THE POTENTIAL OF SYNCHRONOUS TEXT-BASED COMPUTER-MEDIATED COMMUNICATION FOR SECOND LANGUAGE ACQUISITION

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ABSTRACT

This study aims to examine the potential of synchronous text-based computer-mediated communication (SCMC) for second language acquisition and see if it can serve as another channel to offer learners opportunities for communicative practice. Fifty students from a commercial high school participated in the study, interacting with the teacher via the channels of SCMC and face-to-face communication (F2F) separately. Comparing the quantity and quality of the students' language output via SCMC and via F2F, the study revealed that students who interacted with their teacher via SCMC significantly produced more than via F2F. In addition, these students were aware of the sequence of conversation (e.g. initiating, maintaining, and closing a dialogue). Unfortunately, compared with F2F, the average number of the accurate utterances was lower. The study concludes that SCMC provides a less tense environment which motivates EFL learners to take risks in participating in communication. Next, the SCMC task offers an authentic setting for EFL learners to be aware of reciprocal communication which can refine their conversational strategies. At last, the SCMC task may result in improved linguistic ability, but it needs more investment in time.

Key words: computer-mediated communication, second language acquisition

INTRODUCTION

Competence of communication has been a main focus in second language acquisition for several decades. However, there still exists the difficulty that EFL learners are struggling to communicate via their interlanguage system (Gass & Selinker, 1994; Ng & Tang, 1997). Learners in Asia like Taiwan cannot avoid this impediment because most students are in a disadvantageous environment, such as teacher-center instruction, large class size and grammar-oriented examination, etc. Therefore, language teachers in Taiwan do not have many chances to develop learners' communicative competence so that learners cannot deal with real-time interaction with an interlocutor or others (Clennel, 1999). Nevertheless, language learning is considered valid only if the language can be activated within a community. In order to solve this problem, it is assumed that synchronous text-based computer-mediated communication (SCMC) can serve the same function as face-to-face interaction (F2F) which can offer learners extra channels to do communicative practicing.

Based on the hypothesis aforementioned, this study attempts to answer three research questions as follows:

1. What is the quality of EFL learners' language output via SCMC?
2. What is the quantity of EFL learners' language output via SCMC?
3. How do EFL learners employ the strategies via SCMC?

RATIONALE

Communicative competence coined by Dell Hymes refers to an overall ability to convey and interpret oncoming messages and to negotiate meanings interpersonally within specific contexts (Brown, 2000). Anchored in seeking for communicative competence, communicative language teaching (CLT) has become a pervasive schooling approach around the globe (Canale & Swain, 1980; Nunan, 1999). Based on Cummins' theory (1981a), younger learners in Taiwan are obligated by the MOE to learn English and focus on English fluency training. However, 4 to 7 years later, learners in Taiwan still have difficulty having fluent, effective communication in English. According to House & Kasper (1981), Ting-Toomey (1994), Porter & Sanivar (1994), Zhang (1995) and Linnell (2001), by nature Asians tend to have less interaction with others because of the socialized expectations influenced by Confucian heritage. That seems to hinder learners from learning communicative competence. Aside from that, the learning environment aforementioned also brings about indissoluble conventional restrictions. For example, the large class size (around 40 to 50 students) forces teachers to decrease the opportunities of teacher-student or student-student interaction and to adopt lecturing mainly. McKeachie (1980) emphasizes that lecturing has less effectiveness in communicative learning. Therefore, as suggested by many researchers (Anderson, 1993; Ellis, 1996; Rao, 2002; Sano et al., 1984; Yoon, 2004), EFL teachers need to take into account specific cultural appropriateness and local conditions, when creating their own CLT curricula.

With the swift development of the Internet, synchronous text-based computer-mediated communication (SCMC) appears in succession and is considered to serve the same function as face to face interaction (F2F). Compared with F2F, SCMC is more flexible in time and in space, less stressful and anxious, and lower in cost so that Roed (2003) states that learners are willing to use it. Curtis (2004) and Negretti (1999) declare that SCMC contains conversational patterns such as openings, closing, topic shifts, and cohesion, so it can replace F2F activities in classrooms. Maclntyre et al. (2001) and Hoven (2004) asserts that SCMC can break down barriers between learner-learners and teacher-learner and has a positive influence on L2 production. Therefore, researchers (Hoven, 2004; Leahy, 2004; Chun, 1994; Perkins & Newman, 1999) assert that SCMC is effective in L2 vocabulary retention and language acquisition. Morris (2005) even emphasizes that over 65% of the EFL learners' linguistic errors can be repaired during the process of SCMC. It sounds like SCMC has its potential in communicative language learning. However, De la Fuente (2003) claims that SCMC lacks the aural and visual paralinguistic cues and cannot benefit learners in oral production. Again, Patterson & Ritts (1996), Kraut et al (1998) and Nie & Erbring (2000) maintain SCMC would decrease traditional social interactions and learners would lose the ability to negotiate with others in person. In addition, a typical F2F interaction, supported by contextual cues (e.g. intonation and body language), elicits more interaction and utterances, but the written-style conversation like SCMC help the learner understand the meaning of the expressions and have more accurate outcomes (Tannen, 1984).

Nevertheless, SCMC can motivate learners to use a wide range of learning strategies in an interactive task (Oxford, 1990). For example, Devi (2002) asserts that SCMC enhances learners' concept of social learning, whereas Gardner (1999) believes that multisensory input presented by the computer or the Internet can help learners understand the information and memorize it. Harasim (1990) indicates that learners can reflect about themselves more using SCMC than engaging F2F conversations. Therefore, it seems that SCMC can trigger learners to employ as many language learning strategies (LLS) as they can. In fact, LLS, including memory, cognitive, compensative, and meta-cognitive, affective, and social strategies, is viewed as an essential tool for learners' active, self-directed involvement in developing communicative competence because a successful language learner must come from the one who knows how and when to employ LLS to aid the acquisition, storage, retrieval, and use of information (O'Malley & Chamot, 1990;

Oxford, 1990; Richards & Renandya, 2003). Unfortunately, the literature of LLS is wide-ranging and varying especially in the issues of definitions, terms and classification.

METHOD

Subjects

Fifty commercial high school students participated in this study (average age: 18.2). Twenty-five students randomly undertook the SCMC task, whereas the others received the F2F task. Commercial high school students in Taiwan specialize in business knowledge and computer literacy, but do not focus on English. They have only a two-hour English course a week. Thus the normal expectancy is that their English linguistic ability is limited.

Material

Considering the subjects' English proficiency, the teacher assigned three topics for the students to communicate. Nevertheless, all the students chose the topic "my family" to communicate with the teacher.

Procedure

First, the researcher used the independent samples T-Test to examine the initial English ability of the two groups. Next, the SCMC subjects accordingly had real-time conversation with their teacher for 12 minutes, whereas the F2F ones took turns conversing with their teacher for 3 minutes. The relative time depended on Langham's theory (2003) that the average speed of a spoken utterance was around four times as fast as typing. During the task, all the SCMC's and F2F's conversation was recorded either by the computer or by a recorder. Transcribing the data of F2F, the researcher did the comparison of the quantity and quality of language output between the two groups by using T-Test and percentage calculation. After the task, five of the F2F subjects were interviewed by the researcher. By contrast, the SCMC subjects were asked to fill out a questionnaire which made the subjects to think aloud about the quasi-strategy inventory for language learning and reflection on SCMC. The quasi-strategy inventory was adapted from Oxford's strategy inventory designed for ESL/EFL learners. For example, "I can retain information longer via SCMC".

Coding

The coding part was divided into the quality and quantity of the language output. In quality, it was sorted into successful communication and communicative breakdowns. The former, based on the conversational patterns, was generally classified into initiating (e.g. posing a question), maintaining (e.g. sticking with the same topic), and closing (e.g.

signaling leaving); the later was divided into misinterpretation and ill-form expressions, delayed responses or pause, and no responses (Drew, 1994). As to quantity, the overall and accurate outputs an individual produced were compared. The calculation was based on the number of words produced by an individual each turn. The accurate language output especially depends on three premises. First, the unidentified words and sounds, the subjects' native language, and nonverbal fillers like "uh," "err," "mmm" were not considered. Second, the repetitive words like "good, good, good" were counted as only one word "good." Third, a redundant word like "am" in the sentence "I am go to school early every day" would be deleted. In terms of the questionnaire, to reach a statistical significance, the answers "always or usually true" and "almost always true" were sorted into the category of the strategy-positive and "never or almost never true" and "usually not true" were sorted to the category of the strategy-negative.

RESULTS

The SCMC subjects had 525 times of interaction with their teacher and the F2F subjects had 350 times overall in one task (see Table 1). The number of successful communications via SCMC was more than that in F2F. The SCMC subjects were especially aware of the strategies of initiating and closing, while the F2F subjects were good at maintaining a topic. However, the number of communicative breakdowns via SCMC was far more than that in F2F. That is, 70% of the communication produced by the F2F subjects was successful, but only 52% produced by the SCMC participants was. Figure 1 provided an overall picture of the comparison between F2F and CMC groups.

<insert Table 1 here>

<insert Figure 1 here>

Tables 2 showed the initial proficiency, the overall language output, and the accurate language output of the two groups. The SCMC subjects had significant more language output than the F2F (p<.05). On the contrary, the accurate average of the accurate language output the SCMC produced was significantly lower than that F2F uttered (p<.05).

<insert Table 2 here>

In Table 3, it was found that except for memory and meta-cognitive strategy, the subjects used other strategies during the SCMC task especially the affective and social strategies (76%, 80%).

<insert Table 3 here>

CONCLUSION

This study attempts to examine the potential of synchronous text-based computer-mediated communication (SCMC) in second language acquisition. By comparing the quality and quantity of the language output between SCMC and F2F, several major findings to the research questions were addressed. Firstly, the SCMC learners are aware of the conversational sequence (i.e. initiating—maintaining—closing) in communication. In addition to being consistent with Curtis's (2004) and Negretti's (1999) findings, this study even finds that SCMC learners performed better in initiating and closing a topic than F2F. Secondly, like the previous studies (Roed, 2003; MacIntyre et al., 2001; Hoven, 2004), SCMC frees learners from psychological barriers (e.g. face threat) and elicits a flow of utterances, the result of which differs from Tannen's arguments (1984). Thirdly, this study argues that one shot of SCMC may repair native speakers' or advanced learners' errors (Morris, 2005; Hoven, 2004; Leahy, 2004; MacIntyre et al., 2001; Perkins & Newman, 1999; Chun, 1994), but for low achievement learners like the Taiwanese commercial high school students, it cannot. Fortunately, learners tend to employ more strategies via the SCMC which is believed to facilitate second language acquisition (O'Malley & Chamot, 1990; Oxford, 1990; Richards & Renandya, 2003).

With the findings aforementioned, this study argues that SCMC can reverse Taiwanese students' disadvantageous environments such as Taiwanese social dynamics and the distorted learning/teaching manners. First of all, it is common for Taiwanese students to infer the interlocutor's intention by the responses of understatements, pauses, and silences (House & Kasper, 1981; Ting-Toomey, 1994; Porter & Sanivar, 1994; Zhang, 1995; Linnell, 2001). Indeed, many F2F learners in F2F mumbled to themselves, ignoring the teacher's response. They said that they'd rather choose to be silent if they did not know what to say or they tried to recite whatever they had memorized while facing their teacher. By contrast, SCMC eliminated the learners' fear of authority and gave them more courage to communicate with their teacher. In addition, influenced by the "spoon-feeding" manner, learners in Taiwan increasingly loose the ability to employ the conversational strategies to cope with difficulties in communication. Normally all they do is choose or give one correct answer to a question. Most of the F2F students actually did not say anything in front of their teacher until their teacher started talking or they just utilized a formulaic

response to the teacher's inquiry. Conversation for them is just a task of reciting or responding to questions. However, via SCMC learners greeted their teacher and expressed their intention. SCMC made learners notice that they were participating in one-to-one communication so that they cared about their teacher's responses although the dialogues between the teacher and the students mostly still followed the formula of asking and answering. SCMC, the blending of technology and communication, shortens the distance of the student and the teacher and builds another channel of social interaction. Perhaps it is true that people who are immerged in technology will lose their ability to negotiate with people because they lessen traditional social interaction (Patterson & Ritts, 1996; Kraut et al., 1998; Nie & Erbring, 2000), but definitely it has positive potential if it is used appropriately. SCMC has helped learners in Taiwan overcome the psychological hindrance and start communicating with others in English. The more communication the learners participate in, the more chances of actively learning and internalizing the target language the learners will have.

For Asians like Taiwanese learners, it is almost impossible to have sufficient time in class to cultivate their communicative competence. This study suggests that SCMC serves as another channel of communication in addition to F2F that matches up with Asian cultural and local condition (Anderson, 1993; Ellis, 1996; Rao, 2002; Sano et al., 1984; Yoon, 2004) and positively helps students deal with the upcoming, unplanned information, negotiate for meaning, and construct new concepts in linguistic form (Levy, 1997; Chapelle, 2001). Although SCMC has its potential for helping learners' second language acquisition, this study, limited in tasks and time, indicates the need of further study; one future area might be to expand the scope to include teaching assistant-student interaction or student-student interaction via SCMC. Overall, it cannot be denied that the development of synchronous text-based computer-mediated communication offers a significant potential for development in the 21st century. As Colette (2001) said, "Once the system is built up, all the instructional advantages can be executed."

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TABLES AND FIGURES

Table 1. The teacher-student communication between SCMC and F2F

Group / Conversational skills (times)	SCMC		F2F	
Initiating	100		80	
Maintaining	145		160	
Closing	30		5	
Successful communication	**275**	**52%**	**245**	**70%**
Misinterpretation & ill expression	75		20	
Delayed response	50		5	
No response	125		70	
Communicative breakdown	**250**	**48%**	**95**	**27%**
Total	**525**	**100%**	**350**	**100%**
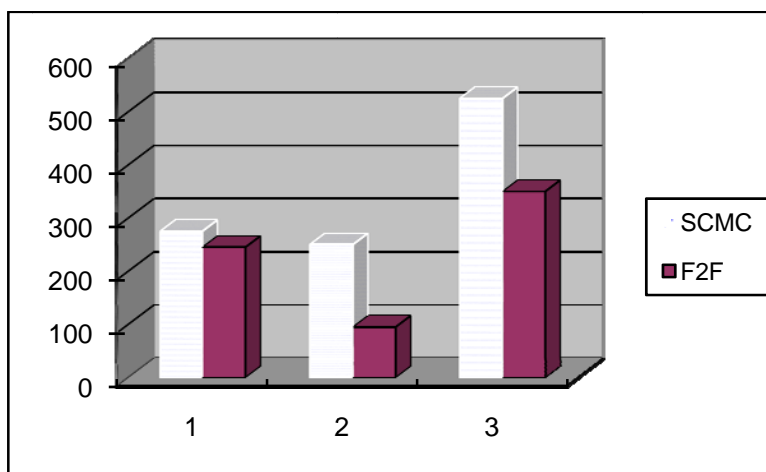
Figure 1. the comparison of language output between SCMC and F2F
Note: 1: successful communication, 2: communicative breakdowns; 3: overall language output

Table 2. The comparison of proficiency and language output between CMC and F2F

Group / Test	CMC		F2F		p-value Sig.
	M	SD	M	SD	
Language Proficiency	83.00	13.75	86.00	8.85	1.01
Overall language output (individual, word/turn)	6.03	2.23	5.21	1.90	0.00*
Accurate language output (individual, word/turn)	3.29	.77	4.85	2.08	.000*

Table 3. the comparison of proficiency and language output between SCMC and F2F

Strategies Attitude	Mem	Cogn	Compen	Meta-cogn	Affect	Social
Positiveness	10 (40%)	13 (52%)	14 (56%)	5 (20%)	19 (76%)	20 (80%)
Negativeness	15 (60%)	12 (48%)	11 (44%)	20 (80%)	6 (24%)	5 (20%)