

Distance Language Learning via Synchronous Computer- Mediated Communication (SCMC): Eight Factors Affecting NS-NNS Chat Interaction

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In this paper, SCMC (synchronous computer-mediated communication) is used to refer to Internet-based, text-only communication, such as 'chat,' where all participants are online simultaneously for real-time, human-to-human interaction. A report on Intermediate-level Japanese SCMC by native-speaker (NS) and nonnative-speaker (NNS) participants is presented in three parts. First, advantages and disadvantages of using SCMC are outlined based on previous studies. Second, 2,848 turns of NS-NNS chat conversations are qualitatively analyzed and are summarized as main findings. Finally, based on the results of the study, several factors affecting both NS and NNS behaviors in SCMC are discussed, and suggestions for future applications are offered.

1. Introduction

It is often said that the Internet has changed the way we communicate and learn over the past three decades. In the United States, "today's college students have never known a world without computers. For them to communicate electronically is natural" (Krohn, 2004, p. 325). There is a presumption, however, that adopting a new technology of interpersonal communication improves the effectiveness of distance language education. In this paper, this presumption was tested through computer-mediated communication (CMC) tasks in a college-level Japanese language course. Before presenting the findings, defined below are some key concepts germane to the current study.

CMC

The term refers to communication between human beings via telecommunication technologies and computer networks (Erich et al., 2005) used in a variety of forms for a variety of interactions (Wang, 2004). IRC (Internet Relay Chat) and other web-based chats as well as oral-visual based video-conferencing are examples of synchronous CMC. Email, weblogs, and online discussion boards are examples of Internet-based, time-and-place independent (so called 'asynchronous') written CMC. Either form of CMC supports interaction varying from 'one-to-one' to 'one-to-many.' CMC is ubiquitous in both public and private fields of American life (Newlands et al., 2003) and serves as the basic communication between users of distance education (both teacher-student and student-student). This new form of communication has recently stimulated a wide range of pedagogical applications in the field of second language acquisition (SLA).

SCMC vs. F2F

Unlike email, synchronous computer-mediated communication (SCMC), such as *chat*, resembles many features of real-time, face-to-face oral communication. However, several studies have shown that some interactional behaviors in SCMC are different from those of face-to-face communication (F2F). The most frequently cited advantage of meeting online with the class is the convenience of place-and-time independence (Wu & Hiltz, 2004). This "flexibility in time and geography" (Henry & Li, 2005, p. 4) is often the key reason for adopting Internet-based communication in distance language courses. When communicating on the net, users are said to demonstrate fewer inhibitions, less social anxiety and more reduced self-awareness, with the computer working as "a shield from being on-stage" (Bradley & Lomicka, 2000, p. 362). Students tend to collaborate more in discussing course content, working together as 'problem-solvers' (Biesenbach-Lucas, 2003). Particularly those who are shy in F2F interaction 'speak up more frequently in discussion, feeling liberated and confident online due to the absence of their own self-image and other visual cues (Wallace, 1999; Carvevale, 2003). On one hand, the "low level of inhibition and social anxiety, in particular, would be advantageous in foreign language learning" and "would result in increased language production" (Roed, 2003, p. 155). Indeed, initiating L2 conversation has been found the most anxiety provoking activity by L2 learners due to learners' acute sense of self-awareness (MacIntyre & Noels, 1996; Koch & Terrell, 1991) or their feeling of being "placed in situations that surpass their abilities" (MacIntyre et al., 2003, p. 602). On the other hand, the lack of self-awareness in public discourse may lead to incidents of *flaming*, or negative behaviors on the net via swearing, insulting, and other inappropriate utterances in the user's native or target language (e.g., Krohn, 2004; Abrams, 2003).

The speed of communication in SCMC is also different from that of F2F. For example, it may take some time for the message to come up in the chat display screen after it is typed, depending on the capacity of the server. The 'lag' (e.g., the duration between the time of hitting the return key to send the message and seeing it on the screen) can be a source of frustration to some SCMC users, although Wallace (1999) found that a lag of 2 or 3 turns may be tolerated well by most chatters. Eight turns proceeding without a response to the user's initial utterance may be felt very long especially due to the absence of visual cues from the other participants, irritating the original sender's feeling (Roed, 2003). However,

the slower speed of SCMC may provide the user with more control of the conversation especially in text-based communication. The reduced speed of interaction affords the users "more processing time while reading and typing messages" (Smith, 2003, p. 39), and helps them learn to exchange information more succinctly and precisely (Newlands *et al.*, 2003); the ability to review previous utterances of others and edit their own induces more flexibility and planning in constructing L2 discourse both with NS interlocutors (Negretti, 1999) as well as with NNS peers (Gonzalez-Lloret, 2003). Moreover, some studies show that the use of SCMC helps improve L2 learners' writing skills and prepare them for real-time oral interaction (e.g., Kitade, 2000). As Warschauer & Kern (2000) state, computer-based communication provides the opportunity for L2 learners to interact in the target language more ideally (e.g., attention to L2 form) than F2F communication due to the nature of written discourse.

The synchronous aspect of this medium enables online learners to experience the immediacy of communication and power to exchange ideas quickly as the give-and-take of real-time, human-to-human communication and bridges between on-campus and off-campus learners, those who do not otherwise meet (Ingram *et al.*, 2000). Because sufficient interaction with other human beings is what precisely lacks in distance language education, "the urgency in solving this problem is self-evident" in SLA (Wang, 2004, p. 375). The real-time nature of SCMC can offer the features of oral communication through its "ability to provide stress to words and phrases" and "the use of the first person, and the clear informality" (Smith, 2003, p. 39).

From the interactional perspective, however, SCMC does not necessarily provide more advantages over F2F. For example, although this media serves the purpose of meaning-based communication, the occurrence of 'uptake' is rather limited and it does not necessarily lead to the acquisition of the form in SCMC (Smith, 2004). In order for meaning-based communication to result in increased L2 production, SCMC must ensure negotiated interaction that leads to noticing of L2 errors and interactional modifications by learners themselves (Gass, 2003; Pica, 1994; Long, 1996). Particularly in unstructured chat, the flow of conversation often becomes "disrupted and discontinuous since many different topic strands and interactions can be carried out simultaneously, often by the same participant (Henry & Li, 2005). For this matter, it is critical to design a task of SCMC so as to produce ample opportunity for confirmation and comprehension checks, clarification requests, recasts and other traits of negotiated NS-NNS interaction.

The chatter's inexperience with SCMC may influence the patterns of discourse, as well. Observing novice users of SCMC, Newlands *et al.* (2003) found that their subjects took considerably longer time to complete the same task especially at the beginning (i.e., unfamiliar) stage of the experiment. Interestingly, there was no statistically significant correlation between the level of the subjects' technical ability and their log-in time ($p > 0.1$), indicating that the length of time in completing the task was unlikely due to participants' level of typing skills (p.336). By contrast, showing agreement and understanding was much easier in F2F because of the availability of gestures and visual backchannels, and the completion of the task was much more efficient. Yet, as they gained more experience with SCMC, they adopted a more precise communication style of giving directions (e.g., succinct use of referents and exact measurements of distance) than when they spoke to each other.

Another major difference between SCMC and F2F is said to be the availability of immediate, visual cues for body language (Krohn, 2004). Internet-based communication "lacks the traditional nonverbal dimensions of human communication," thus the users "attempt to compensate for the lack of the usual nonverbal components by the employment of emoticons" (Krohn, 2004, p. 322). Invented by Scott E. Fahlman of Carnegie Mellon University in 1982, emoticons are "punctuations marks that viewed sideways resemble facial expressions" (Extejt, 1998, p. 65) frequently used in email. Emoticons, or *smileys*, can express more than facial expressions; intended gestures such as smiling (:-) or ☺) and winking (;-) and feelings such as sadness or disappointment (:(or ☹) and surprise (:-o) are readily illustrated with a few strokes of the keyboard. Although a bit ambiguous, it is possible to add vocal variety (e.g., capitalization for emphasis, such as OUCH, or use of exclamation marks as in Yes!!) to the message. By using acronyms, SCMC users can economically express verbal as well as nonverbal tokens (e.g., LOL = laughing out loud, TYVM = Thank you very much). In Japan, a culturally adapted version of emoticons, *kaomoji*, was invented as "the latest example of Japan seizing upon a Western idea" (Pollack, 1996, p. 1). The main difference, however, is that American emoticons are one-byte characters presented horizontally, as in the most popularly used sign :-), while the kaomoji version is drawn vertically (e.g., ^_^ equivalent for a smiling face) and displayed in two bytes. Kamoji includes culturally unique expressions, such as \(\^o^\)/ for raising both hands and saying 'banzai' (yippee!) and (>_<) for humbly admitting one's social blunder, many of which are derived from Japanese comics.

2. Present Study

This study uses text-only 'chat' conversations, where both native-speaker (NS) and non-native-speaker (NNS) interlocutors were engaged simultaneously in real-time interaction. An Intermediate Japanese conversation course was offered to college students via a course management system, *WebCT*, for four weeks. The main purpose of the study was to describe some factors crucially affecting SCMC by qualitatively analyzing approximately 20 hours of chat conversation data (a total of 2,848 turns) gathered from 11 NNS and 3 NS participants.

Research Methodology

This study was conducted as an 'action-research' investigation. Action research is typically carried out by language instructors on their classroom practices. Teacher involvement is intended for "re-seeing learners, the learning process, and the teaching process" and is "aimed at improving practice" (Johnson & Chen, 1992, p. 213). Usually not theoretically-driven, the methodology "consists of systematic, iterative cycles of planning, acting, observing and reflection" (Bailey, 2001, p.1), "gathering and recording information from their own classrooms and school life, and then reflecting on what was learned" (Johnson & Chen, 1992, p. 216).

The main advantage of this setting is the instructor's ability to decide what L2 materials and activities to bring to students, while fine-tuning the research focus and designing assessment relevant both to grading and data collection. Another advantage is to get to know subjects/students quite well regarding their learning styles and preferences beyond the scope of data collection. One disadvantage is, however, the overwhelming work demand.

The time-consuming nature of 'dual role-play' may be toppled with occasional computer and software glitches in computer-assisted research inquiry.

Subjects

Eleven students who were enrolled in a college-level, intensive summer course in Intermediate Japanese conversation all agreed to participate in this study. They were native-speakers of English with varying sub-levels of intermediate Japanese and are referred to as NNS (non-native speaker) participants in this report. All except one¹ had undergone at least two semesters of Japanese. The youngest NNS subject was 19 years old, while the ages of the rest of NNS ranged from about 20 to 60. Three NS (native speakers) of Japanese also participated as interlocutors in NS-NNS chat conversations. One NS participant was the instructor of the course while the other two NS were laboratory assistants with no formal teaching experience.

Chat Tasks

Participation in chat conversations was assigned via the website as part of the 18 module-coursework of this distance language course and was required for the NNS participants' final course grades. In each chat session, one NS guest (i.e., the instructor or one of the assistants) visited a chat room, in which multiple NNS participants were assigned. The NS guest served as the primary chatter, holding the conversational floor and directing the course of conversation. On the first two days, the task was mainly getting to know each other by exchanging greetings and interviewing the NS guest. Later on, a new task was designed to create a more 'collaborative' atmosphere in order to increase each student's CMC participation. For this purpose, a game-type task, "*Watashi wa dare deshou?*" ("Who am I?")², was adopted for the chat sessions of the last two days.

Data Collection Procedures

A student background survey was administered to all the NNS subjects via WebCT on the first day of the course, and their online class performance (e.g., number and duration of logging-in to the course website) was recorded daily in WebCT's student tracking records. The learners' chat conversations were stored in WebCT's chat scripts for later retrieval. NS interlocutors (the course instructor and two lab assistants) participated in twenty-five chat sessions with the NNS subjects conducted on seven separate days via the website across the four-week course. Short 'follow-up' interviews were conducted with some participants to assist the interpretation of chat data. The use of student tracking data, the background survey responses, and comments from the interviews provided valuable information for data triangulation.

Units of Analysis

The units of analysis used to describe SCMC participation patterns are 'turns,' or lines generated for the chat screen when messages are typed. These turns are automatically

recorded in WebCT's chat logs. A total of 2,848 turns taken in task-based chats were analyzed in this study. To ensure the subjects' anonymity, their names have been changed to two-to-three-letter acronyms (e.g., JA, BOK). Although WebCT does not provide the numbering of turns to indicate different lines, that information was added for the convenience of discussing the transcripts. The conversational tokens examined in the analysis were 'turn-taking' sequences, 'greetings,' 'closings' and other utterances, as well as the use or non-use of paralinguistic devices (e.g., emoticons).

3. Findings

The main purpose of this section is to describe the characteristics of SCMC using the data of task-based NS-NNS interaction in this distance language course. All the transcripts below are dated (e.g., May 28) where S means 'Session' (e.g., S2 = Session 2) and L means chat line (e.g., L34 = Line 34).

Greetings and closings

In the earlier sessions, both NS and NNS tended to use the fixed formulaic expressions, such as 'ohayoo gozaimasu' (Good morning) and 'konnichiwa' (Hello/How're you?) for initial greetings, and 'ja mata' (See you) and 'sayoonara' (Goodbye) for leave-taking. After several rehearsal sessions, they started to use more variety including 'ja hajimemashoo ka' (Well, shall we start now?) and 'ikagadesuka' (How's it going?) as well as 'gokuroo sam deshita' (Well done!) and 'ja doomo arigatoo gazaimashita' (Thanks for your participation/contribution). The greetings and closings were almost always initiated by the NS interlocutor, signaling the start and ending of the chat, and with the use of collective term, 'minasan' (everyone; you all), indicating the NS role as primary chatter addressing all the NNS participants in the room.

Ease with SCMC in Japanese

The comments from the transcripts of the earlier sessions indicated that some NS and NNS participants felt anxious about chatting in SCMC and/or communicating in the target language, as the following examples show.

- "im kind of nervous..." (May 21 by NNS)
- "kyou ha ajimete nanode cyotto kincyo-shiteimasu"
(Because this is my first time chatting online, I'm a bit nervous) (May 21 by NS)
- "chotto muzukashii ne" (It's kind of difficult, isn't it?) (May 21 by NNS)

Out of the eleven NNS, three participants, SW (a campus webmaster), LM (a computer major sophomore), and SM (a staff member with some experience with Japanese chat), were more savvy SCMC users, chatting comfortably from the beginning and occasionally describing different states of mind and shades of subtle meaning with emoticons (see below). They also used English smileys and acronyms commonly used in email (e.g., lol) throughout the course.

(May 24, S1)

L60 JG >> these computers suck

L70 JG >> the mouse won't go left so I can't...

L62 SW >> ^_^;; (expressing empathy in response to JG's computer complains)

(May 28, S2)

L178 SM >> *senbu mecha kucha ni nattemasune* (^_^)

('All the turns have been entangled')

In one session, LM and SW were using emoticons to build rapport and signal support for each other (see below).

(June 9, S2)

L3 LM >> :)

L4 SM >> ^_^

L7 LM >> aww

L8 SM >> *Gambatte!*

('Don't give up!')

L9 LM >> hehe

L10 LM >> Thanks

L27 LM >> haha

L29 LM >> oic

L30 LM >> hehe, that's good

L39 SM >> hehe, ya

L91 SM >> \(^o^)/ banzai!

(congratulating LM making a correct guess in the game)

L131 LM >> ^_^

L138 SM >> *hehehe, iie*

(Giggling, 'don't mention it' = Thanks for the compliment)

These Japanese emoticons, *kaomoji*, used by those experienced chatters were initially foreign to the other participants of the same room (see below for an example).

(May 24, S2)

L47 LM: >> ^_^

L50 BOK >> *M-san, nan desuka.* ^_^

('What do you mean by ^_^, M-san?')

In a later session, one of them finally came to realize that he had been the only one in the room familiar with emotions, apologized, and offered a brief illustration on how to demonstrate body language online. However, as the other participants gained more experience with SCMC, both NS and NNS chatters started to use both English and Japanese emoticons with ease (see below).

(June, 9, S4)

L108 BAK>> :-)

L110 BOK>> ??

L115 BOK>> Uhhh

L116 BOK>> ...

(June, 9, S5)

L36 IN>> :-)

L68 IN>> ^_^

L70 KJ³>> ^^

L143 IN>> O.o

Romaji typing and spelling errors

Romaji is a transcription of Japanese using the Roman alphabet. Because the chat program of WebCT (4.1) does not support Japanese fonts, all the participants had to resort to Romaji. Both NS and NNS users of SCMC made numerous spelling errors⁴. One NNS commented on difficulty in transcribing oral Japanese in the alphabet during the chat session:

(May 21, S2)

L45 LL>> Ssometimes a little confusing on the proper romaji spelling of some words

In the follow-up interviews, two other students expressed their discomfort about chatting in Romaji:

BAK: I didn't like writing in Romaji. When I used a Romanized textbook several years ago, it left a negative impact on my writing skills. I believe Romaji is a clutch.

AR: My (vocabulary) cares are in hiragana, so (typing in) romaji is a bit different.

Interactional modifications and negotiation for meaning

Due to the reflective nature of text-based SCMC, the NNS participants often caught their own errors in the previous messages and corrected them in the adjacent turns. Although depending on the individuals, the NNS participants frequently made comprehension or confirmation checks by requesting the NS interlocutor to supply English translation for an unknown word as in the following examples:

(June 7, S1)

L60 IN >> action no haiyuu desu ga...

(I am an action movie star)

L65 SW>> *haiyuu ha nandesuka? (eigo de)*
(What does 'haiyuu' mean in English?)

L66 IN >> *haiyuu ha "actor" desu*
(It means 'actor/movie star')

L67 SW>> *ah, suimasen*
(oh, thank you)

(June 9, S2)

L75 LM>> M-san, how do you ask if someone is married?

L76 SM>> *kekkon wo shite imasu ka?*
(It is 'kekkon wo shite...')

L77 SM >> *kana?*
(Am I right?)

L78 IN >> *hai soo*
(Yes, you are)

The NS interlocutor, particularly IN, tended to send out a confirmation check immediately after a new word or expression was brought up by herself or someone else.

(June 2, S2)

L58 SM>> *Kyou hidoi henzutsu de shigoto kara yasunde imasu.*
(due to a terrible migraine headache, I skipped work today)

L62 IN>> *M-san, henzutsu tte wakarimasuka?*
(M-san, do you understand what 'henzutsu is?')

L63 LM>> *watashi?*
(Me?)

L64 LM>> *iie*
(No.)

L65 SM>> *Henzutsu wa migraine headache desu,*
(('Henzutsu' means migraine headache.)

L68 LM>> *a soo, arigatou.*
(I see. Thank you.)

By contrast, explicit error corrections and recasts by NS interlocutors or more advanced learners occurred only infrequently. It was difficult for anyone to find a chance for attending to L2 form and providing corrective feedback in this meaning-based communication, especially when the conversation was flowing very smoothly. Particle errors were mainly ignored (e.g., *wa* instead of *ni* as in *daigaku wa ikimashita*). Due to the discontinued or intermingled turn-taking typical in chat, a question-response pair was often separated between a few turns, making it even harder for corrective feedback to be offered timely. The lack of turn adjacency also appeared to interfere with the intended negotiation for meaning among the participants. On a few occasions, however, some participants were able to manage providing feedback in response to one participant (see below).

(June 2 S4)

- L26 TK (NS)>> *Hashiru noto, tennis to, furisubi-kana?*
(‘running, tennis and Frisbee, I must say.’)
- L29 KI (NNS) >> *T-san, Furishubikana wa nan desuka?*
(T-san, what do you mean by ‘furishubikana?’)
- L30TK (NS): *Furisubii ha gakkou no gurando de shimasu*
(I play Frisbee on the campus ground)
- L31 LU (NNS): *Furisubii=Frisbee*
(‘Furisubii’ in Japanese is Frisbee)
- L33 KI (NNS): *Frisbee desu ka!*
(Oh, Frisbee!)

Moreover, abrupt topic shifting was common, and the participants were not easily able to pursue the same topic strand even if the communication was not quite clear. The difficulty of staying on the same topic seemed to prevent the NS and NNS participants from engaging in negotiated interaction. Yet, there were a few incidents of ‘negotiation,’ that is, various kinds of contingent utterances by L2 learners such as extensions and recasts (Long, 1996), as exemplified in the following interaction.

(June 9, S5)

- L86 IN>> *chuukintoo ni sundemashita*
(I live in the Middle East)
- L87 KI>> *Anata wa Masako no ohime sama desu ka?*
(Are you Princess Masako?)
- L88 IN>> *iie*
(No)
- L89 IN>> *watashi wa sabaku ni sundemasu*
(I live in the desert)
- L90 LU>> *“chuukintoo” tte doko desuka?*
(What does ‘chuukintoo’ mean?)
- L92 IN>> *chuukintoo=middle east desu*
(It means ‘Middle East’)

During this session, LU later used the word ‘chuukintoo’ (see below).

- L113 LU>> *chuukintoo (middle east) no sheikusupia no onna desu ne.*
(So, you’re a Middle Eastern woman from Shakespeare’s story)

Unfortunately, such an example of comprehensible output by NNS was rare in this corpus of SCMC. Much of learner uptake appeared to be a mere echoing of the original input; the conversation usually shifted to a new topic, without leaving a trace of evidence for a resulted restructuring of the learner’s interlanguage in the chat transcripts.

Enjoyment with SCMC

Toward the end of the course, many of the participants, including the novice chatters, expressed enjoyment in speaking Japanese via SCMC. Upon completing the game, several NNS participants verbalized their excitement in Japanese (e.g., 'yatta' Got it!). Below are a few examples of comments expressing the participants' enjoyment and satisfaction that appeared during the regular chat sessions:

(June 7 S3)

L54 GR>>	tanoshikatta ne	(It was fun, wasn't it?)
L55 MO>>	otsukaresama desita	(Great work, you guys)
L56 MO>>	hontone!	(It was fun, isn't it!)
L57 JA>>	hontooni	(It was fun.)

(June 9 S4)

L144-147	(a lot of laughter)	
L172 BAK>>	kore wa kyouiku desu	(This is educational)
L173 BOK>>	omoshiro katta desu	(I enjoyed it.)
L174 IN>>	watashi mo	(Me, too)

4. Discussion: Eight Factors Affecting SCMC

From the analysis of the NS-NNS conversations in this study, several factors have emerged as variables critically affecting the effective use of chat for L2 learning. The discussion of these factors is made in light with several previous studies and is offered as suggestions for future pedagogical applications of SCMC.

1) Group Size

In the current study, the maintenance of topic coherence and focused interaction was most successful with only two NNS participants interacting with one NS interlocutor. When there were up to six participants in the same room, as in the earlier sessions, turn-taking and topic management became greatly problematic. Another issue pertinent to this group-based chat was the occasional instances of a 'late comer' being unable to join in especially after rapport had already been established and the conversation flowing. This was also the case in Roed's (2003) study in which 13 learners of Danish attempted to chat simultaneously. In addition, Roed's study reports that those who were unsuccessful in getting attention from the other participants displayed some form of online temper tantrum. Other researchers recommend small groups of three to five (Ingram *et al.*, 2000) or six chatters (Light *et al.*, 1997) in each room. Tolmie and Boyle (2000) propose the-smaller-the-better approach, especially when the instructional focus is on "increasing contributions per individual (p.122). "Very large groups are essentially unmanageable" (Ingram *et al.*, 2000, p. 32), and the flow of chat is typically disrupted with intermingled adjacent pairs (i.e., one person calls for another's attention and the other responds in the turn that follows immediately), multiple topic strands, and frequently disconnected turn sequences (Negretti, 1999).

2) Computer Anxiety and Familiarity with SCMC

In this study, the level of perceived comfortableness with computer use was a factor of influence initially. In the first week, BOK expressed his preference for face-to-face oral communication over online chat, and KI, the oldest NNS in this group, appeared to be uncomfortable in SCMC. Yet, neither missed even one session of online chat through the course; both were equally enthusiastic about communicating in the target language with the NS interlocutor; judged from the number of the chat turns they had produced. KI was also fortunate to receive constant support from his NNS partner, LU, who was more up-to-date with distance education during the session. He was given technical assistance by his wife, who was a retired school teacher with some computer background, as well. Thus, support from others and their own motivation for communication probably outweighed their initial hesitation and occasionally experienced technical difficulties. This was gratifying from the teacher's point of view. To participate in a technology-based course, basic computer and Internet skills are necessary. The availability of technical assistance to novice users is another important issue to make the pedagogical application of SCMC successful. Recent studies of distance education also emphasize the important relation between learners' familiarity with the technology and perceived usefulness of the medium (e.g., Erlich *et al.*, 2005; Taylor & Gitsaki, 2003).

3) Provision of SCMC Strategies

In this study, those who had prior experience with online chat had one great advantage over the other participants: they were able to compensate for their lack of L2 vocabulary and grammar with communication strategies, such as using short, direct utterances, adding emoticons and other signs (e.g., ... to indicate the holding of the turn), and scrolling up and down to locate the key word. Regardless of proficiency levels, novice users of chat need to be provided with sufficient guidance about how to converse well in SCMC and examples of commonly used emoticons (appropriate in the target culture). After a handout called '*Chatto Kaiwa no Kiso*' (the Basics of Chat Conversation) was posted to the website, both NS and NNS participants of this study started to demonstrate more equalized participation and enjoyment in chatting. Although it may be true that "today's college students have never known a world without computers" (Krohn, 2004, p. 325) and "most students come to college with CMC experience" (Barnes, 2003, p. 4), this generalization should be taken with caution.

4) Collaboration among Participants

Collaboration among L2 learners was particularly important in conducting SCMC effectively in this distance language course. After a more-collaborative task was introduced and the NNS participants were encouraged to help each other, more balanced turn-taking and equalized contributions were achieved among all the chatters.

The atmosphere of collaborative learning is likely to produce negotiated interaction that enables L2 learners to modify their output. Another benefit of collaborative work in L2 instruction is that the target language becomes a tool of 'socialization' in which mutual assistance is necessary in order to complete a shared task (Kitade, 2000; Lee, 2004). Lee (2004) observes that "online collaboration was beneficial to the NNSs through linguistic scaffold-

ing, as in the expert-novice relationship between the NNS student and the NS. During the negotiation, students were able to notice their interlanguage system: the gap between their L1 and L2 and the correct Spanish produced by their NS partners" (p. 93). However, the type of NS partners may influence the degree of induced collaboration; in Lee's study, the NS interlocutors were graduate students from another university with some teaching backgrounds, which undoubtedly affected the frequency of NS scaffolding. Clarity in instructing a task is another key factor affecting the quality of participant interaction in SCMC (Tolmie & Boyle, 2000), which will be discussed next in more detail.

5) Task Types

As mentioned above, selecting the right task for SCMC was very critical in equalizing the degree of contribution from all the NNS chatters in this study. In the last two sessions, the subjects participated in the game-type task, "*Watashi wa daredeshoo?*" (Who am I?), in which the less-proficient NNS was paired with the more-proficient NNS trying to figure out who the mysterious guest (played by the NS) was. During each session that lasted about 20 minutes, up to three games were played collaboratively with much focused participation. Coupled with the participants' gained experience with online chat, the selection of the goal-oriented task seems primarily responsible for the effectiveness of SCMC in this study.

We must design a SCMC task so as to promote meaningful communication in the target language. "The key is to structure tasks that involve learners' active participation in sharing exchanging and debating information relevant to life experiences through self-expression and self-discovery" (Lee, 2004, p. 90). Task-based instruction is said to be a good application of communicative language teaching via technology, something that compensates for the paucity of human interaction (Doughty & Long, 2003). Other possible applications of collaborative SCMC are the Map Task⁵ and the Jigsaw Task. The former is a collaborative problem-solving game invented by Brown *et al.* (1984) and was used in online chat in Newlands *et al.* (2003). The latter is a task in which each player holds a different portion of the complete picture and has to obtain information on the missing elements and was found to be more effective in producing a high proportion of negotiated work than the Decision-Making Task (Smith, 2004) or the Information-Gap Task (Blake, 2000).

6) L2 Oral Proficiency and Literacy

Regardless of their initial familiarity with SCMC, the more advanced learners of Japanese (e.g., LU, BAK) initially produced a greater amount of L2 output in this study. A subcomponent of proficiency is L2 literacy. Interestingly, KI was unfamiliar with Japanese orthography although his oral proficiency was one of the highest. Although the chat was conducted in Romaji and the NNS's literacy levels were not an issue in this course, if SCMC is used to practice L2 writing skills in conversational context (as was in Toyoda & Harrison, 2002), it should be ensured that all participants have similar levels of familiarity with L2 orthography.

7) NS Interlocutors

In this study, two NS interlocutors did not have much experience with L2 learners of varying levels. According to the chat transcripts, they were not usually adept at noticing typical L2 errors and providing corrective feedback to the learners. Their reservation about offering constant error correction might have been culturally derived, too (this tendency of Japanese NS was also reported in Iwasaki and Oliver, 2003). One of them confided that she did not feel quite right about correcting American students' errors and that she was not even sure how to do so. Thus, it is possible that the type of NS partners influences the quantity and quality of SCMC participation. In Lee's (2004) study on NS-NNS dyads via WebCT chat, L2 learners were able to use various negotiation skills to receive authentic L2 input from the NS partners commenting NS assistance was useful to the improvement of their writing skills. One big difference, however, is the background of the NS interlocutors used in this study: Two out of three NS were international students from Japan with no formal teaching experience in this study, as opposed to Lee's NS subjects who were high school teachers of the target language.

In the SLA literature, the term 'native speaker' tends to be used as a monolithic identity. Yet, 'NS' covers a wide range of L1 speakers. It is probably why not all NS-NNS interaction leads to meaningful communication. To make SCMC useful in L2 instruction, NS interlocutors must be able to provide input modification for comprehensibility to assist L2 learners (Pica *et al.*, 1996) and help them "comprehend the semantics and syntax of input" and "improve the comprehensibility of their own (i.e., learner's) linguistic output" (Hegelheimer & Chapelle, 2000, p. 42). Thus, merely arranging NS interlocutors does not suffice; the effectiveness of using SCMC depends on the teacher's designing a task that results in ample negotiation for meaning and modification of L2 output and providing focus on form (e.g., drawing the learner's attention to linguistic forms) through meaningful, interpersonal communication.

8) Technological Limitations

In this study, a chat program came with WebCT, a course delivery system purchased by the institution for system-wide use, and technical support was readily provided to the instructor at no cost. However, one participant's computer was occasionally malfunctioning, causing much frustration as the student tried to log into the chat-room from home. We need to ask ourselves whether or not adopting SCMC can be "technically problematic due to limited bandwidth" of an institution (Wang, 2004, p. 381) as well as of the individual learner.

5. Conclusion

In this study, the usefulness of adopting online chat for L2 communication was explored through the qualitative analysis of Japanese SCMC by NS and NNS participants. The paper also presented the factors that are likely to influence the effectiveness of using SCMC for distance language education. The data from this study confirmed the literature in that SCMC does not lend itself to all the aspects of F2F conversations with target-language speakers. Yet, the key issue is not how to compensate for what SCMC lacks that F2F offers, but how to make good use of what SCMC can best offer in distance language learning. Depending on the design of a communicative task, SCMC can bring individuality, equal-

ized participation, and a sense of enjoyment to the hands of L2 learners. All in all, the use of online chat appears to be a feasible and beneficial way to provide increased opportunity of meaningful NS-NNS interaction for college-level language learners. It should be noted, however, that only a small number of subjects (11 NNS subjects and 3 NS subjects) were involved in the current study and that the subjects were not randomly selected from a large pool of L2 learners. Thus, the findings of the study may not be generalized to the population of college-level distance language learners.

Language teachers should be informed of pros and cons of using a new technology based on the kind of L2 interaction needed for a certain pedagogical purpose and the availability of resources and instructional time at their local institutions. Research on computer-mediated communication is still in its infancy (Krohn, 2004). More investigation of effective SMC use in L2 instruction will provide teachers with necessary information on educational benefits this medium of communication would bring to their students.

Notes

1. The one student who had never studied Japanese formally was a heritage learner who grew up with his Japanese speaking family in the United States.
2. The “*Watashi wa dare deshoo?*” game was invented in collaboration with one of the subjects, JA. The procedure was similar to the classic American game, ‘20 Questions.’ Unlike the 20 Questions, this game was played in trios and with no limit on the number of questions. The goal of the game was for the NNS participants to work collaboratively to figure out who the NS guest was pretending to be – either a famous person (e.g., Ozzy Osborne) or someone very familiar to them (e.g., the instructor or a classmate). The NNS participants were allowed to ask both yes-no and w-h questions regarding the gender, age, birthplace and other key information of the person, while the NS guest answered the questions, occasionally volunteering extra hints to assist their guessing.
3. KI was in his 60s and was least comfortable with computers. This was the only case in which he attempted to use emoticons (although incomplete for ^_^).
4. The most common typos in Romaji were the omission of a vowel (e.g., *dsu* for *desu*) or a consonant (e.g., *nai* for *naji* ‘what’; *tukuru* for *tsukuru* ‘to make’) as well as misspelled vowels (e.g., *kenkyoo* for *kenkyuu* ‘studies’) or consonants (e.g., *suchi* for *sushi*). Minor spell errors usually went unnoticed (e.g., *chooto* for *chotto* ‘a little’; *eeqa* for *eega* ‘movies’). However, some misspelled words caused confusion and miscommunication (e.g., *shijin* ‘poet’ for *shujin* ‘husband’; *warukoto* ‘breaking/cutting’ for *waraukoto* for ‘laughing’). Another problem with Romaji-based chat is that Romanization of Japanese is inconsistent. For example, the same word may be spelled in several different versions (e.g., *ohayoo*, *ohayou*, *ohaiyoo* for ‘good morning’; *hanashi* or *hanasi* for ‘talk’), and there are no rules governing word boundary (jikoshookai vs. jiko shookai for ‘self-introduction’) or letter boundary (e.g., *ren-ai* vs. *re-nai*) in Romaji.

5. In this game, paired players are given the identical maps with landmarks (e.g., a forest, a cottage, a lake) drawn on A3 paper in simple lines together with their fictional names (e.g., Lake Emerald). Player A (the instruction giver) tells Player B (the instruction follower) about a designated 'safe route' which is drawn only on Player A's map. The goal of the game is for Player A to instruct directions to Player B. The pair's performance is assessed based on Player B's accuracy of the route (including exact diameters in distance between landmarks).

Appendix A

Date	Type	Session	NS partner	NNS participants
May 21	Warm-up (self-introduction)	Session 1	IN	SW
		Session 2	IN	SM, LM
		Session 3	TK	GR, LU, AR
May 24	Warm-up	Session 1	IN	SW
		Session 2	IN	BOK, SM, LM, BAK
		Session 3	MO	KI, AR, GR, LU
May 26	Warm-up	Session 4	MO	GR, JA
May 28	Interview (getting to know each other more)	Session 1	IN	JG, SW, AR
		Session 2	IN	JA, SM, LM, BOK, BAK
		Session 3	MO	KI, GR, LU
June 2	Interview	Session 1	IN	AR, SW
		Session 2	IN	SM, LM
		Session 3	IN	GR, JA
		Session 4	TK	KI, LU
		Session 5	IN	BAK, BOK
June 7	Game ("Watashi wa dare deshoo?")	Session 1	IN	AR, SW
		Session 2	IN	SM, LM
		Session 3	MO	GR, JA
		Session 4	IN	BAK, BOK, KI
		Session 5	IN	KI, LU
June 9	Game	Session 1	IN	AR, SW
		Session 2	IN	SM, LM
		Session 3	MO	GR, JA
		Session 4	IN	BAK, BOK
		Session 5	IN	KI, LU

*IN was the instructor while MO and TK were international students from Japan who worked as the lab assistants of the course. Although one NNS participant, JG, was originally assigned to Session 1, he almost always missed the session.

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