

Interactional behaviour of foreign language learners in asynchronous CMC: Are they really interacting?

Nobue Tanaka-Ellis

Waseda University
nobuette@gmail.com

The aim of this exploratory study was to better understand some of the factors that influenced language learning using asynchronous computer-mediated communication, by analysing interactional behaviour of foreign language learners. The participants were learners of Japanese at an Australian secondary school and English as a Foreign Language (EFL) learners at a Japanese high school, who communicated through a bulletin board system (BBS) using Japanese and English, to complete weekly tasks designed to develop understanding of the participants' cultures. The messages on a BBS were analysed to see if meaningful interactions occurred between the participants, by determining whether the learners actually referred back to previous messages to provide appropriate answers, or whether learners simply wrote a series of monologues without reference to messages written by their interlocutors. The findings show that the threads of messages were often incoherent, and students did not always reply to requests for information posted by their overseas counterparts.

1. Introduction

Research into computer-mediated communication (CMC) has been diversifying as various types of synchronous and asynchronous programs have been introduced for language learning. Many teaching methods and pedagogies incorporating CMC have, therefore, been tested and discussed to assist the arena of second language (L2) learning. The research objectives include face-to-face and CMC comparison (Abrams, 2003; Chapman, 1997; Sullivan & Pratt, 1996; Warschauer, 1995; Fernández-García & Arbelaiz, 2003), tandem learning (Appel 391

& Mullen, 2000; Brammerts, 1996; Cziko & Park, 2003; Donaldson & Kötter, 1999; Kötter, 2003; Schwiendhorst, 2002), learning about the target culture (Itakura, 2004; Kinginger et al., 1999; Lee, 2004; Liaw & Johnson, 2001; Nutta & Spector-Cohen, 2002; O'Dowd, 2000, 2001, 2003; Zeiss & Isabelli-García, 2005), sustainability of online communication (Kung, 2002a, 2002b; Stockwell, 2003), student attitudes (Greenfield, 2003), L2 pragmatic competence (Belz & Kinginger, 2002), and collaborative writing (Roskams, 1997; Savignon & Roithmeier, 2004). A number of studies have demonstrated that the networked language classroom can have positive effects on second language (L2) learning. Lee (1998, 2004) found from a survey conducted in her advanced Spanish class that students had positive attitudes toward using the Internet, email, and online chat rooms. The students responded that email and chat rooms were effective for communicating with native and non-native speakers and their experiences in using the Internet were encouraging and motivating (Lee, 1998; Kung, 2002b). Although Kung (2002a, 2002b) recognises some benefits of employing networked tools, problems with asynchronous CMC are also addressed. For instance, the poor sustainability of online communication between native speakers (NSs) and non-native speakers (NNSs) seems to be a common problem. The reasons for poor CMC sustainability are due to lack of response and purpose (Kung, 2000a, 2002b), too many topics in one message, sudden change of topic, premature cessation of message, lack of explicitness, and syntactic and pragmatic errors (Stockwell, 2003). Despite the numerous causes that may cause poor sustainability of CMC, Stockwell (2003) mentions that sustained CMC has the potential to lead to L2 improvement. Thus, sustaining CMC interactions can be regarded as a factor that is crucial for fostering L2 learning.

Benefits of interactions have been widely discussed in both applied linguistics and CALL research. The interactionist approach (Long, 1983) is one of the most prominent views in second language acquisition (SLA) theory. Numerous research fields stemmed from this domain, which are exemplified by negotiation of meaning (Long, 1983), comprehensible output (Swain, 1993, 1995), noticing (Schmidt, 1990, 1993), and recasts (Mackey & Philp, 1998). Numerous studies have been conducted on CMC and classroom interaction, adopting interactionist view of SLA that investigate the characteristics, benefits, and efficacy of asynchronous and synchronous CMC, including audio and video interaction. The research topics in CMC that focused on interactionist view include corrective feedback (Morris, 2005), noticing (Lai & Zhao, 2006), repair and modified output (Jepson, 2005), and negotiation of meaning (Blake, 2000; Kötter, 2003; Leahy, 2001; Smith, 2003; Toyoda & Harrison, 2002; Tudini, 2003).

Negotiation of meaning is said to be triggered by lexical confusion during computer-mediated interaction (Blake, 2000; Toyoda & Harrison, 2002; Tudini, 2003). Blake (2000) conducted a study of university level L2 Spanish speakers of completing different tasks, which were jigsaw, information-gap, and decision-making by chatting online. From this study, he concludes that different task types influenced the frequencies of negotiation for meaning (jigsaw was the optimal task type for inducing negotiations in this case) and promoted the learners to notice the gaps in their target language (TL), which he considers similar to face-to-face interaction. He also mentions that text-based interaction forced the participants to produce output.

In contrast, in Tudini's (2003, 2010) study of synchronous CMC, of 61 occasions of negotiation, only 11 occasions led to modified output, in spite of NSs' spontaneous form-focused instruction. Lai and Zhao (2006) studied synchronous text-based chat and face-to-face interaction on noticing of university ESL students. Their result suggests that online interaction

provided more time for processing of input and monitoring of output. The expressions used during negotiation for meaning in online interactions were more explicit, such as more use of **WH** questions, than face to face. However, the difference in frequency of noticing during online and face-to-face interaction was smaller. Therefore, the studies on online communication showed that online learning does not always provide the optimal environment for **L2** learning and the results can vary depending upon different factors, such as the **TL**, student proficiency, task types, synchronicity, setting, etc. The recent studies concerning the interactionist view in **L2** learning and **CMC** are based predominantly on the studies of synchronous communication, although asynchronous **CMC** is said to be able to provide more time for learners to think and promote deeper, careful thinking, especially for the learners with lower **L2** proficiencies (Lamy & Goodfellow, 1999; Weasenforth, Biesenbach-Lucas & Meloni, 2002). Thus, beginning level **L2** learners of character-based Asian languages can be benefitted from the extra time they can spend for typing and selecting appropriate characters by employing asynchronous **CMC**.

Regardless of numerous research results that indicated favourable views of using asynchronous **CMC** for lower level **L2** learners, more classrooms seem to shift towards choosing synchronous **CMC**. This can result in stalling the research on asynchronous **CMC** that has been reported as more suited for beginning level learners, and thus continuous assessments and evaluations of asynchronous tools are essential for understanding efficient learning tools, especially for lower-level **L2** learners. Asynchronous tools (e.g., email, threaded forum, blog comments, etc.) are also highly accessible in everyday life so they could be easily adopted in various learning environments. The current study, therefore, attempts to illustrate and critically analyse how asynchronous **CMC** facilitated (or hindered) **TL** learning of beginning level learners. Learners' messages exchanged on an asynchronous **BBS** are particularly looked at to see if there are any behavioural characteristics existed in the messages, and how much of their interactions was potentially useful for their **TL** learning.

2. Method

2.1 Research questions

The following research questions were formulated to investigate if asynchronous **CMC** promotes reflective dialogue-like exchanges (Lamy & Goodfellow, 1999) between secondary school students in Australia and Japan for learning their **TL**. The study particularly focused on students' reading and writing behaviours on the **BBS**, by analysing if requests for information in the messages were appropriately replied to. Requests for information (Rs) were defined as questions and requests that asked for information, such as "Please tell me your names," "Can you tell me your names?" or "What are your names?" However, Rs used for leave-taking purposes such as "Please take care" were not included as they do not normally require responses. Requests for information were analysed as they were thought that they would serve as an indicator of whether or not learners actually referred back to the messages that were posted by their interlocutors.

Thus, the following research questions were posed:

- Do learners make use of the **TL** input when they are engaged in **L2** productive (i.e., written) tasks?
1. Do learners refer back to the messages sent by their overseas partners in previous turns when they compose new message?

2. Do learners reply more frequently when they receive messages in their native language or the target L2 language?
3. What are the possible causes for non-response to requests for information?

2.2 Setting

The participants were 26 Year-10 students (15–16 years old) enrolled at an Australian secondary school and 35 second-year senior high school students (16–17 years old) in Japan. The project was conducted over a 6-month period, excluding 1-month school holidays at each school. Both schools were Catholic girls' schools and had exchange programs as sister schools, however, the students had no contacts prior to the project. A total of 10 groups of 2 to 3 Australian students and 3 to 4 Japanese students were formed for weekly group interaction using a bulletin board system (**BBS**). An asynchronous **BBS** (*CourseForum*) was used as the vehicle of communication as the students on the both sides had limited L2 skills. The Australian students received a 50-minute training one week prior to the actual **BBS** communication since they had no experience in using Japanese on computers. The Japanese students, on the other hand, joined the online interaction without any previous training sessions as their term started later than the Australian group, and they started to communicate through the **BBS** immediately from day one of their **CALL** class. Through numerous discussions, the Australian and the Japanese teachers decided six one-monthly topics for communication (Introduction, Leisure & Sport, Shopping, Famous People, Festivals, and Fashion) based on the Australian school's curriculum, as the Japanese school did not have particular requests on topic selection. The selected topics were thought to be interesting for teenage female students to sustain motivation for communicating with each other for six months. The tasks for the students were to discuss and to ask questions on the discussion topics to develop deeper understanding of participants' cultures. The **TL** for the Australian students was Japanese, and English was for the Japanese students. In order to strengthen and sustain a reciprocal relationship, the online interaction was designed to take a form of tandem learning (Brammerts, 1996; Calvert, 1992) that all the participants acted as tutors of their L1, and learners of the **TL**. The **TL** for writing **BBS** messages alternated every week, in order to provide equal opportunities for the Australian and Japanese cohorts for producing their corresponding **TL** outputs. The role of teachers in this project was to assist their students with reading and writing L2 messages, however, deciding to what extent they should assist their students with the L2 was left to their own judgement. The reason for this was that the researcher was not one of the participating teachers and we agreed at the beginning of the project that this project should be student centred, rather than teacher centred.

2.3 Analysis

Percentages of answered and unanswered requests for information (Rs) were calculated to see if the students referred back to the messages sent by their partners. The relationship between the language used for writing Rs and the frequency of response was looked at by analysing the quantity and the percentage of responses. The causes of non-response were sought by analysing messages posted before and after the Rs in question. The last research question was adopted using frameworks from Lamy and Goodfellow's (1999) study, particularly on sustaining online exchanges, and Stockwell's (2003) study of sustainability of email interaction. In Lamy and Goodfellow's (1999) study of asynchronous **CMC** used by

university-level distant French learners, three different types of messages – monologue-type, conversation-type, and reflective dialogue-type messages – were identified. According to their study, monologue-type messages did not include any stimulus for the reader to respond to, and in conversation-type messages, although phrases that asking for replies were included in the messages, the participants were not communicating on a pre-set agenda and the dynamics of interactions was less controlled. In the messages regarded as reflective dialogue-type, the interactions contained some characteristics seen in negotiation of meaning, such as asking questions about previous messages, asking for clarification, and so forth. They further investigated causes of discontinued discussion threads, which could help sustaining reflective dialogue. They focused on analysing end-of-threads messages that contained invitations of replies but failed to receive replies. There were a few characteristics of non-response found in the 11 unsuccessful threads, which were identified as lack of explicitness, discourse mishaps, self-answering, asking questions already answered, and syntactic errors. Stockwell (2003) further elaborated these characteristics in his research. In Stockwell's research, **NS-NNS** email exchanges were analysed to identify the causes of discontinued discussion threads. Similar to Lamy and Goodfellow (1999), the messages at the end of discussion threads that invited response were particularly looked at for causes of premature cessation of threads. The causes of non-response included; multiple topics in one email, sudden cessation due to assigned topics, lack of explicitness, syntactic error, asking about a question already answered, pragmatic error, one speaker closes topic, and unknown. For the current research, each of the requests for information in the **BBS** exchanges was identified, and the replies for the requests were sought in the following postings. For the purpose of data analysis, causes of non-response found in the studies of Lamy and Goodfellow (1999) and Stockwell (2003) were used as guidelines. However, Stockwell's "multiple topics" were changed to "multiple requests for information" and new categories "message too long," "two or more consecutive turns," "posting under a wrong thread," and "off-topic" were added to suit the current study. Also, instead of focusing only on the messages posted at the end of topic threads, as in Lamy and Goodfellow's (1999) and Stockwell's (2003) studies, causes of non-response for all the Rs posted on the **BBS** were analysed to see if the students read the messages carefully and attended to every request. A total of 10% of data set was subjected to the second rater, who was an English-Japanese bilingual language professional, for analysing inter-rater reliability of coding "causes of terminating discussion threads." The value of Cohen's Kappa was 0.911, indicating that the raters achieved a high degree of agreement.

3 Results

3.1 Numbers of request production and response rates

The total number of Rs produced by the students were 636. The Australian students produced 58% of total number of Rs and the Japanese students produced 42 % of Rs. Table 1 shows the proportions of Rs produced in **L1** and **L2**: these indicate that both the Australian and Japanese students produced far more Rs in English than in Japanese. Also, the Australian students produced nearly 100 more requests in English than the Japanese counterpart. Surprisingly, the Japanese students produced almost as same number of Rs in Japanese as the Australian students.

Table 1: Total number of Rs for information produced in English and Japanese

	Australian students		Japanese students	
	<i>n</i>	%	<i>n</i>	%
Rs in English	269	73	171	63
Rs in Japanese	97	27	99	37
Total	366	100	270	100

The percentages of answered and unanswered Rs were looked at to see if the students referred back to the messages previously posted by their overseas counterparts. Of the 636 Rs posted by the students, less than half (48 %) of were replied to. Table 2 shows the numbers and proportions of the Rs answered by the Australian and Japanese.

Table 2: Overall percentage of Rs for information that received replies

	Australian students		Japanese students	
	<i>n</i>	%	<i>n</i>	%
Answered	146	54	158	43
Unanswered	124	46	208	57
Total	270	100	366	100

The answer rate for the Australian students was higher than that of the Japanese students. However, the Japanese students received more Rs in total, and replied to more queries in actual numbers.

3.2 Frequencies of replies due to language choice in requests

Language specific relationships between response rates and languages used for asking Rs were further looked at to investigate if the students preferred to answer Rs in English or in Japanese (Table 3).

Table 3: Percentage of replied Requests for information written in L1 and L2

		Australian students		Japanese students	
		<i>n</i>	%	<i>n</i>	%
Rs in English	Answered	100	58	108	40
	Unanswered	71	42	161	60
	Total English	171	100	269	100
Rs in Japanese	Answered	46	46	51	53
	Unanswered	53	54	46	47
	Total Japanese	99	100	97	100

The percentage of replied Rs in English for the Japanese students shows lower frequency of replies to Rs in English than the Australian students, however, due to the large volume of Rs in English posted by the Australian students, the actual number of replied Rs in English by the Japanese students was larger than the Australian counterpart. Regarding the Rs written

in Japanese, the Australian and the Japanese students produced almost the same amount of Rs, although the Japanese students answered slightly more Rs than the Australian students.

The following table (Table 4) indicates the designated proportions of English and Japanese use on the BBS.

Table 4: Designated turns of using English and Japanese as the TLs

	Australian students		Japanese students	
	<i>n (weeks)</i>	%	<i>n (weeks)</i>	%
English	9	56	10	59
Japanese	7	44	7	41
Total	16	100	17	100

Before the project started, the proportion of using English and Japanese was set to be almost equal. The proportion, however, started to become less balanced as the study proceeded, due to school holidays and unexpected school events, which were unknown at the time of project preparation. Table 5 shows the proportions of answered and unanswered Rs written in English.

Table 5: Replies posted for Requests for information written in English

		Australian students		Japanese students	
		<i>n</i>	%	<i>n</i>	%
Answers in English	Answered	86	77	73	40
	Unanswered	25	23	108	60
	Total	111	100	181	100
Answers in Japanese	Answered	14	23	35	40
	Unanswered	46	77	53	60
	Total	60	100	88	100

The Australian students replied to more requests when they were required to answer in their L1, and replied to fewer Rs when they were to reply in the L2. On the contrary, no differences were found in the response rates between the answers written in the L1 and the L2 posted by the Japanese students. Table 6 summarises the proportions of answers posted in replying to the requests for information written in Japanese.

Table 6: Replies posted for requests for information written in Japanese

		Australian students		Japanese students	
		<i>n</i>	%	<i>n</i>	%
Answers in English	Answered	16	36	44	54
	Unanswered	29	64	37	46
	Total	45	100	81	100
Answers in Japanese	Answered	30	56	7	44
	Unanswered	24	44	9	56
	Total	54	100	16	100

The table shows that the Australian students answered to more Rs in the **TL** than in the **L1** for the Rs written in Japanese. The Japanese students, on the other hand, answered to Rs in English more frequently than in Japanese. While the Japanese students only received a handful of Rs in Japanese from their counterpart, less than half of the Rs were replied to.

3.3 Causes for ending discussion threads

The following table shows the frequencies for the causes identified as the end of discussion threads (Table 7). The first cause of discontinuation of threads is “multiple requests in one turn.” This is defined as an unanswered request for information posted as one of five or more Rs included in one turn. This also includes the case of 2 or more consecutive turns, without any postings from the partners in between, which contained 5 or more requests for information in total. The messages categorised under “sudden cessation due to assigned topics” are the messages posted at the end of monthly topic threads. “Lack of explicitness” includes messages written with ambiguous expressions and sentence structures that lacked the clarity of meaning in Rs. “Syntactic errors” are severe ungrammatical Rs, which caused impairment of functions in requests. The category, “asking about a request already answered” is self-explanatory, however, it also includes the Rs asking about the topics already mentioned in previous turns by their partners in their monologue-like messages. “Pragmatic error” contains the messages that breached their partners’ communicative rules, such as speech acts. The messages listed under “one speaker closes topic” include the situations like a student requests for information and provides its answer on her own within the same turn, without giving any chances for her partners to reply in the next turn. “Messages too long” is a new category added for the current study. This is defined as a message contains a total of more than 400 words, or a series of messages that contains 4 or less Rs posted in one turn, in both English or in Japanese (roughly one A4 page in English and half a page in Japanese). However, if 5 or more Rs were contained in one turn of a long message, the Rs were categorised under “multiple requests in one turn.” “Two or more consecutive turns” was defined as two or more consecutive postings without a response in between, which contained 4 or less requests. If the accumulated messages contained 5 or more Rs, this was considered as multiple requests. “Posting under a wrong thread” included the messages posted under the threads set up for previous monthly topics. “Off-topic” included the requests that were considered unrelated to their tasks. All the unknown causes for termination of threads were place under “unknown.”

3.3.1 Multiple requests in one turn. A total of 106 instances of multiple requests (83 English and 23 Japanese Rs) that caused the end of topic threads were found from the data gathered from the Australian students. This was the most common reason that caused cessations of topic threads, which shaped over 50% of the entire reasons for non-response for the Australian students. In the Japanese data, on the other hand, this only formed 20% of the entire reasons for causing cessations of threads.

3.3.2 Sudden cessation due to assigned topics. Compared to the Australian students, the Japanese students experienced this situation more frequently as their messages happened to be posed at the end of month, which was often the end of the discussion period for the monthly discussion topics. As Table 7 shows, the majority of the last messages posted under each monthly topic thread were not answered. In fact, only 4 out of 31 turns (4%)

Table 7: Causes of terminating discussion threads

Cause of ending threads	Australian students						Japanese students					
	Total n	%	L1	%	L2	%	Total n	%	L1	%	L2	%
Multiple requests in one turn	106	51	83	52	23	50	25	20	9	17	16	23
Sudden cessation due to assigned topics	26	13	22	14	4	9	36	29	22	41	14	20
Lack of explicitness	8	4	4	2	4	9	5	5	4	7	1	1
Syntactic error	11	5	1	1	10	22	1	1	0	0	1	1
Asking about a request already answered	3	2	2	1	1	2	3	2	1	2	2	3
Pragmatic error	0	0	0	0	0	0	0	0	0	0	0	0
One speaker closes topic	0	0	0	0	0	0	0	0	0	0	0	0
Message too long	18	9	18	11	0	0	3	2	3	6	0	0
Two or more consecutive turns	3	1	3	2	0	0	3	2	3	6	0	0
Posting under a wrong thread	7	3	5	3	2	4	16	13	1	2	15	21
Off-task	5	2	5	3	0	0	1	1	1	2	0	0
Unknown	20	10	18	11	2	4	31	25	9	17	22	31
Total	207	100	161	100	46	100	124	100	52	100	71	100

posted at the end of monthly topic threads were responded to. This may be caused when a new thread was created for a new monthly topic on a different page, previous discussion pages were not checked.

3.3.3 Lack of explicitness. A small number (4% for Australian and 5% for Japanese students) of messages were found in this category. The Australian students had Rs written in both L1 and L2, however, the Japanese students only had L1 in this category. The following example was collected from an Australian group (Example 1).

Example 1

Australian students – In Japanese

週末どうですか。[How's weekend?] [sic] (Group 10)

This question asks about weekends to their Japanese partners, however, since they failed to specify the tense of the weekend the meaning of the question was unclear. The following English question was posted by another Australian group (Example 2). The sentence contains two conjoined questions with only one question mark at the end, which may confuse low proficient English learners.

Example 2

Australian Students – In English

When do you go out what do you like to eat? (Group 4)

The following examples (Examples 3 & 4) were found in the data collected from the Japanese **399**

students. The first example was considered inexplicit as there were two similar meaning of a request written one after another (Example 3). The differences between these requests for information would be easily distinguished if the **EFL** learners were more advanced learners, however, even if the learners could understand what the Japanese students asked for, it would have been too complicated to explain their answers in Japanese with their **L2** proficiency.

Example 3

Japanese students – In Japanese

休日は何をすごしますか??りそうの休日もおしえてください!

[How do you spend your holidays?? Please tell me about your ideal holidays as well!]

(Group 10)

In the next example, a Japanese group posted a long message that included two questions (Example 4). The first question received no replies, whereas the second question was replied to. The structure of the message seemed to have made the first question less explicit as the explanations prior to the first question were already very lengthy and the first question was vague. Compared to the first question, the structure of the second question was clearer and it can be understood without reading the preceding explanations. Also, the second question may have attracted more attention from the readers because of their interest in the topic, therefore, the first question may simply have been overlooked.

Example 4

Japanese students – In Japanese

私たちは休みの日は、えいがをみにいったり、買い物をしたり、カラオケに行ったりしています。休みの日は、おそくまでねています。ときどき、うんどうもします。りそうはボーイフレンド(今、みんなボーイフレンドはいません)とテーマパークに行ったり、えいがをみたり、ドライブに行ったりしたいです。あなたたちはどうですか?あなたたちはボーイフレンドはいますか?

[On holidays, we go to see movies, go shopping, and go to karaoke. On holidays, we sleep in late. Sometimes, we exercise, too. Ideally, with a boyfriend (no one has boyfriends now), go to theme parks, watch movies, go driving. How about you? Do you have any boyfriends?]

(Group 8)

3.3.4 Syntactic error. Syntactic errors were seen in both the Australian and Japanese data, however, there was only one error found in the Japanese data in **L2**, whereas the Australian students had errors in both the **L1** and **L2**. This made up 5% of non-responded to messages in the Australian students, and only 1% of the Japanese students. The following example was found in the messages posted by the Australian students (Example 5). The questions contain multiple errors of verb, tense, and particle, which make it difficult to assume what the author wanted to ask.

Example 5

Australian students – In Japanese

ところで、東京に買い物したことができますか。

[By the way, can you ever been able to shop to Tokyo?] [sic] (Group 10)

The next example (Example 6) was also collected from an Australian group. The Australian students misspelled 'trendy' in this question.

Example 6**Australian Students – In English**

What is trandy in Japan at the moment? [sic] (Group 5)

This may appear to be a simple spelling mistake for proficient English speakers, however, in a tandem learning situation, **NSs** are regarded as the authority of their **L1**, thus **NNSs** with a low **L2** proficiency could treat it as a new lexical item that is not listed in their dictionaries. The situation changes when the Japanese students made the same error. The following example (Example 7) was found in the messages posted by one of the Japanese groups.

Example 7**Japanese students – In English**

Where are Trandy places in Geelong? [sic] (Group 9 Japanese)

Reply: Instead of saying Trandy, say Trendy, that is the correct way! (Group 9 Australian)

The word 'Trandy' was recognised as an error by their partners in Australia and as a result, the Japanese students were provided with an error correction, instead of receiving an answer to the question.

3.3.5 Pragmatic error and one speaker closes topic. No requests for information were found under these categories. The possible reasons for not finding these types of messages are that most of the messages were co-authored and the students had discussions on what should be included in their messages before posting them. The discussion pages on the bulletin board were semi-public arenas, where all the participants in this study including teachers could read the posted messages. For that reason, the students could have been careful of the content and mannerism when they composed their messages.

3.3.6 Messages too long. Requests for information in this category were found across the data, especially the data collected from the Australian students, making up 9% compared with 2% for the Japanese students. All the messages found under this category were written in their **L1** and the contents were extremely detailed.

3.3.7 Two or more consecutive turns. This was not a commonly occurring situation for both the Australian (1%) and the Japanese students (2%). Two or more consecutive turns of messages were posted mainly due to cancellations of classes or school holidays on either side of school. A problem caused by different school terms of participating schools was explained in Stockwell and Levy's (2001) paper as well. In their study, since there were only five overlapping weeks in one semester, the participants' interaction period was short. In the current study, differences in school schedules affected the project in different ways. Due to two separate long school holidays taken by the Australian and Japanese schools during the project, together with unexpected cancellations of classes, the online interaction stalled and caused incoherence in message threads.

3.3.8 Posting under a wrong thread. This cause only formed 3% of the total causes of termination of threads for the Australian students, however, it was 13% for the Japanese students. All the messages posted under wrong threads were placed under the first discussion thread, 'Introduction,' which was created for the initial contact between the Australian

and the Japanese students. Construing from how the discussion pages and threads were set up, the students seemed to forget to go to the appropriate discussion pages when they logged in and typed their messages straight into the message field on the group home page without checking which page they were in.

3.3.9 Off-task. Only six questions and requests in the Australian data and 2 questions and requests in the Japanese data were recognised as off-task. Most of the questions and requests categorised here seemed to be arisen out of curiosity at the time that the students were composing messages. The following example was collected from Group 6 in Australia (Example 8). On the week when the students sent this message, they were to read the messages written in Japanese sent by their partners and ask some questions on festivals in their partners' country in English. Although this question was considered to be a friendly concern towards their partners' wellbeing, the messages posted on this date by this group did not contain any comments or questions on the messages sent by their partners in the previous week or anything related to festivals.

Example 8

Australian Students – Monthly topic: Festival

Are you okay as I hear there was a drastic Typhoon that hit the land. [sic] (Group 6)

The next request was found in one of the Japanese groups (Example 9). The Japanese students did not ask this question during the month of "Introduction" instead, they asked a few weeks later when they were discussing on "Sport and Leisure." Although their Australian partners did not introduce their names in Japanese formally, except for one student, two other Australian students mentioned their names in katakana when they signed off their messages in the previous topic thread, "Introduction."

Example 9

Japanese Students – Monthly topic: Sport and Leisure

あなたたちのなまえの読みかたを、おしえてください。(Group 6)

[Please tell me how to read your names.]

This case was not categorised as "Asking about a request already answered" as the Australian students did not mentioned their names in katakana formally, and not all the group members mentioned their names using Japanese scripts. Therefore, the Japanese students may have not paid attention when they were reading their names in katakana on the messages in the "introduction" thread, however the question might have cropped up at the time they were composing a question.

3.3.10 Unknown. The portions of questions and requests categorised as unknown were 10% for the Australian students and 25% for the Japanese students. Of the questions and requests placed under this category from the Australian data, the questions and requests written in their L1 had more counts, and the situation was vice versa for the Japanese students. However, any patterns in questions and requests in this category were not observed.

4. Discussion

In this section, the results presented in the previous section will be discussed in light of

4.1 Do learners refer back to the messages sent by their overseas partners in previous turns when they compose new message?

This research question can be answered by looking at the numbers and percentages of Rs that received replies. As the results showed, although replying to Rs was a part of their weekly tasks, roughly half of the Rs were not referred back to. The possible reason for this is that the students spent more time on producing their own messages than reading and responding to their partners. The students might have spent more time reading, especially when they received long L2 messages. However, within the limited amount of time the students had left after reading long messages, they still managed to post reasonably lengthy messages (about two or more sentences) for low proficient students. It is, thus, unlikely to think that they ran out of time of writing replies of any Rs due to the length of the previous messages. In the current study, unlike Lamy and Goodfellow's (1999) conversation-like messages, discussion topics were predetermined and questions were instructed to be included to ensure reflective dialogue-like exchanges, when participants failed to replied to Rs, the function of those messages in a discussion thread became monologue-like because they turned into a list of narratives.

4.2 Do learners reply more frequently when they receive messages in their native language or the target L2 language?

The results in the previous section have shown that the Australian students answered to Rs in English more than Rs in Japanese. The Japanese students, on the other hand, answered to the Rs written in Japanese than in English. Therefore, both Australian and Japanese students preferred to reply to Rs written in their first language. These outcomes, however, need to be interpreted carefully, since the Japanese students received and replied to more Rs in their L2, due to the large number of English Rs produced by the Australian students. In terms of replying to Rs using English or Japanese, if Rs were in English and the students were to answer in English, the Australian students replied to more than three quarter of them. However, if they were to reply to English Rs using Japanese, only less than a quarter of Rs were replied to. In the same condition, the Japanese students replied to 40% of Rs written in English, using both English and Japanese. Thus, the Australian students seemed to have a clear preference in choosing their L1 as the language for production, whereas the Japanese students did not show any indication of language preference. However, the identical response rates for English and Japanese Rs could be interpreted that it was not the language used for replies that influenced this result, but this was due to the type of Rs they received from their counterpart. From the result regarding multiple requests, the Australian students often posted multiple Rs in English, which could have challenged the Japanese students' writing skills. That is, within a limited amount of time, the Japanese students needed to reply to multiple Rs posted by the Australian students, in addition to their weekly writing tasks for introducing their culture to the overseas partners. Hence, they always lacked time to reply after reading excessively long L2 messages.

In relation to the Rs written in the L1, the Japanese students did not produce many Rs in their L1, compared to the large number of L1 Rs produced by the Australian students. Possible reasons for the lower production of Rs in Japanese were identified by comparing the original schedule for composing English or Japanese messages against the dates of actual messages posted in each language. Although the language in focus was predetermined

(see Table 4.), the students often took liberties with changing the designated language to the language of their choice. For instance, one turn of alternation from English Rs to Japanese Rs was observed, and ten turns of alternations from Japanese to English Rs were observed from the Australian side. The Australian students also alternated one turn of English answers to Japanese, and four turns of Japanese answers to English. The Japanese students alternated nine turns of Japanese Rs to English but did not alternate Rs from English to Japanese. The alternations of answers by the Japanese students were observed as well. One turn of alternation from English to Japanese was found, and 14 turns of Japanese to English alterations were found. Therefore, a total of 19 turns across the data designated for Japanese as the language in focus were changed to English for Rs, and 18 turns were changed from Japanese to English for answers. This seems to be one of the main reasons for the large gap between the quantities in Japanese and English production. The unplanned change of **TL** was also considered to be caused by unbalanced grouping of English and Japanese learners. The **L2** proficiency of the Japanese students was considerably higher than the Australian students as the level of their mistakes in their **L2** messages did not seem to interfere with the meaning of their messages. The mistakes found in some **L2** messages posted by the Australian students, on the other hand, were more severe and made their messages confusing (e.g., Examples 1 & 5). The Japanese students themselves might have felt that their **L2** skills were more advanced than the Australian counterparts, as in some messages, partial or full translation of Japanese to English were provided (see Appendix), although English to Japanese translation by the Australian students did not appear in the data. Even after a series of discussions and careful selection of year levels of participating students to match **L2** levels of the Australian and the Japanese students, the difference in the students' **L2** levels were still very obvious. In a tandem learning environment, especially if the language used for output is planned out to be almost equal, changing the language for output jeopardise the reciprocal nature of **L2** learning in tandem.

4.3 What are the possible causes for non-response to requests for information?

As the results indicated, "multiple requests in one turn" was the most common cause found in the Australian data, which covered 50% of the entire causes that ended threads. As for the Japanese students, although the percentage was not low (20%), this was not the most common cause for non-response. A possible explanation for the differences in percentages between the Australian students and the Japanese students can be elucidated by the result in 3.3.1. The numbers of Rs categorised under this section for the Australian students were 83 in English and 23 in Japanese, while the Japanese students were 9 in English and 16 in Japanese. Compared to the Australian students, the Japanese students did not produce Rs in their **L1** as many as the Australian students did, even if they had the opportunities to do so. This was evident in the result discussed in 3.2 that the **TL** of the requests posted by the Japanese students were often changed from Japanese to English. Although the Japanese students were not as inclined to post multiples Rs as the Australian students, they were more likely to produce them in their **L1**, consequently changing the **TL** to English could have decreased the Japanese students' likelihood of producing multiple Rs.

"Sudden cessation due to assigned topics" was the most common cause for non-response of requests posted by the Japanese students. The Japanese students happened to post at the end of monthly topic threads more often than the Australian students. Each monthly topic

was displayed on a separate page, therefore, unless the students went back to the web page for the previous monthly topic, they were not able to read the messages posted at the end of previous topic thread. Given the fact that 96% of Rs posted at the end of previous topic threads were not replied to, it suggests that the students did not read the messages posted on a previous thread and write the answers on a new thread. This analysis can be applied to another common cause of termination of threads, “posting under a wrong thread” by the Japanese students. The fact that the students posted under a wrong thread indicates that the students did not read their previous messages, and attempt to reply to their overseas partners’ Rs. Students’ behavioural patterns like these illustrate learners’ understanding and interpretation of CMC tasks in study that they regarded posting messages was more important than reading their overseas partners’ messages and reply to the Rs they posted.

“Message too long” was another commonly found messages posted by the Australian students. The Australian students posted extremely long messages in English, which did not contain many requests for information. The messages categorised here would be too lengthy and difficult for the Japanese students to read in their L2 within a limited amount of time, and because of the length, any Rs included in lengthy messages were difficult to be spotted.

“Syntactic error” was seen more across the data collected from the Australian students than the Japanese students. The apart from severe grammatical errors, the messages posted by the Australian students contained frequent spelling mistakes and kanji choice errors. Since the Australian students misspelled Japanese words, computers provided erroneous kanji and the Australian students did not revise errors before posting.

4.4 Limitations of research

This study was conducted under less than ideal conditions, as the researcher was not a teacher at either of the participating schools, which made it difficult to control many issues that occurred during the project. Being an outsider, the researcher encountered problems with cancellation of classes due to sudden change of school schedule, change of Australian teachers after the second term into the project (three terms in total), and assessing student L2 proficiency using different measurements (e.g., student grades). Sudden cancellation of classes affected data collection as well. For instance, the researcher planned to interview the Australian students at the end of the project, however, the project was cut short unexpectedly, partially due to a change to a teacher was new to the school. As she was not familiar with the school, she could not inform the researcher about schedule changes in advance. Limitations concerning the Japanese side were mainly caused by difficulties in knowing what was going on in the class and providing detailed instructions to the Japanese teachers, due to the fact that the researcher was based in Australia. Although the researcher and the Japanese teacher communicated through email on a weekly basis and occasional phone calls, the researcher had almost no control over the Japan side.

5. Implications and final remarks

This exploratory study aimed to analyse how asynchronous CMC is fitted for L2 learning for low proficient learners and the characteristics of their interactional behaviour. Although this study faced numerous challenges that caused some disruption of communication and non-response to requests for information, the study did serve to provide some evidence

that asynchronous **CMC** was a useful tool for **L2** learners with low proficiency. The results indicated that asynchronous **CMC** provided enough time to produce **L2** texts, however, this did not necessarily mean that the students had enough time to read **L2** texts carefully and reply to all the requests for information included in their messages. This is because even they managed to post messages, more than 50% of the Rs included in the messages were not replied to, resulting in monologue-like exchanges. Thus, if the teachers had intervened in student activities and monitored their output more closely, the interactions could have been utilised to their full potential for **L2** learning. One way of dealing with this problem is that the teachers could have acted as moderators of the discussion to make the goals of the task clearer if they had no time to check students' messages during the class. The outcome of this study yielded a few questions for further investigations. For instance, if multiple Rs in a long message were highlighted (e.g., underlined), would students reply to most of the requests for information? What are more effective tasks and discussion topics for promoting reflective dialogue-like exchanges between low proficient **L2** learners? How and in what ways should teachers intervene or guide to facilitate low proficient **L2** learners to engage in reflective dialogue-like conversations?

The current study showed that asynchronous **CMC** could facilitate interactions between learners with limited **L2** skills but it also revealed that unless students' messages are closely monitored, students fail to reply to each of the requests for information, which is considered as crucial for fostering reflective dialogue-like exchanges where negotiation of meaning can occur.

References

- Abrams, Z. I. (2003). The effect of synchronous and asynchronous **CMC** on oral performance in German. *The Modern Language Journal*, 87(2), 157-167.
- Appel, C. & Mullen, T. (2000). Pedagogical considerations for a web-based tandem language learning environment. *Computers & Education*, 34, 291-308.
- Belz, J. A., & Kinginger, C. (2002). Cross-linguistic development of address from using in telecollaborative language learning: Two case studies. *The Canadian Modern Language Review/La Revue canadienne des langues vivantes*, 59(2), 189-214.
- Blake, R. (2000). Computer mediated communication: A window on **L2** Spanish intralanguage. *Language Learning & Technology*, 4(1), 120-136.
- Brammerts, H. (1996). Language learning in tandem using the Internet. In M. Warschauer (Ed.) *Telecollaboration in Foreign Language Learning* (pp. 121-130). Hawai'i, University of Hawai'i.
- Donaldson, R. P., & Kötter, M. (1999). Language learning in cyberspace: Teleporting the classroom into the target culture. *CALICO Journal*, 16(4), 531-557.
- Fernández-García, M., & Arbelaiz, A. M. (2003). Learners' interactions: A comparison of oral and computer-assisted written conversations. *ReCALL*, 15(1), 113-136.
- Greenfield, R. (2003). Collaborative e-mail exchange for teaching secondary **ESL**: A case study in Hong Kong. *Language Learning & Technology*, 7(1), 46-70.
- Itakura, H. (2003). Changing cultural stereotypes through e-mail assisted foreign language learning. *System*, 32, 37-51.
- Jepson, K. (2005). Conversation – and negotiated interaction – in text and voice chat rooms. *Language Learning & Technology*, 9(3), 79-96.

- Kinginger, C., Gourvès-Hayward, A., & Simpson, V. (1999). A tele-collaborative course on French-American intercultural communication. *The French Review*, 72(5), 853–866.
- Kötter, M. (2003). Negotiation of meaning and codeswitching in online tandem. *Language Learning & Technology*, 7(2), 145–172.
- Lai, C. & Zhao, Y. (2006). Noticing and text-based chat. *Language Learning & Technology*, 10(3), 102–120.
- Lamy, M.-N., & Goodfellow, R. (1999). “Reflective conversation” in the virtual classroom. *Language Learning & Technology*, 2(2), 43–61.
- Leahy, C. (2004). Observations in the computer room: L2 output and learner behaviour. *ReCALL*, 16(1), 124–144.
- Lee, L. (1998). Going beyond classroom learning: Acquiring cultural knowledge via on-line newspapers and intercultural exchanges via on-line chartrooms. *CALICO Journal*, 16(2), 101–120.
- Lee, L. (2004). Learners’ perspectives on networked collaborative interaction with native speakers of Spanish in the US. *Language Learning & Technology*, 8(1), 83–100.
- Liaw, M.-L., & Johnson, R. J. (2001). E-mail writing as a cross-cultural learning experience. *System*, 29, 235–251.
- Long, M. H. (1983). Native/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4(2), 126–141.
- Mackey, A., & Philp, J. (1998). Conversational interaction and second language development: Recasts, responses and red herrings? *The Modern Language Journal*, 82(3), 338–356.
- Morris, F. (2005). Child-to-child interaction and corrective feedback in a computer mediated L2 class. *Language Learning & Technology*, 9(1), 29–45.
- O’Dowd, R. (2003). Understanding the “other side”: Intercultural learning in a Spanish-English e-mail exchange. *Language Learning & Technology*, 7(2), 118–144.
- Roskams, T. (1997) Collaborative interaction in networked writing classrooms: The student experience. In T. Orr (Ed.) *The Japan Conference on English for Specific Purposes* (pp. 49–59). Aizuwakamatsu City, Fukushima.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 129–158.
- Schmidt, R. (1993). Awareness and second language acquisition. *Annual Review of Applied Linguistics*, 13, 206–226.
- Schwiehorst, K. (2002). Evaluating tandem language learning in the MOO: Discourse repair strategies in a bilingual Internet project. *Computer Assisted Language Learning*, 15(2), 125–145.
- Smith, B. (2003). Computer-mediated negotiated interaction: An expanded model. *The Modern Language Journal*, 87(1), 38–57.
- Stockwell, G. (2003). Effects of topic threads on sustainability of email interactions between native speakers and nonnative speakers. *ReCALL*, 15(1), 37–50.
- Stockwell, G., & Levy, M. (2001). Sustainability of e-mail interactions between native speakers and non-native speakers. *Computer Assisted Language Learning*, 14(5), 419–442.
- Sullivan, N., & Pratt, E. (1996). A comparative study of two ESL writing environments: A computer-assisted classroom and a traditional oral classroom. *System*, 29(4), 491–501.

- Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. *The Canadian Modern Language Review/La Revue canadienne des langues vivantes*, 50(1), 158-164.
- Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.) *Principle and Practice in Applied Linguistics* (pp. 125-144). Oxford: Oxford University Press.
- Toyoda, E., & Harrison, R. (2002). Categorisation of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology*, 6(1), 82-99.
- Tudini, V. (2003). Using native speakers in chat. *Language Learning & Technology*, 7(3), 141-159.
- Tudini, V. (2010). *Online Second Language Acquisition: Conversation Analysis of Online Chat*. London: Continuum International Publishing Group.
- Warschauer, M. (1995). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal*, 13(2-3), 7-26.
- Weasenforth, D., Biesenbach-Lucas, S., & Meloni, C. (2002). Realizing constructivist objectives through collaborative technologies: Threaded discussions. *Language Learning & Technology*, 6(3), 58-86.
- Zeiss, E., & Isabelli-García, C. L. (2005). The role of asynchronous computer mediated communication on enhancing cultural awareness. *Computer Assisted Language Learning*, 18(3), 151-169.

Appendix

Partial translation included in a Japanese message posted by a Japanese group

Original message:

Mari, Chisa, Misa, Hana: 私たちは、普段(usually)休みの日には、よく買い物(shopping)や、映画を見ます(watching movie)。そしてKARAOKEに行きます。HanaのDream holidayは、Londonに友達と(with friends)行って、観光(sightseeing)をすることです。MariのDreamは、Italyに行って、情熱的な(passionate men)と運命的な出会い(a fateful encounter)をしたいです。MisaのDreamは、Americaに行って、素敵な男の人(cool men)と、恋をして、Dream lifeがしたいです。ChisaのDream holidayは、American Disney landに友達と行くことです。あなたたちの夢の旅行(dream trip)を教えてください。(Group 6, 25 May)

Translation:

[Mari, Chisa, Misa, Hana: When on holidays, we usually go shopping and watch movies. And go to karaoke. Hana's dream holiday is that she visits London with her friends for sightseeing. Mari's dream is that she goes to Italy and experience fateful encounters with passionate men. Misa's dream is that she goes to America and falls in love with cool men and have a dream life. Chisa's dream holiday is that she goes to the American Disneyland with her friends. Please let us know about your dream trips.]