study was to focus on how the noticing of visual input of Korean Hankul (e.g., MSN Messenger) facilitates oral conversation. The coding method was based on the recent noticing and negotiation for meaning research as discussed in the previous literatures. The transcribed data was coded for cues of negotiation for meaning (Long, 1996), by examining how the learners asked for meaning of unknown words, for repetition or for clarification, and how they responded to those requests. Utterances that were repeated in the same forms as the original statements are coded as repetitions while those that were rephrased in another form, usually in a simplified manner, are coded as restatements. A clarification was an utterance that expanded or switched to another language in order to help the interlocutors to understand the meaning of the original statement. When expressions such as *mwerakwuyo/mwerakoyo* “what did you say,” (requests for repetitions), or parts of the other interlocutor’s previously uttered phrases which occurred with rising intonation appeared, they were treated as cues for elicitation for negotiation for meaning. The coding of each transcript was double checked by two researchers to avoid discrepancies in coding. From these negotiation sequences, we found positive results for the use of visual input which will be discussed in the next section.

6. ANALYSIS

In the transcripts, we observed visual input to be an effective means of developing competence for five linguistic items: particle *ul*, *apeci* (father), *thonghap* (to merge), *nokum* (to record), and *mwelakwu yo/mwelako yo* (What did you say?).

6.1. Particle *ul*

It is often said that Japanese learners of Korean may have less difficulty in learning Korean due to the similarities between Japanese and Korean. Excerpt 1, which illustrates the mistaken use of the direct object particle *ul*, suggests that benefits of linguistic knowledge about the two languages do not always appear in performance. Yet, visual input on the screen seems to help in the process of noticing for both this particle and formulating a question.

Excerpt 1 [from 3/23 PalTalk audio transcript]

- 1 S2: um **ceyiltwu ce sipi *kwa eyse um Cwunhwi oppa ka* uh um uh *say enma Han*
- 2 *Swuli say enma ey* uh **salam i salam i* *ponaysse yo*.
 In the 12th story, Joonhuy's father sent people to Han Suri's new mother.
- 3 S2: *way yo ?* [= ! MSN m.s.]
 Why?
- 4 S2: aa *salam ul* *ponaysse yo* [= ! MSN m.s.]
 (Father) sent people.
- 5 S2: *way kulaysse yo?*
 Why is that so?
- 6 T1: *kulssey yo*
 Well,
- 7 T1: *kukosun cal molkeysse yo*.
 I don't know about that.
- 8 T1: *kulssey yo*.
 Well,
- 9 T1: *kukosun cal molkeysse yo*
 I don't know about that.
- 10 T1: *hoksi lakey Cwunhwi ka Han Swuli say enma eykey* *salam ul* *ponaysse yo?*
 Did Joowhi send people to Han Suri's new mother by the way?

- 11 T1: *Cwunhwi ka ponaysse yo?*
Did Joonhuy send (them to her)?
- 12 S2: *aniey yo.*
No.
- 13 S2: *Cwunhwi oppa oppa ka Han Swuli say enma ey uh * salam i salam ul*
14 *ponaysse yo.*
Joonhuy's father sends people to Han Suri's mother.

Excerpt 2 [from 3/23 MSN Messenger]

- 1 T1: 제 12 회에서 준휘가 한수리 새 엄마의
ce sipi hoy eyse Cwunhwi ka Han Swuli say enma uy
In the 12th story, Joonhuy . . . Han Suri's new mother . . .
- 2 T1: 새 엄마에게 사람을 보냈어요.
say enma eykey salam ul ponaysse yo
(Father) sent people to her new mother.
- 3 T1: 왜 그랬어요?
way kulaysse yo?
Why was that?

In the transcript above, trying to explain the context of the drama to T1, S2 provided details of the drama in excerpt 1, lines 1–3. The visual input provided feedback to S2 for two problems in her formulation of this question. In this sentence, she used an incorrect particle *i* where she should have used the particle *ul* (line 2). She then moves to ask a question in line 3. In MSN Messenger, T1 rephrases her statement and her question in excerpt 2, lines 1–3 by providing visual input feedback. This occurs at the same time as S2 says *aa* in excerpt 1, line 4. This *aa* as has been noted by Saft (2001)⁷ explains that the use of *aa* in Japanese conversations indicates that the participants “have undergone or are in the process of undergoing a change in their understanding” (Saft, 2001, p. 236). The participants, as either L1 or L2 speakers of Japanese, use *aa* to indicate that she has noticed (Schmidt, 1990) the message that was provided by T1 and that they are in the process of undergoing some type of change. This is made evident in what follows in the voice communication. In excerpt 1, line 4, S2 selects the right particle as *salam ul ponaysse yo* and also incorporates the reformulation of her question from T1 (excerpt 2, line 2).

Continuing on with the conversation, T1 in excerpt 1, line 10 asks a question about the content of a drama. This also included the same phrase that S2 had stated originally. In excerpt 1, lines 13–14, S2 provides the answer to T1's question by restating her original statement found in lines 1 and 2. At first, she said *salam i* with the incorrect particle and then immediately self corrects the

word to *salam ul*.

This example shows how the visual feedback from T1 triggered S2's noticing. This also led to negotiation between S2 and T1. The formulation of her question and also the mistaken particle use was resolved by the visual input on the screen.

6.2. *Apeci*

Visual input was also supplied for *apeci*, which means father, in the following segments.

Excerpt 3 [from 3/23 PalTalk audio transcript]

- 1 S1: um *Cwunhwi* * opeci * opeci aa [= !MSN message sound (m.s.)] apeci *nun Han*
2 *Swuli say enma kuliko* * opeci *eyse ku salam i wasse yo.*

From Joonhuy's father, those people came to Han Suri's new mother and father.

Excerpt 4 [from 3/23 MSN Messenger]

- 1 T1: 준희 아버지 가
Cwunhwi apeci *ka*
Joonhuy's father . . .

In excerpt 3, line 1, S1 made a mistake with her pronunciation of the first syllable of the word *apeci* and pronounced it *opeci*, which appears twice without a pause. Then, T1 provided her with visual input feedback (as indicated by the MSN Messenger sound)⁸ by typing the correct form on the screen in line 1 of excerpt 4 (MSN Messenger). S1 indicated a change in state (Saft 2001) with *aa* in excerpt 3, line 1. This *aa* shows that she has noticed the MSN Messenger feedback and this leads to her correction of her mistake (excerpt 3, line 1). While she made the same mistake again in line 2 of excerpt 3 demonstrating that she could not retain the correct form, the noticing of the visual input allowed the learner to self correct herself and move on with finishing her utterance.

6.3. *Thonghap*

In the example above, S1 noticed her mistake in the pronunciation of the lexical item *apeci* because of the visual input provided by the instructor. In the next excerpts, the interaction demonstrates the positive effect of visual input that took place together with peer collaboration, which facilitated learning the new word *thonghap* (to merge).

Excerpt 5 [from 3/23 PalTalk audio transcript]

- 1 S2: umm *way way sacangnim hoysa hako* umm *Han Swuli kapang kongcang hako*
 2 uh umm [= ! MSN m.s.] *mweya mweya haysse yo?*
 Why did the president's and Han Suri's bag factories . . . what's it called?
- 3 S1: *aniey yo.*
 No, that is not (what it is).
- 4 S1: *S2ssi umm umm Han Swuli uh S2ssi nun umm ipen cwu tulama*
 5 *mos pwasse yo nye?*
 You couldn't watch this week's drama, right, S2?
- 6 S1: *kuliko umm [thonghap] kes ul molla yo.*
 Then, she does not know that they merged.
- 7 S1: <ney?> [<]
 Right?
- 8 S2: <aniey yo.> [<].
 No.

Excerpt 6 [from 3/23 MSN Messenger]

- 1 T1: 왜 사장님 회사 하고 한 수리 회사 하고 같이
way sacangnim hoysa hako Han Swuli hoysa hako kathi
 2 통합 해요?
thonghap hay yo?
 Why do the president's company and Han Suri's merge?
- 3 T1: 통합—merge?
thonghap-merge (*Eng)

Excerpt 7 [from 3/23 PalTalk audio transcript]

- 1 S2: *way uh mmm hoysa ka aa [= ! MSN m.s.] [thonghap] thong [thonghap] haysse yo?*
 Why did the companies merge?

Excerpt 8 [from 3/23 MSN Messenger]

- 1 T1: 왜 회사가 통합 해요?
way hoysa ka [thonghap] hay yo?
 Why do the companies merge?
- 2 T1: merged why?

In the transcripts above, the benefits of peer collaboration along with visual input are demonstrated. In excerpt 5, lines 1 and 2, S2 tried to ask a question regarding the content of the drama that the learners were discussing, but she indicates she did not know the word she is looking for (*thonghap*) with “uh umm” and then *mweya mweya haysse yo*. After hearing her hesitation markers (uh umm), T1 restated her question (excerpt 8, lines 1), providing visual feedback on the MSN screen. Furthermore, he puts the Korean word explicitly along with the English equivalent in line 2 of excerpt 8. This repeated visual input provided an enhanced opportunity for acquisition of this new lexis. S2 did not use it immediately, but S1 used the word in line 6 of excerpt 5, trying to explain S2’s possible unfamiliarity with the context of the drama.

Later in the conversation, S2 used the word *thonghap* after she received further visual input from the teacher as seen in excerpt 8, line 1. She began to restate her original question (excerpt 7, line 1). She indicated with her *aa* that she saw the visual input which is collaborated with the MSN Messenger sound in line 1 of excerpt 7. The feedback in excerpt 8, line 1 provided support for noticing the word’s correct pronunciation. The immediate incorporation of the word into her utterance here indicates that the visual input was effective in this circumstance.

6.4. *Nokum*

The examples above have demonstrated that providing visual input on screen instantly triggered the learners’ noticing of the new lexical item especially when repeated. Visual input even if it was provided only once was also facilitative in the learning process because it allows the learner to keep a record of the input. The interaction involved with the next example *nokum* (to record), will exemplify the benefits of visual input that occurred in this manner.

Excerpt 9 [from 4/20 PalTalk audio transcript]

- 1 T1: *onul* *nokum* *halkoyey yo?* ((pause))
Are we recording today?
- 2 S2: *ne*, **lokum* *halkoyey yo. S1ssi yo?*
Yes, I am recording. How about you, S1?

Excerpt 10 [from 4/20 MSN Messenger]

- 1 T1: 오늘 녹음 할거예요?
onul *nokum* *halkeyey yo?*
Are we recording today?

- 2 S2: 저는*녹음 하고 있어요. S1 씨도요?
*ce nun*nokwumhako isse yo S1ssi to yo?*
 I am recording. You, too, S1?
- 3 S1: 저도요.
ce to yo
 Me, too.
- 4 T1: 석사시험 끝났어요?
seksasihem kkuthnasse yo?
 Is (your) master's exam over?
- 5 T1: master
 master (*Eng)
- 6 S2: *녹음 아니라 *녹음, 미안해요.
 *nokwum anila *nokom, mianhay yo
 It's not *nokwum*, but *nokom*, sorry.
- 7 S1: 아뇨. *꽤 참아요.
*anyo *kwaychanha yo*
 That's O.K.

The situation here is as follows: T1 asked if someone in the group was recording the conversation (excerpt 9, line 1). S2 recognized the meaning of his question and responded *ne*, **lokum halkoyey yo* as in line 2. She pronounced the word incorrectly as **lokum* by relying on her L1 (initial 'n' of the word in Korean is to be pronounced as 'r/l' in Japanese). This is an example of an L2 learner's use of one of the languages in their competence as a learning strategy. T1 provided visual input feedback on the MSN screen (excerpt 10, line 1). S2 noticed her mistake in the first syllable *lo* and attempted to correct the word by typing *nokwum* (excerpt 10, line 2). However, this time she made a mistake with the second syllable. Later in line 6, she typed her message *nokwum anila nokom, mianhay yo*. This time she tried to correct the second syllable, but was not successful.

S2 reflected on this example during the coding phase as follows: When she was not certain of the pronunciation and spelling of *nokum*, she returned to the visual input on the screen that had been provided by T1. Then, being aware of her incorrect use of the word, she searched the instructor's previous written input of the word by scrolling up and down the screen and attempted to correct her output. Although her noticing of this word did not necessarily lead her to spell it correctly, as seen in her mistakes in excerpt 10, line 6, the example above revealed that the visual input even when it was provided only once was advantageous, because the learners were able to

scroll through the text for reference. The participants were able to return to the screen to search for words and expressions to use for composing their current or future utterances.

6.5. *Mwelakwu yo/Mwelako yo*⁹

Being exposed to the authentic use of the target language as well as an explicit explanation of new expressions facilitates the noticing of the next expression. In this case, visual input played an important role in learning the new expression, *mwelakwu yo/mwelako yo*¹⁰ (what did you say?). Before analyzing the data, an explanation of how *mwelakwuyo/mwelakoyo* was learned is necessary. It is a Korean expression used to elicit a repetition, but is not normally introduced in beginning level Korean language textbooks. All of the learners started to use it on February 23 after having an explicit explanation about it from T1 on February 16 (PalTalk session). T1 thought it was an important phrase for the learners to use in natural conversation. This explanation was triggered when S3 used it for the first time in the February 16 session. Examination of the audio data and text chat transcript of the session on February 16 indicates there were two occasions of *mwelakoyo* used by S3. She heard the expression while watching Korean TV dramas during the previous 6 months and had created hypotheses about its use. Here is one of the examples:

Excerpt 11 (From 2/16, PalTalk audio transcript)

1. T2: *sacin ul ei eyse pwuthe ccikesseyo?*
Was the picture taken from above?
- 2 S3: *mwelakoyo?*
What did you say?
- 3 T2: *sacin ul ei eyse pwuthe ccikesseyo?*
Was the picture taken from above?

Before this excerpt began, the participants were discussing a picture that was posted on the Internet. S3 in the talk before line 1 is trying to ask if the picture was taken from above. T2 then rephrases as seen line 1 her question. Then, S3 uses *mwelakoyo* to elicit a repetition from T2 of his formulation of what she was trying to say.

After this conversation, T1 provides visual input for this expression in the following excerpt.

Excerpt 12 (2/16 PalTalk text chat)

1. T1: *ne, moraguyo?* ---what did you say? please say it again.

While the romanization of this word is slightly different from the Yale system used in the transcriptions in this article, it provides visual feedback to the learners.¹¹ He provides both the target word and the English translation. Furthermore, after this PalTalk audio session was completed, the learners along with T1 reflected on this session in English. At this point, T1 explicitly taught the phrase to the learners. Then S2 created a journal entry discussing how to use this phrase in excerpt 13 below.

Excerpt 13 (2/16 Journal entry, S2)

뭐라고요? This phrase is used when you want to ask for repetition. It sounds more casual and natural than 다시 한번 말씀 하세요.

The typical formulaic expression for the learners to use for eliciting a repetition was *tasi hanpen malsum hecwuseyo*, meaning “say that again, please.” T1 perceived this as being awkward and not colloquial and taught this phrase explicitly with both his visual input during the Palktalk audio session and the reflection session.

In order to observe the learning process of this particular phrase, Table 2 shows the changes in the expressions used to elicit negotiation for meaning as time passed.

Table 2 : Clarification Expression Chart

	January 26			February 23			March 23			April 20		
	tashi-	mweye-	mwela-	tashi-	mweye-	mwela-	tashi-	mweye-	mwela-	tashi-	mweye-	mwela-
S1	3	1	0	0	0	4	0	0	3	0	1	2
S2	1	2	0	1	1	2	0	1	2	0	1	2
S3	4	2	0	0	0	1	0	0	0	0	1	0
T1	1	0	1	3	0	0	0	0	1	0	0	2
T2	1	0	1	1	0	0	0	0	0	0	0	0

Note: tashi-: *tashihanpen malsumhecwuseyo* (Please say that again.)

mweye-: *mweyeyo?* (What is that?)

mwela-: *mwelakoyo/ mwelakwuyo?* (What did you say?)

Tateyama, Kasper, Mui, Tay, and Thananart (1997) found in their study of pragmatic routines in Japanese that explicitly taught learners tended to do better in their use of phrases taught to them than those who learned implicitly. The chart above also demonstrates the effect of the explicit explanation of the new expression. None of the learners used *mwelakoyo/mwelakwuyo* in January; rather, they used *tasi hanpen* or *mweyeyo* instead. On February 23, the day after the learners had an explicit explanation about the expression from one of the instructors, S1 and S3 stopped using *tasi hanpen*. Among the three learners, S1 used the new expression the most (February 23: 4

times, March 23: 3 times, April 20: twice).¹²

The following excerpts are examples from the data where the learners used *mwelakwu yo*/*mwelako yo* in the PalTalk audio session that occurred on February 23.

Excerpt 14 [from 2/23 PalTalk audio transcript]

- 1 S1: *ce nun han sikan cen ey T2 sensayng T2 sensayngnim hanthey, eh*
 2 *umm, yayki haysse yo. eh kuliko sorosoro (*Jp) soon (*Eng) wayo.*
 3 *sayngkak iey yo. wa sayngkak hay yo.*
 I talked to Mr T2 an hour ago. Then, I think he will come soon.
 4 S3: *aa kulay yo ce nun S3 khotu password (*Eng) lul ssuko*
 5 *hayssciman, mwe- mo se yo.*
 Is that so? Although I used a password for the code, S3,
 I cannot use it.
 6 S1: *mwelakwu yo*? *mwelakwu yo*?
 What did you say? What did you say?
 7 S3: *ce nun uh cikum C sensayngnim password (*Eng) lul ssuko*
 8 *isse issciman um let's see (*Eng) uh S3 (*Eng) ssuko hayssciman*
 9 *ssuko ssuko hayssciman an sse yo. Mos sse yo.*
 Even though I used Prof. C's password, let's see, I used
 S3, I do not, cannot.

Excerpt 15 [from 2/23 PalTalk audio transcript]

- 1 S2: *uh S1 ssi uh cey ka ssun imeyl ul patasse yo?*
 Did you receive the message I wrote to you, S1?
 2 S1: *mwelakwu yo*?
 What did you say?
 3 S2: *ecey imeyl ul pwuchyess pwuchyessciman pwuchi pwuchyessciman uh*
 4 *kiiro eru (*Jp) Hawaii (*Eng) e y an pwuchyesse yo.*
 I sent an email to kiiro-l Hawaii, but . . .

Excerpt 16 [from 2/23 PalTalk audio transcript]

- 1 T1: *S1s si onul swuep ettaysse yo?*
 How was your class today, S1?
 2 S1: *mwelakwu yo*?
 What did you say?

- 3 T1: S1 *ssi onul swuep ettaysse yo?*
How was your class today, S1?
- 4 S1: *onul *soba? ((pause)) uh onul swuep* pwu *issesse yo? ney *issesse yo*
 5 *onul swuep* pwu issesse yo. umm ilpone swuep mos uh iss- ilpone*
 6 *swuep epsesse yo*
Today soba? I had class today, right? I had class. I had class today. I did not have Japanese class.

The occurrence of *mwelakwuyo* in the data of February 23 as discussed previously was triggered by the explicit instruction and visual input that occurred on February 16. In excerpt 14, lines 1 through 3, S1 explains that she had seen T2. In lines 4 and 5, S3 tells the others that she has a computer problem. Then, S1 requests repetition with the expression *mwelakwuyo* as seen in line 6. Responding to her request, S3 is explaining her problem. Later, S1 used the expression several times as seen in excerpt 15, line 2 and excerpt 16, line 2. As we have seen in Table 2 and the above examples, all of the learners started to use the new expression *mwelakwuyo* to elicit repetition. The visual input feedback assisted in the noticing process for the learners.

7. DISCUSSION

The analysis revealed the complicated process for the use of visual input as part of audio communication among learners and teachers of Korean. It demonstrated how the visual input assisted the learners in the communication process. The analysis uncovered several important points that will be recapitulated here along with providing ideas for future projects that will use both voice communication and text chats.

First, the analysis indicates that learners were assisted in the zone of proximal development and this provided opportunities for language learning. The learners and teachers interacted with each other to assist in providing corrections to errors. This interaction allowed for the learners and teachers to facilitate the learning process of another member through the negotiated sequences and the visual input feedback that was provided.

Second, this Korean CMC project was designed specifically in order to provide an opportunity for learners who had only had a formal classroom study of Korean and few chances to use the language outside of the classroom a space for exploring and trying out their language skills. The unique element of this study is that it combined two technologies: voice communication with text chats. For these novice-intermediate level learners, this dual environment allowed them to receive immediate feedback to mistakes in pronunciation, particle use, and set phrases. The

analysis showed that the visual input was used to maintain the overall flow of communication and allowed them to explore further their language skills.

Next, the analysis of the five segments indicates that the learners benefited from the visual input on the screen. The five linguistic items discussed were found in sequences where the learners and teachers negotiated to achieve understanding and provide opportunities for learning. In analysis of the particle *ul*, *apeci*, and *thonghap*, one indication of this was the use of *aa*. It indicated a deficiency in the learner's knowledge and also that a change of understanding was occurring in response to the visual input. Further investigations of this indicator in relation to the acquisition of the target items is necessary with a detailed analysis of data collected through a similar interactive learning environment as this study. In order to investigate this, videotaping of the learners' reactions during the sessions as well as examining participants' production longitudinally is necessary to investigate further the learning process.

Finally, let us look at learners' opinions and concerns about the use of visual input that were expressed in the learners' journals.

- Visual input in Romanized Korean is helpful in learning new words and phrases (S3: January 19).
- Visual input in Hankul is helpful in learning new words and their spelling (pronunciation) (S2: February 2; S3: March 2).
- Helped each other by typing words that the peers wanted to say (S2: February 17).
- Asking questions by typing Romanized Korean on PalTalk was helpful because it is faster than typing Korean on MSN (S2: February 23).
- Visual input in Hankul is helpful in learning new words and phrases; it makes it easy to ask questions about new words that I could not catch (S1: February 23).
- Visual input in Hankul is helpful in understanding what people are trying to say (S1: March 9).

As illustrated above, each of the learners discussed her positive impressions about the use of visual input feedback. The learners felt that visual input facilitated their learning of the spelling and pronunciation of words. In addition, they also believed that visual input assisted communication when words were provided to a peer learner who was experiencing difficulties.

The learners in this project experienced difficulty in recognizing and writing Korean Hankul correctly using input method of computer keyboard. As found in excerpts 9 and 10, the learners had trouble recognizing differences with some vowels or made mistakes when writing out some of the words. The visual input in the Hankul writing system triggered learners' noticing. Further research is necessary for determining the effects of using the Hankul writing system as opposed

to a Romanized version of Korean.

8. CONCLUSION

Based on the previous studies using CMC for language learning and collaborative learning in the zone of proximal development, our study was designed so that the learners could interact with each other using a voice communication tool along with text chat. We have examined the effects of visual input in segments where noticing occurred. As indicated by our analysis of the data, visual input which was provided in text chat during the voice interaction among teachers and learners of Korean as a foreign language contributed to the learning process. The learners relied on the visual input from the text chat sessions to assist in communication in the PalTalk audio sessions. When the learners were paying attention both to visual input and audio input, they tended to notice their mistakes, specifically in their choices of particles and pronunciation. When they received visual input related to unfamiliar words or expressions, they noticed the meaning and the spelling without losing the flow of the conversation. The benefits of visual input in an audio communication as shown in this study need to be further explored in future studies to examine the effectiveness in larger classroom settings. Also, now that the double-byte character system for Windows has improved significantly, it is necessary to test different computer programs which integrates both audio and text chat functions. Although CMC including a voice component is different from both face-to-face communication (e.g., lack of visual cues, necessity to push a button to talk) and regular Internet chat which is only text-based, this study shows that CMC with a voice component is a powerful tool for collaborative language learning.

Notes

¹ The Korean 399 is an online language course offered at the University of Hawai'i at Manoa, which focuses on reading and writing skills. The course has provided opportunities for upper (third or fourth year) level learners of less commonly taught languages such as Korean to study the language in a distance learning environment. The first Korean 399 was offered in fall 2000. Learners in this course write journal-type entries and exchange ideas with peer learners.

² The orthographic system for Korean uses a phonetic alphabet that allows for a one sound one symbol correspondence. However, while ㅏ is pronounced as *a*, this symbol can never be used by itself. Thus, the individual symbols are used to build syllable blocks. "In forming a syllable block, a consonant symbol is placed first, then a vowel or diphthong symbol, and then a consonant symbol" (Sohn, 1999, p. 13). For example, the

combination of the *s* and *a* sounds produces the sound *sa* (사).

³ Cohen (1997) who examined his own learning process of Japanese, found that an examination of his own learning processes provide him insight into his development.

⁴ 101 and 102 are the first year, beginning level and 201 and 202 are the second year, intermediate level Korean classes at the University of Hawai'i.

⁵ In March, she came to Hawaii for a short visit to take the placement test for Korean 202 and was able to meet with the other online participants.

⁶ While the program allows for multi-party conversations, the main problem with this program is that each participant must press the control-key on their keyboards to speak, thus forcing participants to wait until whoever is speaking to finish. Each person's user name is listed on screen and when someone speaks, a microphone icon appears next to his or her name. This allows all participants to know if someone is talking, or trying to talk. There is also a button that allows the speakers to self-select themselves to be the next speaker. When pressed, a small hand icon appears next to their name indicating to the other participants that this person wants to talk.

⁷ Saft (2001) refers to Heritage's (1984) explanation of change of state tokens.

⁸ MSN Messenger makes a beeping sound when a new message is posted. This sound appeared after the text had appeared on the screen. Thus, as in this case, the *aa* token indicating recognition of the incoming message comes before the sound occurs.

⁹ *Mwelakwuyo*, an alternative pronunciation for *mwelakoyo* (what did you say?), is used in the Seoul area. Our Korean native-speaker-informant explained that female speakers regardless of their age and male speakers up to their 30's tend to pronounce *kwu* instead of *ko* as *mwelakwuyo* in casual settings.

¹⁰ The expression *mwelakwuyo/mwelakoyo* is a contracted form of *mwuesilakohaysseyo*.

¹¹ At the beginning of the project until February 23, only Paltalk chat was used. After February 23, both Paltalk chat and MSN messenger were used. Thus, the instruction provided here for the spelling of *mwelakwuyo/mwelakoyo* was provided only in the Romanized version of Korean. The Romanized version is the version used in the learners' textbook.

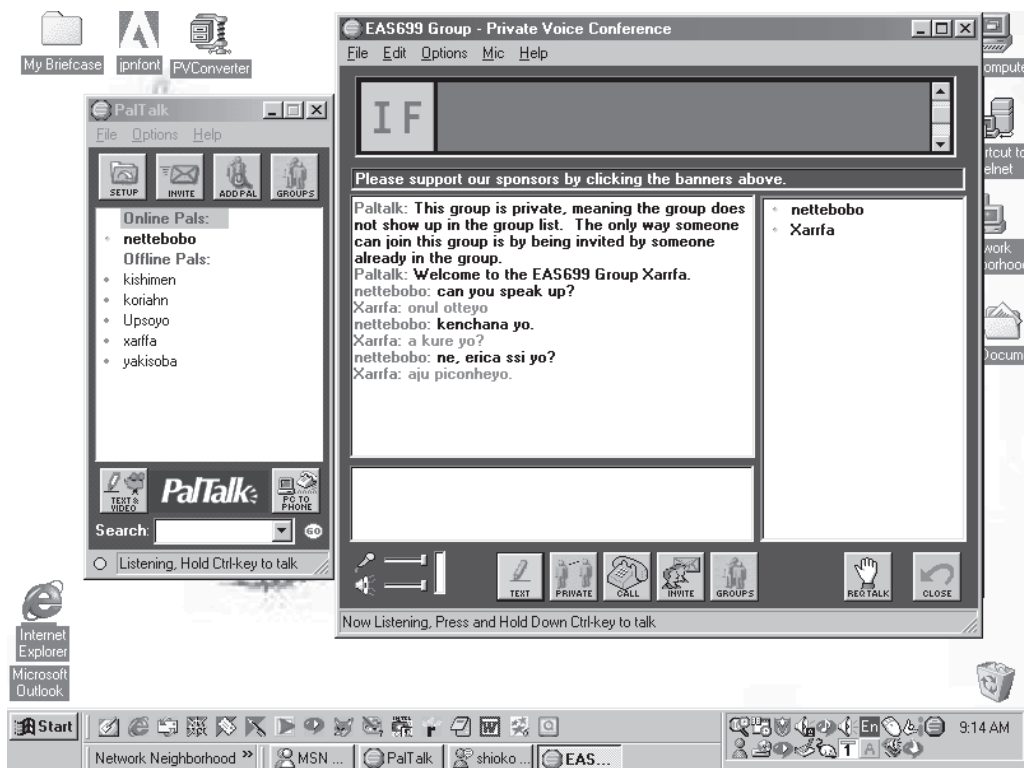
¹² We also checked all audio recording before February 23 to see if *mwelakoyo/mwelakwuyo* was used. February 16 was the first time S3 used this expression.

REFERENCES

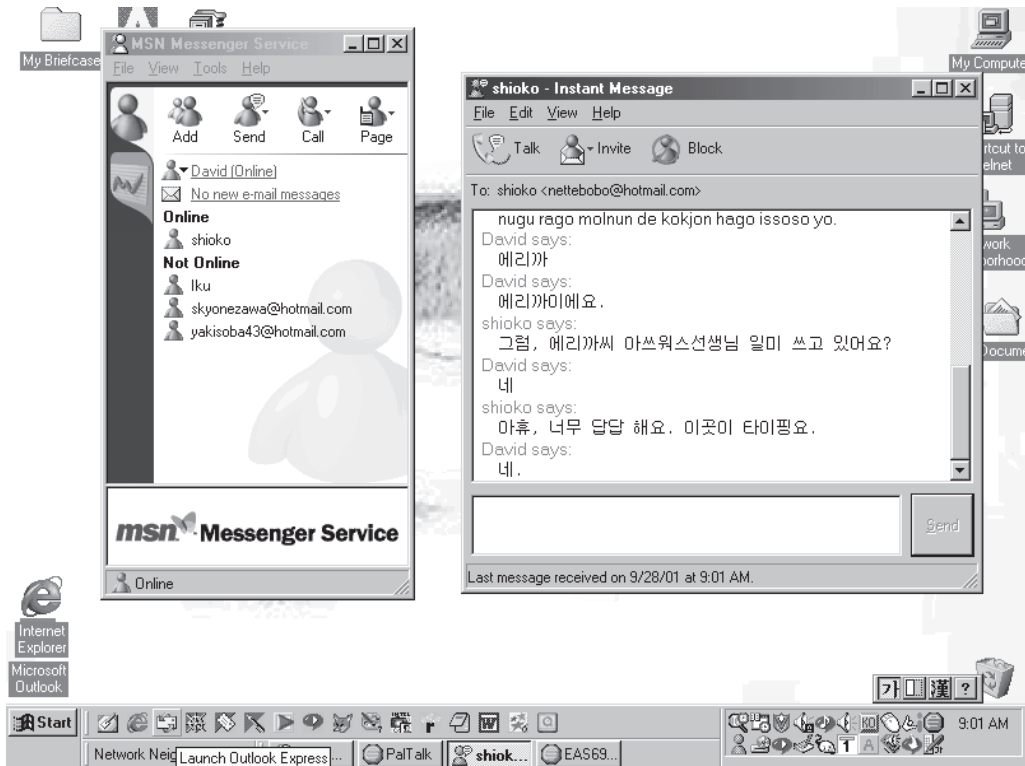
- Blake, R. (2000). Computer Mediated Communication: A Window on L2 Spanish Interlanguage. *Language Learning & Technology: A Refereed Journal for Second and Foreign Language Educators*, <http://llt.msu.edu/>, 3 (2), 120–136.
- Cohen, A. D. (1997). Developing pragmatic ability: Insights from the accelerated study of Japanese. In H. M. Cook & K. Hijirida, & M. Tahara (Eds.), *New trends & issues in teaching Japanese & culture* (pp. 133–159). Honolulu: University of Hawaii Press: Second Language Teaching and Curriculum Center, University of Hawai'i at Manoa.
- DiNitto, R. (2000). Can collaboration be unsuccessful? A sociocultural analysis of classroom setting and Japanese

- L2 performance in group tasks. *Journal of the Association of Teachers of Japanese*, 34, 179–210.
- Fernandez-Garcia, M., & Martinez-Arbelaiz, A. (2002). Negotiation of meaning in nonnative speaker-nonnative speaker synchronous discussions. *CALICO Journal*, 19 (2), 279–294.
- Gass, S., & Varonis, E. (1994). Input, interaction, and second language production. *Studies in Second Language Acquisition*, 16 (3), 283–302.
- Heritage, J. (1984). A change of state token and aspects of its sequential placement. In Atkinson & J. Heritage (Eds.), *Structures in social action: Studies in Conversation Analysis* (pp. 299–345). Cambridge, United Kingdom: Cambridge University Press.
- Kelly, P. (1992). Does the ear assist the eye in the long-term retention of lexis? *IRAL*, XXX (2), 137–145.
- Kitade, K. (2000). L2 learners' discourse and SLA theories in CMC: Collaborative interaction in Internet chat, *CALL*, 13 (2), 143–166.
- Koda, K. (1997). Orthographic knowledge in L2 lexical processing. In J. Coady & T. Huckin (Eds.) *Second Language Vocabulary Acquisition* (pp. 35–52). Cambridge, United Kingdom: Cambridge University Press.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). San Diego, CA: Academic Press.
- Loschky, L. (1994). Comprehensible input and second language acquisition: What is the relationship? *Studies in Second Language Acquisition*, 16 (3), 303–323.
- Ohta, A. (1995). Applying sociocultural theory to an analysis of learner discourse: Learner-learner collaboration in the zone of proximal development. *Issues in Applied linguistics*, 6, 93–121.
- Ohta, A. (2001). *Second language acquisition processes in the classroom: Learning Japanese*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Pellettieri, J. (2000). Negotiation in cyberspace: The role of *chatting* in the development of grammatical competence. In M. Warschauer & R. Kern (Eds.), *Network-based Language Teaching: Concepts and Practice* (pp. 59–86). Cambridge, United Kingdom: Cambridge University Press.
- Pica, T., Doughty, C., & Young, R. (1986). Making input comprehensible: Do interactional modification help? *ITL Review of Applied Linguistics*, 72, 1–25.
- Saft, S. (2001). Displays of Concession in University Faculty Meetings: Culture and Interaction in Japanese. *Pragmatics*, 11 (3), 223–262.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11 (2), 129–158.
- Sohn, H. (1999). *The Korean language*. Cambridge, United Kingdom: Cambridge University Press.
- Tateyama, Y., Kasper, G., Mui, L. P., Tay, H.-M., & Thananart, O.-O. (1997). Explicit and Implicit Teaching of Pragmatic Routines. In L. Bouton (Ed.), *Pragmatics and Language Learning*, Vol. 8 (pp. 163–177). University of Illinois at Urbana-Champaign.
- Toyoda, E., & Harrison, R. (2002). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning and Technology*, <http://llt.msu.edu/vol6num1/toyoda/>, 6 (1), 82–99.
- Wertsch, J. (1985). *Vygotsky and the Social Formation of Mind*. Cambridge, MA and London: Harvard University Press.

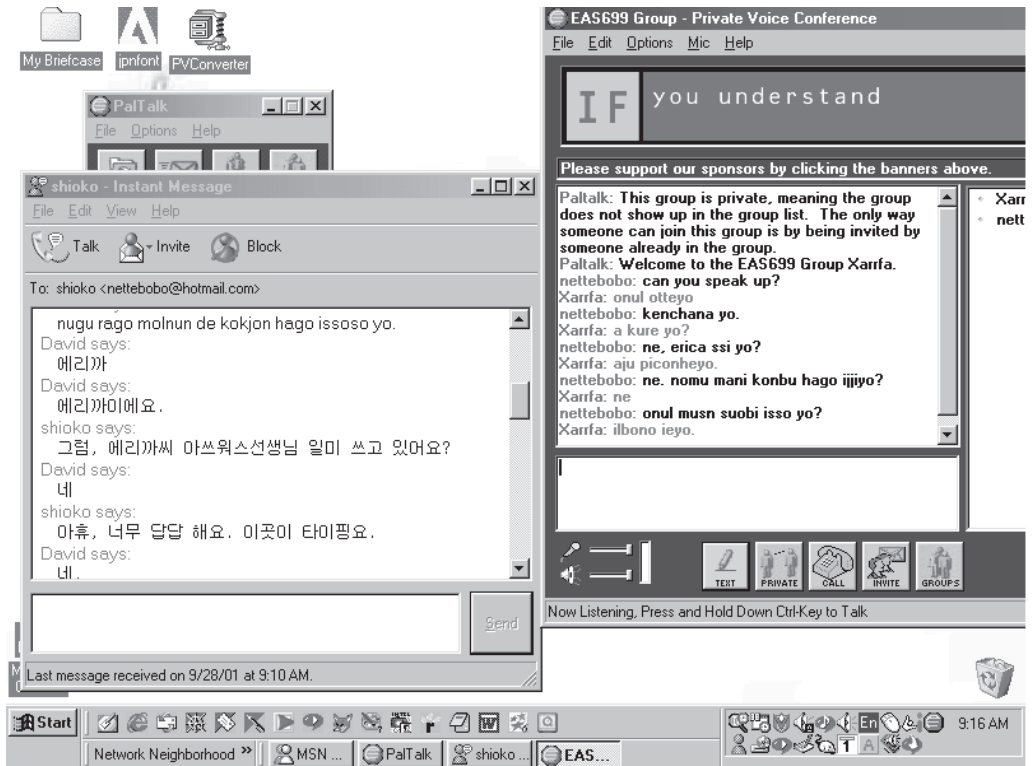
Appendix 2 : Screen shot of PalTalk



Appendix 3 : Screen shot of MSN Messenger



Appendix 4 : Screen shot of PalTalk with MSN Messenger



Acknowledgements: We want to thank Joonki Baek, Chang Seob Ahn, and Dr. David Ashworth for their collaboration and participation in this online project. We also want to thank Brian Howell for his suggestions on an earlier version of this paper.

(Received: October 31, 2006)