The Potentiality of Synchronous Video-Based Computer-Mediated Communication on EFL Learners' Inside and Outside Classroom Willingness to Communicate and Intercultural Competence

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ABSTRACT

The two constructs of Willingness to Communicate (WTC) and Intercultural competence (IC) are among influential factors affecting the success or failure of communication. This study aimed at exploring the potentiality of synchronous video-based computer-mediated communication class on intermediate EFL learners' inside and outside the classroom WTC and IC. In so doing, 52 intermediate learners from different cultural backgrounds selected through the Solutions Placement Test (SPT) were randomly assigned to experimental and control groups. The necessary data were collected through WTC Inside the Classroom Scale, WTC Outside the Classroom Scale, and IC Scale. Culturally-based videos were implemented in both groups to raise students' awareness of target culture and to trigger their intercultural competence by gaining insight into their own and other cultures. Voice over Internet Protocol (VoIP) software, Discord, enabled the participants of the experimental group to communicate on a chat channel. However, the control group had face to face negotiation on video contents. The results indicated that synchronous class led to a statistically significant improvement in both inside and outside the classroom WTC. With regard to IC, although the intercultural competence of both groups improved, no significant difference was reported between the two groups. In the rapidly diversifying world, facilitating learners' WTC and pushing them to

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1. Introduction

Being unwilling to speak in another language particularly in English as a Foreign Language (EFL) contexts, is a problem existing in most learning situations. That is learners avoid or devaluate communication or regard it as relatively unrewarding. One of the reasons for students' unwillingness to speak is due to the fact that they bring their faces with themselves to the classroom. Since there is always a possibility of other students' negative reaction to what they say, they have the fear of losing their face (Redmond, 2015). In many EFL contexts, learners may remain reluctant to express themselves even after many years of study. This unwillingness will possibly result in deficiency in communicative competence, which is an integral part of oral skill (Soo & Goh, 2013).

Another construct known to affect the effectiveness and appropriate communication while attempting to learn another language is Intercultural Competence (IC) (Tran & Doung, 2018). IC has been of interest to those in academe and those involved in practical applications of IC in an increasingly multicultural society. Appropriate intercultural communication includes behaviors that suit the norms and expectations of a particular culture, a specific context, and the relationship between the parties involved in that situation. IC is determined by the presence of abilities that directly shape communication across cultures. IC is "the ability to develop targeted knowledge, skills and attitudes that lead to visible behavior and communication that are both effective and appropriate in intercultural interactions"

(Deardorff, 2006, p. 242). Since English is the first choice of foreign language in most countries of the world so that it has become a global language for conveying national and international perceptions of reality which may be different from those of other interlocutors (Crystal, 2020), awareness of cultural expectations and understanding cultural differences while walking along different cultures along with the language seems to be critical.

With the rapid growth of technology enhanced learning, new mediums of instruction and learning have emerged. Computer Assisted Language Learning (CALL) as a young branch of applied linguistics is still establishing its directions. CALL paves the way for using computers for learning languages and interaction in a Second Language (L2) or a Foreign Language (FL). Stephenson and Limbrick (2015) define CALL as a systematic approach to increase students' knowledge and academic skills that uses a computer as a central feature. One way to offer an assuring situation to reticent learners, may be Computer-Mediated Communication (CMC). In fact, the rapid growth in the application of digital technologies including CMC devices has had a significant impact on education (Jelfs & Richardson, 2012). Furthermore, CMC seems to provide the learners with the unique opportunity to interact with people from other cultures (Hsu & Beasley, 2019).

2. Related Literature

Willingness to Communicate

Willingness to communicate as an emerging

concept useful in communication was first developed in L1 communication by McCroskey (1992). WTC, as one type of individual differences, is defined as one's propensity to initiate and continue a communication (Cao & Philp, 2006; Yu, 2009). With the growing emphasis on communication in L2 contexts, MacIntyre and Charos (1996) and MacIntyre and Clément (1996) applied WTC to L2 communication. Developing a path model, MacIntyre (1994) postulated that perceived communicative competence at a greater level and communication anxiety at a lower level contribute to WTC. In other words, MacIntyre (1994) claimed that L2 communication anxiety and perceived L2 communicative competence can predict WTC in an L2 context. The learner's propensity and willingness to speak, apart from perceived competence, depend on other variables related to culture, motivation, personality, instructional context, etc.

According to MacIntyre et al. (1998), WTC is more complicated in L2 situations due to one's level of proficiency, as an additional determinant variable. They argued that "it is highly unlikely that WTC in the second language is a simple manifestation of WTC in the L1" (p. 546). Accordingly, they defined L2 WTC as "a readiness to enter into discourse at a particular time with a specific person or persons using L2" (p. 547). Kang (2005) adds the role of situational contextual variables in WTC and considers topic, interlocutors, group size and cultural background as crucial factors. Suksawas (2011) summarizes that studies have viewed WTC either as a personality-trait construct (McCroskey & Baer, 1985) or a situational feature (MacIntyre et al.,

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1998). Therefore, WTC is either viewed as a stable or a dynamic construct.

Research on WTC has accounted several factors contributing to cultivating WTC. For example, Aubrey (2011) mentions group cohesiveness, interesting topics, lowered anxiety, and boosted positive attitudes towards the cultural aspects of language learning among the influential factors. Vongsila and Reinders (2016) categorize the responsible factors into teacher-related, learner-related and factors related to learning environment. CMC as one of the learning environments has also been included among the influential factors in boosting WTC (Reinders & Wattana, 2012). Accordingly, video-based SCMC seems to be beneficial in promoting learners' WTC.

Intercultural Competence

Intercultural communication that is communication between individuals from different cultures is not anything new. Nowadays, due to globalization the necessity of intercultural interactions has become more evident. Intercultural competence is an effective behavioral and even cognitive skill which makes people communicate appropriately with people of other cultures. The most accepted definition of intercultural competence is "the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes (Deardorff, 2006, p. 249). The second important definition includes essential components of IC in terms of "the ability to shift frame of reference appropriately and adapt behavior to cultural context, adaptability, expandability, and flexibility of one's frame of reference/filter"

(Deardorff, 2006, p. 249). So, this competence is a basic skill to learn when it comes to learning another language. A lack of consensus is seen among writers and researchers to use a single term for this competence since there is a wide variety of terms applied to denote this competence and its underlying dimensions, multicultural competence, global citizenship, transnational competence, cross-cultural skills, intercultural communication, intercultural sensitivity, and cultural intelligence (Deardorff & Jones, 2012). Sercu (2004) categorizes the definitions of IC into two realms; in the professional realm IC contains attitudes, traits, knowledge and skills through which Chen and Starosta (1996, cited in Chao, 2014) focus on affective (intercultural sensitivity), cognitive (intercultural awareness), and behavioral (intercultural adroitness) components. The other definition is in the educational realm. Byram (2012) proposes a definition which is considered very operational and effective in FL education. According to him, two fundamental components need to be learned for being an intercultural speaker; IC which contains attitude (which refers to one's interest in one's interlocutors' cultures, values, and beliefs and willingness to share their opinions on different topics), knowledge, skills of relating and interpretation, critical cultural awareness and skills of interacting and discovering. The latter is the target language communicative competence which includes linguistic, sociolinguistic, and discourse. Stier (2006) considers two competence domains for IC: "content-competencies" which are static ("knowing-that") and include elements such as language, worldviews, values, norms, traditions,

and "do's and don'ts" (p. 6). "Processual-competencies", on the other hand, are dynamic by taking into account the context of a situation ("knowing-how") and cover intrapersonal and interpersonal competencies (Stier, 2006, p. 7). The only component of IC with %100 consensus among the scholars has been "understanding others' worldviews" (Deardorff, 2006, p. 249).

Computer-Mediated Communication

In every type of communication, people can express their thoughts, attitudes, and exchange information. CMC was first outlined by Turoff and Hiltz (1978) and then many researches were conducted on this issue. CMC was not originally designed for learning purposes; however, foreign language teachers viewed it as a new shaking educational development for learning experiences. There are two modes of CMC including synchronous and asynchronous transmissions. Synchronous CMC also referred to as real time exchange of information is defined as those modes of communication in which the users are present at their computers or media and communicate with each other simultaneously. In other words, the two communicating parties need to be both online while they exchange information. In this mode, participants usually use video conferences, chat rooms, or instant messengers in real time format. The second mode is asynchronous CMC in which there is delay while communicating and the participants are not supposed to be present at their computers or the media at the same time. While the sender's message is stored, the delay can enable the other party to read the message later and give feedback. Therefore, the users do not communicate with

each other at the same time. Generally, since asynchronous CMC allows for more time, reflection and syntactic complexity, it can be more closely linked with writing than synchronous CMC (Zheng & Warschauer, 2017). Although synchronous CMC can also be done textually, it is closely linked to speaking due to the bulky communication strategies and discourse patterns that CMC contexts require (Ko, 2012).

Previous Studies on Computer-Mediated Communication

Research into CMC and learning languages has either looked at its usefulness for developing language skills or teachers and learners' perceptions and attitudes towards this development. O'Rourke and Stickler (2017) discuss the benefits of Synchronous Computer-Mediated Communication (SCMC) under three headings: as a learning tool, as setting for learner dialogue, intracultural and intercultural, and as a target competence.

In the available literature review, a number of researches have been conducted on the role of CMC in developing productive skills. Warschauer (1996) reported that students used language in SCMC that was both lexically and syntactically more complicated and formal than face to face interaction in terms of lexical density. Beauvois (1997) examined the role of SCMC in the development of oral ability and concluded that SCMC did significantly improve the oral skills of learners in comparison with face to face communication. Abrams (2003) compared the effects of synchronous, asynchronous, and face to face communication on learners' oral

performance. The synchronous group had a discussion on the Web Course Tool (Web-CT) chat before the oral discussion. The asynchronous group had a one-week opportunity to discuss the assigned readings and personal experiences on the Web-CT bulletin board. The learners of face to face group had the regular classroom exercises including pair and group work to discuss on the assigned reading assignments. The obtained results indicated that SCMC was more effective than asynchronous and face to face groups regarding developing oral performance. Rezai and Zafari (2010) investigated the effect of online dyadic text-based discussion on Yahoo Messenger platform on Iranian EFL learners' oral proficiency. The findings revealed a statistically significant difference between the learners' oral proficiency. The authors concluded that online discussion is more beneficial for the linguistically insecure and shy learners. Taking the writing skill into account, Ritchie and Black (2012) investigated the effect of public internet discussion forums on students' argumentative skills. The forums demanded the learners to choose a topic, read about it, obtain information, consider others' different points of views, and develop their own viewpoints. The findings indicated that participation in the forums had a positive effect on students' argumentative writing skill.

Regarding language comprehension, Rafieyan et al. (2014) explored the effect of telecollaboration on the development of Iranian undergraduate EFL learners' pragmatic comprehension. The participants of the experimental group had the chance of interacting with target language speakers through internet-

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mediated communication tools besides receiving pragmatic instruction. The results showed the positive effect of telecollaboration on pragmatic comprehension development.

The usefulness of CMC has also been investigated for developing language elements. Yanguas (2012) explored possible differences between audio and video CMC and face to face interaction in terms of vocabulary development. The findings showed no significant differences among the groups regarding production or written recognition measures of vocabulary. Marzban and Esmaeilzadeh Ghomi (2017) explored the effect of CMC through Telegram Messaging Service and learners' gender on their idiom learning and attitudes towards CMC. The obtained results proved the outperformance of the CMC group in terms of learning idioms. However, no difference was observed between the performance of different genders. In terms of attitudes, learners were willing to use their mobile phones for language learning but no significant difference was indicated between genders in this regard. Bozorgian and Shamsi (2020) investigated the extent to which Computer Assisted Pronunciation Training (CAPT) through The My English Tutor (MyET) computer software could improve Iranian EFL learners' use of suprasegmental features (stress, rhythm, intonation). MyET's instruction is based on successful imitation and production of desirable output after the correct form is presented in the software. The screen showed the performance and scores of each individual on suprasegmental features as well as the waveform of standard speech. The findings confirmed the effectiveness of CAPT in improving the learners' use of

suprasegmental features. As literature review indicates, these studies have explored the effect of CMC in terms of its usefulness as a learning tool in developing different aspects of language, but the main reasons and factors leading to this learning improvement have left unnoticed.

Another line of research in CMC realm has investigated the students' perceptions and CMC role in developing cultural awareness. LeShea (2013) explored the effect of the inclusion of synchronous class sessions on students' level of satisfaction and academic achievement. It was revealed that incorporating live, synchronous class sessions increased neither students' attitudes nor their test scores. Kumi-Yeboah (2018) explored instructors' perspectives on and challenges in designing a cross-cultural collaborative online learning framework. Results introduced instructional strategies facilitating cross-cultural collaborative online learning including group work, self-introduction and cultural awareness activity, the inclusion of global examples, and internationalized curriculum among the others. Designing a cross-cultural collaborative online learning framework emerged as the most obvious challenge. Racheva (2018) conducting a research on social aspects of synchronous virtual learning environments lists the key benefits derived from students' perspectives as enhanced learning opportunities, flexibility, interactivity, student-centered instruction, options for timely and constructive feedback, collaborative learning, etc. Cote and Gaffney (2018) investigated the role of SCMC on learners' foreign language anxiety and output quality in terms of vocabulary learning and the present tense forms. Results showed that learners

were significantly less anxious using SCMC than in oral classroom. Furthermore, the students took more turns and provided significantly more new words in the SCMC environment.

More specifically focusing on intercultural competence, Hagley (2020) zoomed on the effect of virtual exchange in EFL classroom on students' cultural sensitivity. Quite a strong evidence suggested that virtual exchange had improved students' knowledge of their own culture and an appreciation of other cultures. Mai et al. (2020) tested the efficacy of asynchronous video-based discussion in improving the Vietnamese students' intercultural competence. The results indicated that the number of students who could develop a system of principles and then refer to them in almost any intercultural encounter was low. However, most participants fully respected the beliefs, values, and behavior of members from other countries due to having put themselves in others' positions. Due to the importance of WTC and IC in the process of language learning and the few number of studies on the effect of synchronous video-based CMC on learners' WTC and IC, the present study aimed at investigating whether synchronous video-based communication with a focus on cultural issues would have any significant effect on intermediate EFL learners' WTC and IC. Therefore, this study aims at answering the following research questions:

1. Does synchronous video-based computer-mediated communication have any significant effect on EFL learners' inside classroom willingness to communicate?

2. Does synchronous video-based computer-mediated communication have any significant effect on EFL learners' outside classroom willingness to communicate?

3. Does synchronous video-based computer-mediated communication have any significant effect on EFL learners' intercultural competence?

3. Method

Participants

A total of 52 male students from different cultures, all living in Shiraz were selected for the present study. Fourteen of them were Turks, 16 Fars, 12 Arabs, and 10 Afghans. The process of the selection of the participants was not performed randomly due to the limitations we had in selecting only multicultural students. The learners' age ranged from 18 to 26, and they were learning English as a foreign language at the intermediate level based on the standards set by their institutes and Solutions Placement Test (SPT) conducted at the beginning of the study. The reason for selecting participants at the intermediate level was the fact that for lower proficiency learners, unwillingness to communicate is mostly due to deficiency in oral skills. It is worth mentioning that before initiating the study, the institute's written permission was sought for data collection and the prospective participants were provided with pertinent information to make an informed consent to participate. They were also ensured that their privacy would be protected and their data would remain confidential. After the procedure of semi-random assignment (we had the students from all cultures with same number in each class), 26 learners were randomly assigned to the experimental group and 26 learners to the control group.

Instruments

Solutions Placement Test

In order to investigate the homogeneity of the experimental and control groups and determine their level of English language proficiency according to the standards of Solutions (an international institute for language teaching), Solutions Placement Test was administered at the beginning of the study. A pilot study had been done with a group of twenty-six participants at the intermediate level in order to measure the reliability of the test in this EFL context. The KR-21 formula was used in order to compute the internal reliability of the test. The result was .80 which is an acceptable value for the internal reliability of the test.

Willingness to Communicate Inside the Classroom Scale

In order to measure WTC in the classroom, a modified version of Likert-type questionnaire developed by MacIntyre et al. (2001) was applied in this study. This 27-item questionnaire involves all four skills and the scale ranges from 1 to 5 (1 = almost never willing to 5 = almost always willing). For some words that were considered to be ambiguous for the learners and lead to misunderstanding, equivalents and clarifications were provided. In order to measure the reliability of the questionnaire in this EFL context, a pilot study was done and the alpha reliability estimates for this instrument were as follows: α = .81 for speaking, α = .85 for listening, α = .86 for reading, and α = .87 for writing.

Willingness to Communicate Outside the Classroom

Another modified version of WTC scale developed by MacIntyre et al. (2001) was used to measure learners' WTC outside the classroom. It comprises 27 items in a Likert-type scale ranging from 1 to 5 (1 = almost never willing to 5 = almost always willing). For the current study the reliability measures turned out to be α= .85 for speaking, α = .80 for listening, α = .86 for reading, and α = .91 for writing.

Intercultural Competence Scale

The six Likert scale questionnaire (0= strongly disagree to 5= strongly agree). applied in the present study was adapted from Fantini's (2006) the Assessment of Intercultural Competence. The questionnaire includes forty-two statements separated into four major categories of intercultural competence containing knowledge (items 1-7), attitudes (items 8-16), skills (items 17-27), and awareness (items 28-42). To avoid misunderstanding, the questionnaire was paraphrased and clarified. The reliability of Cronbach's alpha was found to be .88.

Data Collection Procedure

Based on the standards of the institution and SPT administered at the outset of the study, the participants were at the intermediate level but they were from different cultural backgrounds. First, the procedure for assigning the participants to the experimental and control groups was performed. Twenty-six learners were randomly assigned to the experimental group and 26 learners to the control group (we had the students from all cultures with same number in each class).

After assigning the students into the groups, both groups took pre-tests of WTC inside and

outside the classroom and IC. Then, the learners in the experimental group were asked to participate in the online class 3 days a week, 90-minute sessions for 2 months, via Voice over Internet Protocol (VoIP), Discord software. It is a computer/mobile Internet software which enables groups of computer /mobile users to speak on a chat channel with fellow users online via the Internet. This software can easily be downloaded on Google Play Store and discord.com which is its official website. Before participation, the learners had been familiarized with the software. Each session was composed of three parts (each 30 minutes): at the beginning, the students were presented with some culturally-based videos of American movies to be exposed to cultural contents. The criteria for choosing these videos were adopted from the rubric by Smaldino et al. (2012). In the next 30 minutes, the students practiced the presented content with teacher's facilitating role via different interactive activities such as role plays, interviews, dialogues and monologues. The final 30-minute part was allocated for discussing the cultural contents for more analysis. In the online class, all of the participants could hear each other and could speak whenever they wanted, and the teacher managed the class. Exactly the same procedure was applied in the conventional face to face class.

After 2 months, the WTC and IC questionnaires were administered again in order to investigate whether the treatment had any significant effect on the learners' WTC and IC during this period.

4. Results

The SPT was administered at the beginning

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of the study to select participants who were at the intermediate level. According to the standards of this test, acquiring a score between 47-70 indicates the intermediate level. Then the participants were randomly assigned to the experimental and control groups each comprising 26 participants. First, to make sure of the appropriateness of running independent-samples t-tests, the collected data were checked for the assumption of normal distribution. Then, in order to check whether the two groups were homogeneous in terms of WTC inside the classroom, the relevant scale was administered on the participants as the pre-test. The results of running an independent-samples t-test on pre-test scores are presented in Table 1.

Table 1. Independent-Samples T-test on Pre-test Scores on WTC Inside the Classroom

		Levene's Test for Equality of Variances		t-Test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Pre-test	EVA	.10	.74	.73	50	.46	2.07	2.83
	EVNA	-----	-----	.73	49.9	.46	2.07	2.83

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

The results of the independent-samples t-test analysis comparing the performance of the participants on WTC inside the classroom revealed that there was no significant difference between the two groups at the outset of the experiment. T (50) = .73, p= .46>.05 indicates that the two groups met the condition of homogeneity at the outset of the study.

To find out whether the synchronous video-based class had any significant effect on the level of WTC inside the classroom, the gain scores

were obtained by subtracting the pre-test scores from the post-test scores in each group. The mean score for the gain scores of the control group was 9.03 and the SD was 5.56, and for the experimental group 14.3 and 5.13, respectively. As the obtained results indicate, the level of WTC inside the classroom increased in both groups, but in order to see whether the difference in the means of gain scores was statistically significant, an independent-samples *t*-test was conducted. The results are reported in Table 2.

Table 2. Independent-Samples T-test for Testing the Difference Between the Two Groups on WTC Inside the Classroom

| | | Levene's Test for Equality of Variances | | *t*-Test for Equality of Means | | | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Gain score	EVA	.07	.78	-3.54	50	.001	-5.26	1.4
	EVNA	-----	-----	-3.54	49.67	.001	-5.26	1.4

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

As Table 2 shows, t (50) =-3.54, p= .001<.05 indicates a statistically significant difference between the means of the gain scores of the experimental and control group. The value of the effect size was also computed to see the magnitude of the mean differences, and it was .98 which is a large one.

As it was mentioned before, the study also aimed at investigating the effect of SCMC on WTC outside the classroom. The related scale was administered on the participants at the outset of the study to ensure the homogeneity of the groups with regard to this variable. An independent-samples t-test was run on the scores.

Table 3 represents the results.

Table 3. Independent-Samples T-test on Pre-test Scores on WTC Outside the Classroom

| | | Levene's Test for Equality of Variances | | *t*-Test for Equality of Means | | | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Pre-test	EVA	.01	.92	.75	50	.45	2.03	2.7
	EVNA	-----	-----	.75	49.94	.45	2.03	2.7

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

As Table 3 depicts, t (50) = .75, p= .45>.05 indicates no significant difference in terms of WTC outside the classroom between the two groups at the outset of the study.

To check whether the synchronous video-based class had any significant effect on the level of WTC outside the classroom, the gain scores were obtained. The mean score for the gain scores of the control group was 8.11 and the SD was 5.14, and for the experimental group 13.1 and 5.11, respectively. The obtained results indicate that the level of WTC outside the classroom increased in both groups, but to find out whether this difference in the means of gain scores was statistically significant, an independent-samples *t*-test was run. The results are shown in Table 4.

Table 4. Independent-Samples T-test for Testing the Difference Between the Two Groups on WTC Outside the Classroom

| | | Levene's Test for Equality of Variances | | *t*-Test for Equality of Means | | | | |
		F	Sig.	T	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Gain score	EVA	.04	.84	-3.54	50	.001	-5.03	1.42
	EVNA	-----	-----	-3.54	49.9	.001	-5.03	1.42

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

T (50) =-3.54, p= .001<.05 indicates a statistically significant difference between the means of the gain scores of the two groups in terms of WTC outside the classroom. The value of the effect size was computed to check the magnitude of the mean differences which turned out to be .98.

Another purpose of the study was to see whether the synchronous video-based class had any significant effect on the IC of the learners. Again to check whether the two groups were homogeneous in terms of IC, the IC scale was administered on the participants as the pre-test. The results of running an independent-samples t-test on pre-test scores on IC are presented in Table 5.

Table 5. Independent-Samples T-test on Pre-test Scores on IC

		Levene's Test for Equality of Variances		t-Test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Pre-test	EVA	.000	.99	1.06	50	.29	5.23	4.92
	EVNA	-----	-----	1.06	49.8	.29	5.23	4.92

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

The results of the independent-samples t-test analysis comparing the performance of the participants on IC indicated no significant difference between the two groups at the outset of the experiment. T (50) =1.06, p= .29>.05. So it can be concluded that the two groups met the condition of homogeneity at the outset of the study.

To check the effect of synchronous video-based class on learners' IC, the gain scores on IC were obtained. The intercultural competence gain

score mean of the control group was 11.69 and the SD was 3.20, and for the experimental group 10.92 and 3.36, respectively. To check whether the difference in the means of gain scores was statistically significant, an independent-samples t-test was run. Table 6 reports the results.

Table 6. Independent-Samples t-test for Testing the Difference Between the Two Groups on IC

		Levene's Test for Equality of Variances		t-Test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error difference
Gain score	EVA	.25	.61	.84	50	.40	.76	.91
	EVNA	-----	-----	.84	49.88	.40	.76	.91

EVA: Equal Variances Assumed

EVNA: Equal Variances Not Assumed

According to the results, t (50) = .84, p= .40>.05 indicates that there was no statistically significant difference between the means of the gain scores of the two groups. Therefore, it can be concluded that synchronous video-based class did not lead to a significant increase in learners' IC.

5. Discussion

This study aimed to explore the effect of SCMC on EFL learners' WTC inside and outside the classroom and their intercultural competence. Regarding the first objective of the study in terms of the effect of SCMC on learners' inside classroom WTC, the results obtained indicated the positive influence of SCMC on increasing WTC inside the classroom. The significantly higher level of WTC inside the classroom in the SCMC can be attributed to the fact that the new

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learning situation is less immediate than real class environment and this will result in more openness and willingness on the part of the learners to express themselves. Not being confined within the four walls of a classroom will also make the learners to feel more secured and less ashamed and to motivate them to take more participation. As mentioned before, one of the main reasons for students' unwillingness to communicate is the fear of losing their faces and because of this they prefer not to put their faces into risk and as a result do not feel at ease to reveal themselves so avoiding establishment of relations. Therefore, the unique opportunity to express themselves without worrying about losing their faces can be another important reason for learners' willingness to communicate. The natural nature of synchronous communication and its assimilation to real world practices can be another reason for learners' willingness to participate. What seems prevalent in SCMC is that more focus is put on content of the message and conveying ideas rather than the senders and receivers. So, learners feel more responsibility to prevent communication breakdowns by expressing their viewpoints and they may also become less conscious and sensitive about their language inadequacies. Despite establishing a natural and real life communication, the removal of social rules dominant in face to face interactions is another motive for students' more participation. Furthermore, the increase of WTC in both groups may be due to the authentic input accessed by learners and relating them to their personal lives. As mentioned before, no research has specifically investigated the learners' WTC in synchronous CMC for a group of participants. Anyhow, the

results obtained are in line with Shahini's (2015) case study comparing the effectiveness of two modes of conversation (SCMC & face to face) on a female learner's grammatical accuracy. He came up with the conclusion that the learner was more willing to communicate in synchronous chat environment with fewer grammatical errors. Not completely in the same path, the results also support Yanguas and Flores (2014) who reported higher percentage of speaking turns taken in oral CMC as well as the positive correlation between the frequency of turns taken and learners' WTC. Anyhow, the results are not in line with Mozafarianpour and Tahriri (2016) who explored the impact of SCMC on learners' collaboration and reported no significant difference between the experimental and control groups with regard to their collaboration and interaction.

The second objective of the study was to investigate the effect of SCMC on learners' outside classroom WTC. The relevant findings indicated the significant increase in SCMC group's level of WTC outside the classroom. It seems that WTC outside the classroom may be a manifestation of WTC inside the classroom. In other words, students can transfer the self-confidence and self-esteem attained in communicating within the classroom to outside classroom environment. In addition, the performance-based task in both groups cultivated the learners' self-image which can be viewed as a paramount factor for outside classroom communication. Another factor may be the more enjoyable situation of including a multiplicity of cultures in both groups which makes the situation more similar to real-life situations. For all those reasons contributing to a significant increase in inside WTC in the SCMC

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group, this increase also influenced the learners' WTC outside the classroom. The results are line in with Denies et al. (2015) who consider classroom WTC as a strong predictor of WTC outside the classroom. The findings also provide support for Lee and Lee (2020) who concluded that possessing a higher sense of L2 self will result in exhibiting a higher level of WTC both inside and outside the classroom.

With regard to the third research question exploring the effect of SCMC on learners' IC, it was observed that the IC level of both groups increased but no significant difference was detected between the two groups. The boost of IC can be attributed to the opportunity provided in both groups to acquaint with not only target language culture but also other cultures and sensitizing the learners in terms of cultural factors. As Ilie (2019) mentions working in a multicultural setting and showing respect and appreciation for others can cultivate learners' IC level. The results are not in line with Chun (2011) who considers online exchange a more influential factor for developing learners' IC in comparison with face to face interaction.

6. Conclusion

In the globalized and growing diversity world we are faced with today, revising our conceptions concerning learning and learning environments are deemed as essential. The recent global context demands more willingness on part of learners and the surge in cultural heterogeneity of educational settings calls for linking and working with individuals from different cultures. Teachers are expected to revisit their methodologies and curricula and the students are supposed to improve

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their skills in accordance with the multicultural reality. This study suggests that CMC can be considered as one way to boost learners' WTC inside the classroom which in turn can lead to outside classroom WTC. It should be reemphasized that increasing learners' WTC should be one of teachers' responsibilities; otherwise, this incompetency can impede language learning, particularly oral productive skills. Furthermore, video-based communication targeting at target language culture and triggering discussion of different aspects of other cultures in a multicultural setting can develop learners' IC.

It is worth mentioning that this study is not without limitations. Due to availability and accessibility, only English learners of different cultural backgrounds living in Iran and studying in a language institute in Shiraz participated in the study. It is recommended to replicate this study with learners of more diverse cultural backgrounds living in different countries. Furthermore, the necessary data were collected just through self-reported questionnaires. Others interested in this area of research can include interviews, observations, and real assessment of learners' WTC and IC through more authentic tasks such as role-plays as sources of data. A much closer examination of the main constituent elements of IC and how they may be affected in SCMC can form another line of research for researchers. Future research can also focus on learners at higher proficiency levels including and comparing different genders. As mentioned before, due to sample size and conducting the study on male learners in Iranian context, the obtained results cannot be generalized to other EFL contexts and female learners.

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. doi: https://doi.org/10.1111/1540-4781.00184

Aubrey, S. (2011). Facilitating interaction in East Asian EFL classrooms: Increasing students' willingness to communicate. *Language Education in Asia, 2*(2), 237-245. doi: 10.5746/LEiA/11/V2/I2/A06/Aubrey

Beauvois, M. H. (1997). Write to speak: The effect of electronic communication on the oral achievement of fourth semester French students. In J. Muyskens (Ed.), *New ways of learning and teaching: Focus on Technology and foreign language education.* Boston: Heinle & Heinle Publishers.

Bozorgian, H., & Shamsi, E. (2020). Computer-assisted pronunciation training on Iranian EFL learners' use of suprasegmental features: A case study. *Computer-Assisted Language Learning Electronic Journal, 21*(2), 93-113.

Byram, M. (2012). Language awareness and (critical) cultural awareness-relationships, comparisons and contrasts. *Language Awareness*, *2*(1), 5-13. doi: 10.6330/ETL.2014.38.4.04

Cao, Y., & Philp, J. (2006). Interactional context and willingness to communicate: A comparison of behavior in whole class, group and dyadic interaction. *System, 34*(4), 480-493. doi: https://doi.org/10.1016/j.system.2006.05.002

Chao, T. (2014). The development and application of an intercultural competence scale for university EFL learners. *English Teaching & Learning, 38*(4), 79-124. doi: 10.6330/ETL.2014.38.4.04

Chun, D. M. (2011). Developing intercultural communicative competence through online exchanges. *CALICO Journal, 28*(2), 392-419.

Côté, S., & Gaffney, C. (2018). The effect of synchronous computer-mediated communication on beginner L2 learners' foreign language anxiety and participation. *The Language Learning Journal*, *46*(3), 1-12. doi: 10.1080/09571736.2018.1484935

Crystal, D. (2020). *English Language.* UK: Encyclopedia Britannica.

Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, *10*(3), 241-266. doi:10.1177/1028315306287002

Deardorff, D. K., & Jones, E. (2012). Intercultural competence: An emerging focus in international higher education. In D. K. Deardorff, H. de Wit, H., J. Heyl, & T. Adams (Eds.), The SAGE handbook of international higher education (pp. 283-304). SAGE Publications, Inc. doi: http://dx.doi.org/10.4135/9781452218397.n16

Denies, K., Yashima, T., & Jenessen, R. (2015). Classroom versus societal willingness to communicate: Investigating French as a

second language in Flanders. *The Modern Language Journal, 99*(4), 718-739. doi: https://doi.org/10.1111/modl.12276

Fantini, A. (2006). *Exploring and Assessing Intercultural Competence*. St. Louis, MO: Center of Social Development Washington University.

Hagley, E. (2020). Effects of virtual exchange in the EFL classroom on students' cultural and intercultural sensitivity. *Computer-Assisted Language Learning Electronic Journal, 21*(3), 74-87.

Hsu, S. Y., & Beasley, R. (2019). The effects of international e-mail and Skype interactions on computer-mediated perceptions and attitudes and intercultural competence in Taiwanese students. *Australian Journal of Educational Technology, 35*(1), 149-162. doi: https://doi.org/10.14742/ajet.4209

Ilie, O. (2019). The intercultural competence: Developing effective intercultural communication skills. *International conference Knowledge-Based Organization, 25*(2), 264-268. doi: https://doi.org/10.2478/kbo-2019-0092

Jelfs, A., & Richardson, J. T. E. (2012) The use of digital technologies across life span in distance education. *British Journal of Educational Technology, 44*(2), 338-351. doi: https://doi.org/10.1111/j.1467-8535.2012.01308.x

Kang, S. J. (2005). Dynamic emergence of situational willingness to communicate in a second language. *System 33*, 277–92. doi: https://doi.org/10.1016/j.system.2004.10.004

Ko, C. J. (2012). Can synchronous computer-mediated communication (CMC) help beginning-level foreign language learners speak? *Computer Assisted Language Learning, 25*(3), 217-236. doi: 10.1080/09588221.2011.649483

Kumi-Yeboah, A. (2018). Designing cross-cultural collaborative online learning framework for online instructors. *Online Learning, 22*(4). 181-201. doi: 10.24059/olj.v22i4.1520

Lee, J. S., & Lee, K. (2020). Role of L2 motivational self-system on willingness to communicate of Korean EFL university and secondary students. *Journal of Psycholinguist Research, 49*, 147-161. doi: 10.1007/s10936-019-09675-6

LeShea, A. V. (2013). The effects of synchronous class sessions on students' academic achievement and levels of satisfaction in an online introduction to computer course (Doctoral dissertation, Liberty University). Retrieved from http://digitalcommons.liberty.edu/doctoral/769

MacIntyre, P. D. (1994). Variables underlying willingness to communicate: A causal analysis. *Communication Research Reports, 11*, 135–142. doi: https://doi.org/10.1080/08824099409359951

MacIntyre, P. D., Baker, S. C. Clément, R., & Conrod, S. (2001). Willingness to communicate, social support, and language-learning orientations of immersion students. *Studies in Second Language Acquisition 23* (3): 369-388.

MacIntyre, P. D., & Charos, C. (1996). Personality, attitudes and affect as predictors of second language communication. *Journal of language and social psychology, 15,* 3-26. doi: https://doi.org/10.1177/0261927X960151001

MacIntyre, P. D., & Clément, R. (1996, August). A model of willingness to communicate in a second language: The concept, its antecedents, and implications. Paper presented at the 11th World Congress of Applied Linguistics, Jyväskylä, Finland. doi: https://doi.org/10.1111/j.1540-4781.2007.00623.x

MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *Modern Language Journal, 82,* 545-562. doi: https://doi.org/10.1111/j.1540-4781.1998.tb05543.x

Mai, T. T. P., Weist, G. M., & Nguyen, N. D. (2020). Asynchronous video-based discussion for the enhancement of intercultural competence among Vietnamese non-English majors. *Computer-Assisted Language Learning Electronic Journal, 21*(3), 159-174.

Marzban, A., & Esmaeilzadeh Ghom, M. A. (2017). The effects of Computer-Mediated Communication (CMC) and learners' gender on EFL university students' idiom learning. *Journal of Foreign Language Research, 6*(2), 365-392. doi: 10.22059/JFLR.2017.217428.293

McCroskey, J. C. (1992). Reliability and validity of the willingness to communicate scale. *Communication Quarterly, 40,* 16-25.

McCroskey, J. C., & Baer, J. E. (1985). Willingness to communicate: The construct and its measurement. Paper presented at the annual convention of the Speech Communication Association, Denver, CO.

Mozafarianpour, A., & Tahriri, A. (2016). Impact of synchronous computer-mediated communication on EFL learners' collaboration: A quantitative analysis. *The Journal of Teaching Language Skills (JTLS), 7*(4), 115-140. Doi: 10.22099/jtls.2016.3616

O'Rourke, B., & Stickler, U. (2017). Synchronous communication technologies for language learning: Promise and challenges in research and pedagogy. *Language Learning in Higher Education, 7,* 1- 20. doi: https://doi.org/10.1515/cercles-2017-0009

Rafieyan, V., Sharafi-Nejad, M., Khavari, Z., Eng, L. S., & Mohamed, A. R. (2014). Pragmatic comprehension development through telecollaboration. *English Language Teaching, 7*(2), 11-19. doi : 10.5539/elt.v7n2p11

Racheva, V. (2018). Social aspects of synchronous virtual learning environments. *AIP Conference Proceedings, 2048*(1), 020032 (2018). doi: https://doi.org/10.1063/1.5082050

Redmond, V. M. (2015). Face and politeness theories. *English Technical Reports and White Papers.* Retrieved from https://lib.dr.iastate.edu/engl_reports/2/

Reinders, H., & Wattana, S. (2012). Talk to me! Games and students' willingness to communicate. In H. Reinders (Ed.), *Digital Games in Language Learning and Teaching.* Basingstoke, UK: Macmillan, 156-188.

Rezai, A., & Zafari, N. (2010). The impact of Synchronous Computer-Mediated Communication (SCMC) on the oral proficiency of Iranian EFL Learners. *IJAL, 13*(2), 101-120.

Ritchie, M., & Black, C. (2012). Public internet forums: Can they enhance argumentative writing skills of L2 learners? *Foreign Language Annals, 45*(3), 349-361. Doi: 10.1111/j.1944-9720.2012.01203.x

Sercu, L. (2004). Assessing intercultural competence: A framework for systematic test development in foreign language education and beyond. *Intercultural Education, 15*(1), 73-89. doi: https://doi.org/10.1080/1467598042000190004

Shahini, A. (2015). Willingness to communicate in synchronous and face-to-face conversation modes: A case study. *International journal of language and Linguistics, 3*(5), 292-297.

Smaldino, S., Lowther, D., & Russell, J. (2012). *Instructional technology and media for learning* (10th Ed.). Upper Saddle River, NJ: Prentice Hall.

Soo, R. S., & Goh, H. S. (2013). Reticent students in the ESL classrooms. *Advances in Language and Literary Studies, 4*(2), 64-73.

Stephenson, J., & Limbrick, L. (2015). A review of the use of touch-screen mobile devices by people with developmental disabilities. *Journal of Autism and Developmental Disorders, 45*, 3777-3791. doi: 10.1007/s10803-013-1878-8

Stier, J. (2006). Internationalisation, intercultural communication and intercultural competence. *Journal of Intercultural Communication, 11*, 2-12.

Suksawas, W. (2011). A sociocultural study of EFL learners' willingness to communicate (Doctoral dissertation, University of Wollongong). Retrieved from https://ro.uow.edu.au/theses/3427/

Tran, T. Q., & Doung, T. M. (2018). The effectiveness of the intercultural language communicative teaching model for EFL learners. *Asian-Pacific Journal of Second and Foreign Language Education, 3*(1), 1-17.

Turoff, M., & Hiltz, S. R. (1978). *The network nation: Human communication via computer*, Reading, MA: Addison Wesley.

Vongsila, V., & Reinders, H. (2016). Making Asian learners talk: encouraging willingness to communicate. *RELC Journal, 47*(3), 1-17. doi: 10.1177/0033688216645641

Warschauer, M. (1996). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal, 13*(2), 7-26.

Yanguas, I. (2012). Task-based oral computer-mediated communication and L2 vocabulary acquisition. *CALICO, 29*(3), 507-531.

Yanguas, I., & Flores, A. (2014). Learners' willingness to communicate in face-to-face versus oral computer mediated communication. *The jaltcalljournal, 10*(2), 83-103.

Yu, M. (2009). Willingness to communicate of foreign language learners in a Chinese setting (Doctoral dissertation, Florida State University). Retrieved from http://purl.flvc.org/fsu/fd/FSU_migr_etd-0887

Zheng, B., & Warschauer, M. (2017). Epilogue: Second language writing in the age of computer-mediated communication. *Journal of Second Language Writing, 36*, 61–67. doi: 10.1016/j.jslw.2017.05.014