The effect of task types on foreign language learners' social presence in synchronous computer mediated communication (SCMC)

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This study aims to clarify the relationship between task types and foreign language learners' social presence (SP) in text-based SCMC learning modes. The participants in this study comprised 38 high-intermediate level English as a foreign language (EFL) learners from different disciplines of a university in Taiwan. They were divided into two groups (text-chat without webcam, text-chat with webcam). The task types selected for this study included jigsaw tasks (JTs) and decision-making tasks (DMTs). The empirical data for this study were collected from students' SP surveys, interview transcripts, learning journals, and online discussion records. The findings of this study suggest that the task types could affect EFL learners' SP development in SCMC. The DMTs in this study enhanced learners' SP development better. In addition, the learners' image provided by the webcam seemed to enhance learners' SP perception. The learners perceived the highest SP in the DMT-webcam condition, and the lowest SP in the JT-non-webcam condition. However, the learners did not recognize the advantage of the webcam image. Therefore, it is highly recommended that learners be trained to adapt to learning environments in order to enhance SP before the start of learning.

Keywords: social presence, jigsaw task, decision-making task, computer-mediated communication

1. Introduction

Social presence (SP), defined by Garrison (2011, p. 23) as "the ability of participants to identify with the group, communicate purposefully in a trusting environment, **103**

and develop personal and affective relationships through projecting their individual personalities", is highly related to learning media. Tu and McIsaac (2002) suggested four dimensions (social context, online communication, interactivity, and privacy) and a number of variables that should be considered when investigating CMC (computer mediated communication) learning from a SP perspective. SP can be observed through interactivity in CMC (Gunawardena, 1995). Interactivity includes collaborative activities and communication styles used by CMC users (Tu, 2001). Particular task types can have positive effects on one's feeling of interactivity (Tu & McIsaac, 2002).

Ko (2012) also found that task design seemed to be able to influence learners' SP. Most participants in her study favored interaction in the SCMC using webcam and headset mode because they could see the partner's facial expressions. Although nonverbal cues were also available in the face-to-face (f2f) setting, the participants did not feel "real" in that environment. She therefore assumed that the participants' feeling of being "real" is possibly related to the task design in which they were supposed to meet their partner for the first time in a chat forum rather than f2f. According to the task situations, the webcam-plus-headset mode seemed to provide a more "*authentic*" environment compared to the f2f environment which could explain why the learners felt more real.

Some researchers pointed out a correlation between learning tasks and learner authenticity quality. Lee (1995) mentioned learners' positive perceptions of learning tasks as one of the conditions for learner authenticity occurrence. For Taylor (1994), learners (e.g. the learners in Ko's study) can impose their own authenticity on things happening in a language classroom when being presented with the right kind of tasks, which is beneficial to SP development. Hence, this study examined whether task types influence EFL learners' SP in SCMC and if so, how.

2. Literature Review

2.1 Social Presence (SP)

Yamada and Kitamura (2011) evaluated relative levels of SP from three distinct perspectives: interaction type among learners, the learners' utterances quality, and media type (p.327). The first viewpoint links SP to interaction quality among learners. Gunawardena and Zittle (1997) studied SP effectiveness as a predictor of learner satisfaction in a text-based CMC conference. They suggested that SP is a strong predictor of satisfaction, with the online learning process and its perception being influenced by interaction quality. Richardson and Swan (2003) also believed that learners' perceptions of SP overall contributed to predict perceived learning overall.

Another perspective, supported by Garrison, Anderson, and Archer (2000), emphasized the expressive feature of SP. For them, SP is a key concept in determining interaction levels and learning effectiveness in an online environment. Learners' abilities to express themselves, communicate openly and connect with others are three categories of SP indicators. With Rourke, they developed a template (Rourke, Garrison, Anderson, & Archer, 2007) for assessment of SP, which included affective, interactive and cohesive categories.

The last perspective emerged from the study of Short, Williams, and Christie (1976) who regarded SP as an attribute of a communication medium. They speculated that communication media differ in their SP degree, which is determined by its "capacity to transmit
104 information about facial expression, direction of looking, posture, dress and nonverbal cues"

(p.65). For them, communicators perceive some communication media as having a higher SP degree (e.g., video) compared to others. The following section provides further insights about how media can influence SP development.

2.1.1 SP and media. SP is especially important in text-based settings since nonverbal cues that help establish and maintain SP through recognition are not available (Garrison et al., 2000:100). The loss of visual cues can result in unemotional communication, as these cues generally carry relational information. However, despite this lack of nonverbal cues, text-based CMC users develop an ability to express emotion in a written form (Gunawardena, 1995). Paralanguage or emoticons are used to substitute for missing nonverbal cues (Gunawardena & Zittle, 1997; Tu, 2001), give affective information and show informality in text-based communication. In addition, learners are more conscious of whether they transfer meaning accurately during communication in this mode (Yamada & Kitamura, 2011).

In addition to paralanguage and emoticons use, visual cues (i.e. facial expressions, gestures, clothing and physical appearance) can enhance interaction. With visual cues, video-based communication enables interlocutors to feel other's presence to a much greater degree compared to text-based communication (Yamada & Kitamura, 2011). Yamada (2009) found that partners' image provided in the videoconferencing setting led to a more active interaction, which enhanced the perceived ease of communication in the target language. Learners can understand their partner's situation through images, provided by the webcam in this study and therefore represented as "webcam image", and modify grammatical errors in their utterances in response to their partners' facial expression.

For Develotte, Guichon, and Vincent (2010), a webcam image happens simultaneously and interactively through some other semiotic ways on the restricted space of a computer screen. Being ephemeral, it provides limited informational content due to a close-up of the interlocutor's contextual information such as clothes, body language etc.. and sometimes creates small gaps in oral production. However, it can allow the relationship between interlocutors to be individualized (Wang, 2004) and deepen oral exchanges (O'Dowd, 2006).

Voice in CMC also has its advantage in that it can improve interaction (Yamada & Kitamura, 2011). It can not only enable learners to speak naturally, as in f2f communication, but it can also ease interlocutors' comprehension of the meaning and therefore promote active communication in the target language. In addition, voice communication promotes self-correction. Nevertheless, the learners in Yamada and Kitamura's study felt burdened to communicate in voice-based CMC, as nonverbal devices that can insure the transfer of their desired meaning (Garrison & Anderson, 2003) were not available.

2.1.2 SP and interaction. Interaction can influence SP development too. It refers to a meaningful communication in the second language in which interlocutors share information (Yamada & Akahori, 2009) and provides the context in which learners obtain comprehensible input and produce comprehensible output. Although CMC gives learners opportunities to work socially, it does not guarantee interactivity. Learners need to develop the interpersonal relationships among group members and a sense of belonging among them to ensure collaborative interaction (Lee, 2009: 220).

The possibilities to receive feedback from others can contribute to one's degree of salience in interaction (Tu, 2001). Immediate responses also enhance interactivity and increase SP. Tu and McIsaac (2002) suggested that timely response to CMC messages, use of stylistic communication styles (e.g., attentive, relaxed, friendly, open, personal), casual **105**

conversations, appropriate message length, particular task types (planning, creativity, intellectual, decision-making, and social tasks), and suitable group sizes can have positive effects on one's feeling of interactivity.

For Kehrwald (2010), SP is in a two-part process. Firstly, it is established as a feeling of "being there with others" in online environments (p.44). Secondly, it is continuingly demonstrated. Kehrwald pointed out three features of SP: demonstrative, dynamic and cumulative. SP is demonstrative because learners present themselves in the environment by observable demonstration of their presence. Dynamic SP refers to the perception of others that fluctuates with time based on the quantity, frequency, and quality of interaction. SP can be cumulated based on a sense of history developing in the relationship among people. In summary, SP can be established through the perception of mutual presence via ongoing interaction in online-mediated environments.

Aragon (2003) assigned the responsibility for establishing and maintaining SP in an online course to three stakeholders: course designers, instructors and participants. Course designers could structure collaborative learning activities to help learners develop SP. As most English instructors in Taiwan also design their own curriculum, the following section discusses the relationship between interaction and task design in CMC.

2.1 Task-based interaction in CMC

A task is defined as "an activity which requires learners to use language, with emphasis on meaning, to attain an objective" (Bygate, Skehan, & Swain, 2001:11). Tasks are developed because of teachers' concern for meaning-based activities and researchers' investigation of interaction patterns (Skehan, 1996). For Meskill (1999), well-designed and organized tasks are important, as they provide opportunities for learners to interact in the target language, allowing the acquisition of second language to occur. Skehan (2003) discussed the effect of tasks on learning from psycholinguistic, social interactive, cognitive and structure-focused perspectives.

Researchers adopting a psycholinguistic perspective (e.g., Long, 1990) relate tasks to interaction, particularly interaction for negotiations of the meaning, which concerns the way in which learners encounter communication difficulties while completing tasks and the ways in which they overcome those difficulties (Skehan, 2003). Social interactive researchers looked into mutual interaction during task completion as some tasks may offer considerable learning opportunities at multiple interaction levels, although they may be more challenging for learners due to more attention requirement (Nakahama, Tyler & Van Lier, 2001). The above-discussed concerns tend to suggest that various task types may bring different difficulties and learning opportunities, which influence learners' interaction levels and subsequently their SP development.

The learning media is one other factor that influences language learning and learners' interaction in CMC. Some features of CMC make it a suitable environment for carrying out task-based instruction. Although Hampel (2006) pointed out that the task-based instruction shares some criteria with CMC (e.g. meaning focus, positive effect on participants, and learners' mutual collaboration), she reminded that f2f tasks cannot be easily transposed to a virtual environment. One of the reasons is a greater need to focus on socio-affective aspects of learning when communication occurs solely or mainly online or through asynchronous tools (Hampel, 2010). This concern suggests that learning media affect learners' interaction levels as well.

For Peterson (2010), tasks in CMC provide a means to promote beneficial interaction types hypothesized in psycholinguistic (e.g., noticing, focus on form and negotiation) and sociocultural (e.g., scaffolding and inter-subjectivity) SLA research. Some studies (e.g., Blake, 2000; Smith, 2003a) have demonstrated collaborative interaction among learners and high-level focus on tasks in CMC. However, the interaction level generated by different task types in CMC may be different as some researchers (e.g., Gass & Varonis, 1985) have identified "task type" as one of the variables affecting negotiations of the meaning, which facilitates language acquisition. Among all task types, the most investigated task types in recent CMC studies included jigsaw tasks (JTs) and decision-making tasks (DMTs).

In some CMC studies, JTs were found to be more beneficial in eliciting learners' negotiation of the meaning, which possibly increases numbers of interaction. For example, the study of Pica, Kanagy and Falodun (1993) showed that JTs elicited more negotiation compared to other task types. Blake (2000) examined interaction among 50 intermediate level Spanish learners in chat-based CMC over two semesters and also found that JTs elicited the greatest number of negotiations. Park's study (2006) yielded similar results. His 40 Korean college students had a greater amount of negotiations of the meaning in the JTs than in the DMTs on the same topic.

In other studies, DMTs elicited greater numbers of negotiations compared to other task types. Smith (2003b) examined task-based interaction among 18 low-intermediate level ESL learners during five 30-minute sessions and discovered that DMTs elicited more negotiation instances compared to the JTs. By using the same task types, Smith (2003a) further examined interaction among 28 intermediate level EFL learners in chat-based CMC and obtained the same results.

The studies discussed above suggest that different task types may result in various quantity and quality of negotiations of the meaning. However, the task type that elicits greater number of negotiations of meaning may not have the same positive result on quality of negotiations of the meaning. For example, the 17 Korean students in Jeong's (2008) study, completing three tasks (jigsaw, decision-making, open-ended) in a text-based environment, produced the greatest number of negotiations of the meaning in the JT. However, they actually had a more dynamic discussion and felt more interested in the DMT, which yielded better quality of negotiations of the meaning that could be more beneficial to SP development.

Some studies (So & Brush, 2008; Yildiz, 2009) have proved a positive relationship between course structure/activities and learners' SP perception. However, the effect of task types on FL learners' interaction and SP development has not been widely explored yet. Task types could affect learners' interaction quality (Levi, 2012; Smith, 2003a) as well as quantity, which can increase or decrease learners' interaction level while completing tasks. The level of SP, directly associated with interaction level (Garrison, & Cleveland-Innes, 2005), is the key to task completion (Müller-Hartmann, & Schocker-v. Ditfurth, 2010). Based on the above argument, this study aimed to examine the effect of task types on learners' SP development. Specifically, it investigated whether task types affect EFL learners' SP in SCMC contexts as well as how learners develop SP in different SCMC learning conditions.

3. Research Methodology

3.1 Participants

The participants were 38 high-level EFL learners from diverse disciplines at a university in Taiwan. They were first-year students enrolled in one compulsory freshman General English class (three hours/week) during an academic year. Before the study, they have been learning English for more than six years. Most of them have never taken any online courses. Although they had good computer skills, they were poor at English typing. They sometimes used social platforms, such as Skype and Google+, to chat with their surroundings, but rarely to learn English. They also hardly ever chatted online with a webcam.

The participants were randomly divided into two groups (text-chat without webcam, text-chat with webcam) for the reason that the provision of image by the webcam could influence learners' online interaction level (Yamada, 2009). Some SP researchers (e.g. Tu, & McIsaac, 2002; Ko, 2012) also have suggested that learners' familiarity is a key factor that positively influences learners' SP perception. Therefore, time was allotted for the learners to become familiar with each other before the study.

3.2 Technology system and tools

The technology system selected for this study was Google+, as most students had been familiar with it before the study. Before each experimental session, an identical webcam was distributed to each of the participants in the group using webcam, since the computer laboratory did not have embedded cameras.

3.3 Procedure and task types

The study was conducted over one academic semester. It consisted of three JTs and three DMTs, all of which were carried out through 40-minute text chat. The two task types were selected because some researchers (e.g. Pica, Kanagy & Falodun, 1993) suggested that tasks requiring information exchange (e.g., JTs) would produce higher negotiation levels compared to tasks where such exchange is optional (e.g., DMTs). Although both JTs and DMTs could be beneficial to language learners' negotiations of the meaning (Pellettieri, 2000), different negotiation levels may cause different interaction quality and therefore affect language learners' social presence (Gunawardena & Zittle, 1997).

In each JT, all 38 learners had to complete two rounds of discussions about one article consisting of three parts. In the first round of discussions, learners were divided into groups of three (A, B, C). Students in each group had to discuss the questions regarding their assigned part of the article. In the second round of discussions, the participants were assigned to a new group comprising three students from the three groups in the first round of discussions. Each of the three students in one group had to present their assigned part of the reading to their new group members.

In each DMT, the learners were divided into groups of 3–4 and together with their group members, they had to make decisions about a topic provided by the instructor. For example, on one of the DM tasks, the students had to plan a three-day trip to one foreign city. Each group had a budget of 250,000 Taiwanese dollars to cover all the expenses of the **108** trip. With their group members, they had to decide all the details of their trip, including

the city and places they would visit, hotels in which they would stay, restaurants they would go to, modes of transportation they would take, and the like.

3.4 Data collection and analysis

This is a mixed method study. Both qualitative and quantitative data were collected. The qualitative data were collected from the interview transcripts, all the students' learning journal (LJ) written after each task activity, and their online discussion records. Fourteen participants (7 from the non-webcam group, 7 from the webcam group) were recruited to participate in a thirty-minute interview after the study. After the interview transcription, the interview and journal data were translated from Chinese into English and then analyzed thematically to search for and identify common threads in the data (Guest, 2012:17). To establish meaningful patterns for the final report, the data were familiarized first in order to generate initial codes. Next, themes were searched based on initial codes, reviewed and then named.

The online discussion records were analyzed using content analyses defined as:

> The systematic and replicable examination of symbols of communication, which have been assigned numeric values according to valid measurement rules using statistical methods, in order to describe communication, draw inferences about its meaning, or infer from the communication to its context, both of production and consumption (Riff, Lacy, & Fico, 2014:22).

The records were coded and analyzed according to Rourke et al.'s Social Presence Template (2007) that identifies affective, interactive and cohesive categories. For them, affect can be expressed in a number of ways including the use of emoticons, humor, and self-disclosure. Interaction could be observed from asking questions, continuing a thread, quoting others' messages, referring to others' messages, complimenting and expressing agreement. The cohesive category is defined by indicators such as phatics and salutations, vocatives, and addressing the group as "we,", "our," or "us."

The quantitative data were collected from 38 participants who completed SP survey after the study. The four-section survey was adopted from Richardson and Swan's SP survey (2003), which investigated SP in relation to learners' perceived learning and satisfaction in one online learning experience. Richardson and Swan's survey was chosen because it examined learners' perceived learning from course activities rather than from the course itself and therefore was considered suitable for this study.

The first section of the survey asked questions about learners' past online learning experiences and perceived computer literacy. All items in Section 2 and 3 were measured on a 6-point response scale (1 = strongly agree to 6 = strongly disagree). The learners were required to evaluate their level of agreement or disagreement with each item. Section 2 of the survey consisted of ten items taken from Section 3 of Richardson and Swan's survey related to social presence for different types of course activities. Section 3 of the survey also comprised the same ten items from the original survey. However, the language was slightly modified in order to examine learners' social presence for different types of course activities in a learning environment that incorporated webcam. The Cronbach's Alphas for Sections 2 and 3 of the survey were 0.9, and 0.95, which suggest very good internal consistency among the questions.

After the survey completion, the learners' responses were keyed in the computer and **109**

analyzed using one-way and two-way analysis of variance (ANOVA). A one-way ANOVA was used to assess task type effects on the learners' SP perception. A two-way ANOVA was used to examine the learners' SP in different SCMC learning conditions.

4. Findings

4.1 Effect of task types on the learners' SP perception in SCMC

The findings suggested that task types could affect EFL learners' SP development in SCMC. The SP survey results showed that the learners' perceived SP was higher for decision-making tasks than for jigsaw tasks. The means and standard deviation are presented in Table 1. There was a significant effect for tasks as the value for Wilks' Lambda is .846, $F(1.38) = 6.919$, $p = .012$ (<.05), partial eta squared = .154. Compared to JTs, learners felt more comfortable interacting with others (mean = 2.71, 2.32 respectively, p = .021) while doing DMTs and had a more distinct impression of their partners (mean = 3.26, 2.65 respectively, p = .016).

Table 1. Learners' perceived SP in two tasks

Task	webcam		
	M	**SD**	*95%CI*
JT	2.44	.82	[2.178, 2.709]
DMT	1.94	.877	[1.652, 2.22]

The results of the discussion record analysis support the above findings (Table 2). The record for the DMT contained more instances of social presence compared to the one for the JT (n = 365, 214 respectively). During the DMT completion, the learners were more willing to express their emotions and disclose personal information in terms of affective interaction. Regarding social interaction, they made more efforts to build and sustain relationships by asking questions and expressing their compliments, appreciation, and agreements. They also built and sustained a sense of group commitment by using more pronouns such as *we*, *our*, and *us*.

The findings based on the analyses of the interview transcripts and all the students' learning journal (LJ) were consistent with the quantitative findings. Twelve of the 14 interviewees (represented as S1–S14) reported that the DMTs were more beneficial to SP development (Table 3). Table 3 displays each interviewee's opinions about the task he/she considered beneficial to SP development.

Factors enhancing SP development. Table 4 lists the reasons why some interviewees perceived DMTs to be better at enhancing SP. Some of their detailed statements were additionally presented to support the discussions of the findings. Their SP development corresponded to Kehrwald's (2008, 2010) demonstrative and dynamic features.

Table 2. The 38 learners' SP indicators from the online discussion records in different task conditions

SP indicators	Task condition	
	JT	DMT
Affective		
Expression of emotions	12	31
Use of humor	4	1
Self-disclosure	13	25
Total 1	29	57
Percentage	13.55%	15.62%
Interactive		
Referring explicitly to others' messages	2	0
Asking questions	37	68
Complimenting, expressing appreciation	6	16
Expressing agreement	48	53
Total 2	93	137
Percentage	43.46%	37.53%
Cohesive		
Vocatives	17	15
Addresses or refers to the group using inclusive pronouns	29	101
Phatics, salutations	46	55
Total 3	92	171
Percentage	42.99%	46.85%
Total (1+2+3)	214	365

Table 3. Task type considered by 14 interviewees to be beneficial to SP development

Student(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
JT						v								
DMT		v	v	v			v	v	v	v	v	v	v	v
N/A	v				v									

Table 4. Reasons given by 14 interviewees why DMTs were more beneficial to SP

Student(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
More discussion/ interaction	v	v	v				v		v	v	v	v		
More personal opinions												v		
Know partners' thoughts			v	v		v	v		v	v			v	v
Free expression		v				v		v	v					
More interesting						v								v

In this study, the learners demonstrated their presence by participating in discussion as well as by observing each other's presence in both task types. However, their peers in the JT discussion did not always observe their demonstrative presence.

> S6: In the second part of the discussion, we only typed out our assigned articles.

> S7: In JTs, we might have some interaction during the first-round of discussions, but when we were asked to discuss our assigned part, we sometimes just presented our own part without discussing it.

On the other hand, the learners had to participate in a discussion in order to reach agreements on the decisions made in the DMT situations; therefore, other group members perceived their presence more easily. Some students even expressed that DMTs enhanced their communication skills because they had to negotiate with their partners to make decisions.

Regarding the dynamics of SP, the findings of the study revealed that the learners' SP was more dynamic in the DMT situations.

In terms of the quantity, the students interacted more while doing DMTs. In addition to the classroom discussion, they sometimes arranged time to have f2f meetings after class. They did not make such efforts while completing the JTs.

> S3: We had more discussions in decision-making.

> S2: It was impossible to finish the project in class, so we had extra discussions. Therefore, I got to know others better.

In terms of quality, the discussion contents in DMTs were less restricted, which allowed the learners to express their ideas more freely than in JTs where their discussion was based on the readings. Therefore, they gave more personal opinions and knew others' thoughts better. The interaction became more interesting.

> S3: In reading discussions, we only typed answers and others checked them. It was not like a discussion.

> S8: But in making decisions, everyone has his own thoughts. It was more like a discussion.

> S9: It was freer in making-decision tasks. We could express our thoughts and would not be limited to discuss the textbook.

> S6: Decision-making was more interesting.

Factors hampering SP development. The findings from all the 38 students' learning journal (represented as LJ (S1) – LJ (S38)) revealed that the learners encountered more difficulties in performing JTs compared to DMTs. Those encountered difficulties seemed to hamper the learners' SP development. However, in DMTs, some students found it difficult to make decisions because of group members' diverse opinions.

> LJ (S17): We needed to do the project with others, so I think it is a difficult thing.

The students expressed more learning, discussion, expression, teamwork, and typing difficulties while completing the JTs. First, some students experienced learning difficulties that they were unable to overcome due to unfamiliarity with the learning contents and **112** uncertainty about whether they can understand them.

LJ (S25): We don't know the meaning of some sentences; and for others, we discuss their meanings but maybe what we discuss are not the true meanings that the author wanted to express.

Since some of them did not internalize their learning, they participated in discussion by copying sentences from the texts rather than producing what they have learnt. Even if they internalized the learning contents, their discussion would focus on the learning contents that did not allow them to express their personal opinions.

LJ (S18): We have to discuss questions and their answers could be found in the textbook. We were required to better not copy the sentences, but to answer the questions in our tone. It's difficult for me, as I am not sure what I should do.

LJ(S13): I don't know how to discuss the text. Should I ask other questions? I seem to describe my thought only instead of engaging in a discussion with my partners.

Additionally, some participants complained about teamwork discussions. They seemed to lack group discussion skills and could not support each other's learning.

LJ (S27): I find that sometimes my answers are different from theirs. I cannot express my thoughts in time and persuade others to change their answers. Therefore, we don't reach agreements on some questions.

Many participants had difficulties with expression due to their limited language knowledge.

LJ (S21): My English is not good enough to discuss with others fluently.

LJ (S22): Sometimes I cannot find proper vocabulary and phrases to complete my sentences.

LJ(S1): … I almost understand the three articles today, but it is difficult to present my answers in English.

Finally, learners' slow typing speed due to their unfamiliarity with English keyboards also restricted them from expressing their opinion, which led to ineffective discussion.

LJ (S23): When I want to type my words, my classmates have already done it! I am too slow in typing.

LJ (S24): I realized that the discussion would be delayed because we waited for someone to type and didn't say anything. It's a waste of time.

In sum, conducting the DMTs in this study generated conditions that would support the SP development.

S7: The tour discussion (one of the DMTs) helped us to know each other better.

S7: Decision-making was more effective in facilitating interactions with others.

4.2 The learners' SP development in different learning conditions

In terms of the students' learning in different learning situations, the survey data (Table 5) showed that the learners' SP was higher while conducting the DMTs in SCMC using **113**

the webcam context compared to the other three learning conditions. A mixed between-within subjects analysis of variance was conducted to assess the effect of the task types on the learners' satisfaction score in the two learning environments. Interaction between task types and the learning environments was significant. Wilk's Lambda = .872, F (1, 38) = 5.728, p = .022 (<.05), partial eta squared = .128. There was a substantial main effect for tasks as well. Wilks' Lambda = .880, $F(1,38)$ = 5.293, p = .027 (<.05), partial eta squared = .120, with both groups showing more satisfaction scores in the DMT task situation. However, the main effect comparing the two groups was not significant, F (1,38) = .362 , p = .551 , partial eta squared = .009 , suggesting the webcam use did not make difference between the two task types.

Table 5. Learners' perceived SP in different learning conditions

	webcam			Non-webcam		
Task	**M**	**SD**	**95%CI**	**M**	**SD**	**95%CI**
JT	2.08	.806	[1.706, 2.447]	2.7	.873	[2.315, 3.075]
DMT	1.73	1.15	[1.262, 2.198]	2.10	.913	[1.638, 2.552]

Table 6. The 38 learners' SP indicators from online discussion records in different learning conditions

	JT		DMT	
Task	**Webcam**	**Non-webcam**	**Webcam**	**Non-webcam**
Affective				
Expression of emotions	7	5	16	15
Use of humor	1	3	0	1
Self-disclosure	9	4	16	9
Total 1	17	12	32	25
Percentage	12.89%	14.64%	15.84%	15.34%
Interactive				
Referring explicitly to others' messages	2	0	0	0
Asking questions	22	15	46	22
Complimenting, expressing appreciation	3	3	9	7
Expressing agreement	37	11	15	38
Total 2	64	29	70	67
Percentage	48.48%	35.37%	34.65%	41.4%
Cohesive				
Vocatives	15	2	7	8
Addresses or refers to the group using				
inclusive pronouns	10	19	58	43
Phatics, salutations	26	20	35	20
Total 3	51	41	100	71
Percentage	38.64%	50%	49.5%	43.56%
Total (1+2+3)	132	82	202	163

The learners' online discussion records yielded similar findings (Table 6). The numbers of SP instances were the highest in the DMT–webcam condition (n = 202). The fact that the numbers of affective, interactive and cohesive instances were the lowest in the JT-non-webcam condition shows that this condition does not favor the learners' SP development.

However, when being asked explicitly about webcam and emoticon use, the learners slightly disagreed that the webcam tool enhanced learning quality enhancement while conducting the JTs (mean = 3.65, 2.59 respectively, p = .005).

Most interviewees also expressed their dislike of the tool. Eleven of them considered the webcam useless for SP development (Table 7).

Table 7. 14 Interviewees' opinions about the helpfulness of the webcam to SP development

Opinion/Student(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Positive											v		v	v
Negative	v	v	v	v	v	v	v	v	v	v		v		

Among them, only 3 participants had positive opinions about webcam use. Participant 14 pointed out that the webcam allowed her to feel more "real" in this learning experience.

S14: If I only used the computer, I would feel like talking to it.

T: OK, so via the webcam you feel more…

S14: more real.

Participant 11 stated that the webcam helped her connect better with other group members.

T: Do you think the group connection becomes stronger with webcam use?

S11: It was stronger…

Participant 13 observed her partners' learning situation through the webcam, which made her feel relieved while her partners kept silent during discussion.

S13: I was more relieved. If he didn't type but stared at the screen, then I assumed he might be still thinking…

The learning journal data showed that some other students also held positive views of webcam use. For them, the webcam improved their discussion and interaction since the availability of the interlocutor's image could reveal their partners' emotions and reactions that enabled them to perceive their presence.

LJ (S26): Seeing my partner could help me get involved in discussion.

LJ (S22): It (the webcam) was interesting and helpful for discussing and learning because we can see our partners' face and know their emotion and reaction.

LJ (S27): It (the webcam) can enable me to see them and know what they are doing. I communicate with my partners, not the computer.

Other students did not consider using the webcam as necessary because they did not pay

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attention to it due to their focus on discussion, which seemed to require a greater cognitive load when they performed the JTs rather than the DMTs.

> S8: We were busy solving hardware problems and typing answers. I had no time for the camera.

> LJ (S19): I think there is no difference whether we see partners or not because we type words and discuss the questions.

Some of them stated that the availability of the webcam image hindered their concentration in discussion.

> S6: If there was no webcam, I would be more focused and kept typing my words even if there was no response.

> LJ (S13): I think it (the webcam) is unnecessary and makes it even more difficult for me to concentrate.

Moreover, sometimes their partners did not look at the webcam because they focused on typing and discussion, which decreased their interest in using it.

> S4: My group members did not aim the camera at themselves, so I couldn't see them.

Some students also felt embarrassed to use the webcam and avoided using it during discussion.

> S6: It would be helpful if most of us used it (webcam). However, we were too shy.

> LJ (S3): I feel very embarrassed about using the webcam.

> LJ (S29): Facing unfamiliar people through it (the webcam) embarrasses me a little.

Some students specifically pointed out that being visible online made them feel insecure and uncomfortable.

> LJ (S24): I feel nervous when facing others through the webcam. I feel more comfortable when I cannot see others.

6. Discussion

The findings suggest that the task types could affect EFL learners' SP development in SCMC. Learners perceive a higher degree of SP while conducting the DMTs. Although they considered both task types as interesting, the learners' SP was more demonstrative and dynamic during the DMT completion. This result is consistent with Jeong's finding (2008) that the students lead more dynamic discussion in the DMTs. They also showed more affective, interactive and cohesive behaviors while doing this task type. Among those behaviors, they particularly used more inclusive pronouns (e.g., we, our, us) to refer to the group that was suggested to be indicators of connoting closeness and association in immediacy behaviors (Rourke, et al., 2007). Moreover, they expressed personal opinions that enabled them to know their partners better and feel more "real", indicating that their interaction quality was better (Gunawardena & Zittle, 1997; Garrison et al., 2000) in the DMT discussion.

116   On the other hand, they discussed questions from the textbook while conducting the

JTs. Since some students did not comprehend the articles or did not want to produce sentences with errors, they only repeated the authors' words without providing personal opinions; therefore, their partners could not assess their characters/personalities. In addition, they encountered many difficulties while performing the JTs. Although some of them confessed their inability to comprehend the texts, they did not try to get help from their peers. Instead, they participated in discussion by using the author's words or staying silent without contributions.

When diverse answers were given to the same questions, they did not try to solve those disparities by arguing with/persuading others. Some group discussion ended with personal talk. Different learning and typing speed among group members also generated tension that hampered scaffolding support.

> LJ (S31): One of our group members typed and answered very well, fast, and correctly. Others could not catch up with her speed.

The fact that the learners' abilities to express themselves, communicate openly and connect with others (Garrison et al., 2000) were much lower in the JTs hindered their SP development. Unfamiliarity with their group partners may have prevented some of them from asking peers for help due to the fear of losing face. The familiarity with other learners affected not only task complexity (Robinson, 2001), but also SP perception (Tu, & McIsaac, 2002; Ko, 2012).

In terms of the learning conditions, the DMT-webcam condition appeared the most favorable to the learners' SP development compared to the other three. The JT-non-webcam condition appeared the least favorable one. However when asked explicitly, they expressed some negative feelings towards webcam use, particularly during the JTs completion. The availability of the webcam image made some of them feel embarrassed, insecure and uncomfortable; it generated anxiety and they appeared disturbed during communication.

The above findings are consistent with Yamada and Akahori's study (2007) that the interlocutor's image was most effective in promoting consciousness of presence in a DMT. Although the learners in this study, like those in Yamada and Akahori's study, enjoyed communicating with their partners because they could see the partners' personality and non-verbal behaviors, such comfort seemed to be only constrained in the DMT situations where they didn't have as many negative feelings as they had in the JT situations. In the latter situations, they experienced more difficulties, had greater concerns about their outputs, and paid more attention to others' language abilities. They rarely expressed those concerns for the DMTs. It seems that they appeared less confident and more anxious in the JT learning situations, regardless of the webcam.

The JTs in this study seemed to impose greater cognitive load on the learners and affect their SP development negatively. For Robinson (2001), tasks for which prior knowledge is available are less cognitively demanding compared to tasks without prior knowledge support. In this study, the DMTs appeared less cognitively demanding and complex because their task contents were not limited to the textbook and learners could apply their prior language knowledge to task completion. As the cognitive demands of the JTs were greater, the learners became more attentive and therefore had to focus more attention on input and output, which resulted in paying less attention to the webcam.

Notably, 8 out of the 14 interviewees admitted that doing the JTs was more beneficial to language proficiency development because they had to produce what they just learnt in order to participate in discussion. They paid less attention to their output and even used **117**

L1 during discussion while conducting the DMTs. Compared to the other three learning conditions, the JT-non-webcam condition seems to facilitate the learners' development of language abilities, as interaction elicited target language and collaborative dialogue and therefore more socio-cultural competence, such as assistance provision and appropriate peer feedback (Peterson, 2012), characterized this learning condition.

7. Limitation

As most studies, this study has its limitations. Due to time constraints, this study examined only two task types and three activities for each type. Additional tasks could be investigated to increase the study credibility. In addition, the study was conducted only online but not in f2f situations. Some learners stated that if they could choose, they would have completed the tasks in f2f situations. Future researchers may replicate the study in f2f situations to see whether learners will hold the same opinions based on real experiences.

8. Conclusion

In summary, the task type could influence the learners' SP development in SCMC interaction. Compared to the JTs, conducting the DMTs in this study allowed learners to perceive more delight and satisfaction, decreased their fear of expressing their opinions in English, and consequently increased their willingness to give personal opinions and interact with each other. Moreover, difficulties encountered during the JTs completion intensified some negative feelings that were unfavorable to SP development.

On the other hand, the webcam had different effects on the learners' SP in the two task situations. Learners perceived the highest SP in the DM-webcam situation. However, the webcam use had fewer benefits for the learners' SP in the JT situations. Although the webcam seemed to enhance the learners' communication quality, they did not appear to appreciate its function. Some researchers (e.g., Kim, 2007) have suggested that SP has to be cultivated through strategic use (e.g., have a f2f first session to build rapport) in online courses. In agreement with this suggestion, the author recommends that if instructors intend to incorporate webcams in their curriculum, one strategy could be to teach learners to use the webcam before the start of the courses. Only after they get help establishing SP, can students shift their focus to academic learning (Goda, & Yamada, 2012).

However, despite the fact that the learners in the study seemed to develop better SP in the DMT situations, their English appeared less sophisticated because they produced output on their own rather than based on the textbook as in the JT situations. It seemed that the DMTs in this study appeared less beneficial to the development of language proficiency. Nevertheless, this suggestion should be taken with caution since different designs of the same task type may lead to different learning outcomes.

In conclusion, the DMTs of this study gave the learners more expression and interaction opportunities; therefore, they were more beneficial to communication skill and SP development. Yamada and Akahori (2007) reported similar results, showing that learners' mutual communication in a DMT situation enhanced their interaction. The JTs provided the learners with output opportunities that enabled them to apply what they had just learnt into practices benefitting language skill development; however higher cognitive load requirements did not seem to benefit their SP development. It is therefore hypothesized that tasks

of higher cognitive load can hinder sp development in online learning environments. This hypothesis requires further examination in future studies.

As the two task types have different effects on students' learning processes, foreign language teachers could incorporate appropriate task types into the curriculum to meet their teaching objectives and create an effective online learning environment.

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Appendix

Semi-structured interview questions

Learning experience:
1. Do you think Google+ is an appropriate social platform for this learning?
2. Can you know the personality of your partners through this online discussion?
3. Can you make yourself known by others through this online discussion?
4. Is the discussion helpful to your social presence development?

Task type:
5. Which task type do you prefer? Why?
6. Which task type is more helpful to know your partners?
7. Which task type is more helpful to make yourself known by your partners?
8. Which task type is more beneficial to your social presence development?

Tools:
9. Do you think the webcam is beneficial to your social presence development?
10. Which learning mode do you prefer (CMC without webcam, CMC with webcam, f2f learning)? Why?
11. Are you happy with the use of webcam?
12. In which task situation, you feel more comfortable to use the webcam?

Others:
13. Do you think the familiarity with your partners is important to your online discussion? Why or why not?
14. Please give your suggestion(s) if you have any.