

The Impact of Synchronous Computer-Mediated Communication (S-CMC) on the Oral Proficiency of Iranian EFL Learners

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Abstract

The present study is an attempt to investigate whether online dyadic text-based discussion can help language learners develop their oral proficiency due to the fact that classroom interaction barriers have been eliminated and a less threatening, less stressful environment for learner-learner interaction has been created. A total of 30 college freshmen students at the University of Tehran participated in weekly online discussions using the 'Yahoo Messenger' platform for dyadic discussions during six consecutive weeks. The results of participants' oral proficiency test showed that there was a statistically significant difference between the learners' scores in the pre-test and those in the post-test. In addition, the results of both questionnaires and oral proficiency tests employed in the present study showed that online discussion (S-CMC) is more beneficial for the linguistically insecure and shy learners as well as those who had positive attitudes toward online discussion. Moreover, analysis of learners' chat logs regarding the number of turns and number of words per student per session indicated that learners' participation in dyadic online discussion was not equal. This is, in fact, in contrast to what has been reported in previous studies done in this field.

Keywords: Computer Mediated Communication (CMC); Synchronous Computer Mediated Communication (S-CMC); Online Communication; Peer Communication; Interaction; Yahoo Messenger

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Introduction

Over the past few decades, language teaching/learning experts have looked upon second language acquisition (SLA) from various perspectives. One of the innovations of this field is the cognitive perspective which tries to investigate the cognitive mechanisms or learners' internal factors that underlie SLA. This approach tries to investigate the role of attention, perception, noticing, memory, comprehension, etc, in SLA. As such, it seems to be a very wide-ranging and diverse approach. However, despite the differences existing among all these approaches, the common assumption underlying them is that learners are active participants in learning processes. One line of research in the cognitive perspective is the investigation of the role of the linguistic environment in the learners' cognitive processes. In the present paper, firstly two of these prominent hypotheses, i.e. 'Input Hypothesis' and 'Interaction Hypothesis' will be explicated. Then the problems of classroom along with the problems of learners as well as those of the teachers will be discussed. Before reporting the study itself and the results obtained, synchronous computer-mediated communication as well as its merits and demerits will be elaborated on.

Input and Interaction Hypotheses

In 1982, Krashen proposed his input hypothesis and stated that:

Humans acquire language by understanding messages, receiving comprehensible input. Pertinent input in this case refers to new second language material immediately beyond the learner's L2 competence. The input hypothesis is expressed formulaically as $i = i+1$, where i refers to the input and 1 to modification of the input signaling that structures that are beyond the learner's current level have been added to the input.
(p. 23)

According to Krashen (1982), in moving from stage 'i' to stage 'i+1', it is necessary for the acquirer to understand input that contains i+1. Furthermore, Krashen (1982) asserts that in order for L2 acquisition to proceed, learners should be provided with the input which is modified either by simplification or elaboration before they hear or see it either by phonological, morphological, syntactic or semantic adjustments. According to him, this linguistic environment is an ideal one

for second language learning because it helps the learners to comprehend the language.

However, later investigations concerning Input Hypothesis show that although input is necessary for SLA, it is insufficient for L2 development. Long's (1983) Interaction Hypothesis (IH) states that in addition to receiving comprehensible input, learners should participate in conversational interaction. He maintains that linguistic modifications are not the only way to provide L2 learners with comprehensible input; learners can receive comprehensible input through interactional modification as well. Interactional modification, which occurs in conversational interactions and with comprehension or production break-downs, leads the interlocutors to stop the flow of conversation and make a collaborative attempt to overcome the communicative difficulties. This interactional modification, which results in negotiation for meaning, not only provides the learners with comprehensible input but also helps them realize their interlanguage (IL) deficiencies. It is through negotiation work that the learner's attention may be directed to an area of the target language (TL) about which either s/he is trying to formulate a hypothesis, or s/he might have no information (Swain, 1995). In other words, their attention is directed to the differences between their IL and TL.

What happens in negotiation is that learners receive negative or positive feedback from their interlocutors. In this way, they come to know whether the sentence they have uttered is comprehensible and whether the content, either linguistic form or conversational structure, should be changed. Thus, learners modify or adjust their output to be more target-like so that they can receive the feedback at the right time and the right place. Therefore, conversation helps the learners to realize the gap in their IL while they can compare "the erroneous form and a correct one in immediate juxtaposition" (Gass, 2002, p. 54). Thus, both conversation and communication breakdown are valuable for SLA because they can engage the learners in a kind of linguistic problem-solving activity.

Problems in Classroom Interaction

Since the introduction of IH and following communicative language teaching interaction, attention has been paid to speaking not only as a skill but also as the means to a desired end (Gass & Varonis, 1985; Long, 1983; Pica, 1988). Since then, teachers have tried to devise classroom activities that develop learners' ability to express themselves through speech and researchers have tried to find practical

ways of improving the learners' use of the TL. Their main concern has been how to develop an environment and to enhance techniques for confident and effective language use. Findings of the studies done in the field suggest that neither teacher-directed/dominated classrooms nor traditional ways of implementing interaction (initiation-response-feedback) with face-to-face (FtF) classroom discussion or pair and group work can motivate the learners to use language and help the teachers to achieve their goals. This might be the result of several problems related to learners, teachers or both.

Learners' problems

It has been repeatedly reported by various experts in education that many learners are, to a large extent, hesitant, cautious and passive towards classroom interaction and try to avoid active participation. Most of them wait to be called upon to participate in activities. Therefore one of the main concerns of teachers is how to activate students in class. The causes of the learners' lack of motivation may include cultural, linguistic, and psychological/affective factors.

1. **Cultural Factor:** This factor relates to prior learning experiences and expectations leading learners to put emphasis on quiet observation rather than active participation. Most of the learners believe that language learning involves listening to the teacher who is giving instructions and answering his/her questions.
2. **Linguistic Factors:** These factors are related to the low proficiency level of learners, including insufficient production skills, inadequate vocabulary and poor pronunciation. Moreover, they sometimes stem from the incomprehensible input given by some teachers who suffer from low qualifications.
3. **Psychological or Affective Factors:** These factors include learners' negative social experience in the past, their worry about making mistakes in front of others, peer pressure, pressure to respond quickly with no waiting time to construct and communicate their message, shyness, low or uneven turn-taking of classmates, which altogether may lead to one or some of the students to dominating the whole class. (Krashen, 1982)

Teacher's Problems

Interactions in the forms of whole class discussion or group work often cause problems for some teachers which, in turn, lead to their reluctance to implement it in their classrooms. These problems include the little time they have for covering the course syllabus and the large number of students they should handle in class in which group work may result in chaos and the teachers' lack of control in the class. Another problem is that in group work teachers cannot monitor all and each one of the students at the same time so that they can provide them with the required feedback. Finally, they have doubts as to whether peers can provide the required input for SLA as all students have approximately the same level of language proficiency.

IH and the Foreign Language Context

The aforementioned conditions are worse in foreign language contexts since learners in such contexts have more limited opportunities for L2 practice. According to Ortega (2007), exposure to and involvement with the target language (TL) may be rare or impossible outside the classroom. This limitation severely constrains the range of L2 learning facilities. Inside the FL classroom, L2 practice is influenced by the fact that students and teachers share the same L1. In the Iranian context, the number of hours usually allocated to language teaching is typically limited to a maximum of four hours a week. Ortega (2007) compares the same situation with the second language learning context and holds that foreign language learners find the case more challenging.

In comparison to the situation with the second and bilingual language instruction contexts, L2 instruction in FL contexts is likely to involve students who start at generally lower levels of L2 proficiency, who undergo a generally slower pace of development, and who achieve overall lower levels of ultimate attainment, particularly in areas of linguistic ability for use that go beyond grammar, such as pragmatic and sociolinguistic competence. (Ortega, 2007, p. 181)

Synchronous Computer-Mediated Communication (S-CMC)

Synchronous computer-mediated communication, i.e. chatting, is a new type of communication which, if implemented in the classroom, can have two-fold advantages for both learners and teachers. First, it may eliminate or at least

decrease the barriers of classroom interaction and may provide the learners with more opportunities to interact in a less stressful and less threatening environment. In other words, it can increase the learners' participation in classroom interaction. Second, because of its striking resemblance to FtF interaction practice through CMC, it will have the same benefits for second language development as practice through oral interaction. Furthermore, the proficiency acquired in this type of communication can be transferred to FtF interaction as well (Abrams, 2003; Beauvois, 1997; Chun, 1994; Payne & Whitney, 2002).

Interaction in S-CMC is in the form of text-based interaction and helps the learners see the language of communication both at the time of conversation and afterwards without disruption of the online conversation. Also, in S-CMC, students have more opportunities for self-expression, self-correction, self-consciousness, and self-paced learning because the role of the instructor changes from full authority, as was the case in traditional classrooms, to a less dominant position. This can not only lower the affective filters and anxiety which hinder language learning but also motivate the learners towards authentic and meaningful communication (Beauvois, 1992; Chun, 1994). However, some critics have observed that "the abbreviated, oversimplified, telegraph-type language that is coming more and more into use nowadays, especially among younger generations, is one of the drawbacks of this new medium of communication" (Almeida d'Eca, 2003, p. 6). This results in disregarding grammatical accuracy and correct spelling for fluency (Kern, 1995; Sotillo, 2000).

Research on CMC

Previous research (Blake, 2000; Chun, 1994; Kelm, 1992; Kern, 1995; and Pellettieri, 2000) has found positive effects of S-CMC on the quantity and quality of language output. Kern (1995) and Abrams (2003) found that there was a significantly greater increase in the amount of language output. Warschauer (1996) found that students used language in S-CMC which was lexically and syntactically more formal and complex than FtF conversation in terms of lexical density. Moreover, according to Beauvois (1995), Kern (1995) and Warschauer (1996), the CMC environment can improve the learners' attitudes toward language learning. The most important advantages of S-CMC is that, according to some studies real-time, conversational exchange via text may indirectly develop L2 speaking abilities.

Chun (1994) was the first researcher who claimed that linguistic performance in S-CMC might be transferred to FtF interaction. He conducted classroom discussion on a computer network. The study showed an increase in interactive competence of the participants and he concluded that S-CMC activities could enhance the development of learner's interactive competence and oral skills.

Beauvois (1997) examined the effect of S-CMC on the oral achievement of the participants. Her study had four sections: two sections in the experimental condition and two sections in the control condition. The experimental groups had weekly discussions in S-CMC while the control groups performed FtF. Three oral exams related to the materials were administered during the course and were subjectively graded. The t-test was employed for comparing the average of the three oral exams between the two groups, and the finding showed that the participants who had S-CMC sessions did significantly better and had a greater improvement in oral skills than those who had FtF sessions.

Payne and Whitney's (2002) study examined transferability from a psycholinguistic point of view. They investigated whether S-CMC can indirectly improve L2 oral proficiency by developing the same cognitive mechanisms underlying conversation speech. The participants were divided into two groups: the S-CMC group as the treatment group and the FtF group as the control one. The treatment group experienced two chat sessions out of the four sessions they had and discussed the topic in a chatroom while the control group participated in FtF discussion in all the four sessions. The pre-test and the post-test of speaking were administered at the beginning and the end of the semester, respectively. The results of this study showed that the mean score of the experimental group was much higher than that of the control one.

Abrams (2003) examined the effects of two types of CMC on oral performance to investigate whether or not these activities could be a good preparation for oral discussions. He compared the performance of three groups: synchronous and asynchronous CMC (S-CMC and A-CMC) groups (experimental groups) and FtF group (control group). The participants had a total number of three discussion classes. In the first one each group was given a reading assignment one week before each oral discussion session. In the second and the third discussion classes, the S-CMC group had a discussion on the Web-CT chat the day before the oral discussion, whereas the A-CMC group was given one week to discuss the assigned

readings and personal experiences and opinions on the Web-CT bulletin board. The control group had regular classroom exercises, such as pair and group work activities. Findings from this study indicated that S-CMC is a more effective preparatory activity for the whole-class discussion than either A-CMC or small-group or pair work activities.

Kost (2004) examined the effects of S-CMC on the development of writing and oral proficiency. He compared gain scores between the pre- and post tests among three groups: two treatment groups (FtF and S-CMC) and one control group. The treatment was a two-stage activity: participants conducted a web search activity followed by a role-play. In the experimental group the role-play was performed using FtF in the classroom and in the chatroom. The control group did not receive any tasks. His study did not find a significant difference in the development of oral proficiency among the three groups.

The Present Study

The present study is an attempt to re-examine the issue of transferability of language skills addressed by previous researchers (Abrams, 2003; Beauvois, 1997; Chun, 1994; Kost 2004; Payne & Whitney, 2002) and the possibility of oral proficiency development through S-CMC discussions. The main hypothesis in the present research is that S-CMC can provide a less threatening, less stressful condition for classroom interaction because it eliminates, reduces or minimizes the linguistic, psychological and cultural barriers of classroom interaction. Within the Interaction Hypothesis, learners can receive comprehensible input, provide feedback and produce modified output.

In this study the researchers have done their best to fill the gap in research concerning the impact of S-CMC discussion on the development of oral proficiency by exploring the effect of dyadic discussion since all previous research tried to investigate the impact of S-CMC group discussion on the oral proficiency of the learners. In other words, while all the research quoted earlier explored the effect of peers' communication (whole class or group work) on oral proficiency, this study mainly focuses on the effect of pair communication and attempts to investigate the following research questions:

1. Does S-CMC have any effect on the development of language learners' oral proficiency?

2. Within the S-CMC environment, what is the impact of the learners' level of proficiency on their improvement in oral proficiency?
3. What is the impact of learners' attitudes towards S-CMC on their improvement in oral proficiency?

Method

Participants

All English major freshmen students at the Faculty of Foreign Languages and Literatures, University of Tehran, participated in the present study during eight sessions of the Fall Semester, academic year 2008-9. There were 30 students (24 females and 6 males) who were randomly divided into two groups of the same size (n=15). Their ages ranged from 16 to 24, with an average age of 20.

Instruments

The instruments used in this study were two questionnaires, an oral proficiency rating scale, and software for online chatting.

Questionnaires

Two questionnaires were used for gathering the necessary data about the personal background and attitudes of the students. The first questionnaire, administered at the beginning of the study, had two sections (five open-ended items each) asking about the participants' personal information (name, gender, age, email address, etc.) and their knowledge about computers and the Internet. The purpose of administering this questionnaire was to collect general information about the participants of the study, to evaluate their ability in typing, and to find out which platform they preferred for chatting. The second questionnaire, adopted from Kern (1995), was administered at the end of the research. It included 13 items in the form of a five-point Likert scale and was related to the participants' perception of technology, their attitudes toward using CMC and their opinion on the use of CMC.

Oral Proficiency Scheme

In order to achieve the objectives outlined for the present study and in line with the operational definition given for oral proficiency, the researchers used Farhady, Jafarpour and Birjandi's (2004) framework for assessing the participants' oral

proficiency. The framework has five subsections, namely, accent, structure, vocabulary, fluency and comprehension. Each subsection has a rating scale ranging from 1-6 with 1 representing severe errors in speaking and 6 representing error-free oral performance, i.e. quite acceptable proficiency level. As it was necessary to get the course instructor involved, a preparatory session was held to introduce the scale and how numbers (scores) could be assigned to each scale. Both the researchers and the instructor of the course assessed the oral proficiency of the participants based on the above-mentioned 30-point holistic scale. Since it is asserted that structure, vocabulary and comprehension are the most important components of oral communication while accent is the least important for more proficient students different weights were taken into account for different components. Table 1, below, shows the weighing scheme.

Table 1
Weighing scheme for each of the five oral proficiency components

Rating points	1	2	3	4	5	6
Accent	4	3	2	2	1	0
Structure	6	12	18	24	30	36
Vocabulary	4	8	12	16	20	24
Fluency	2	4	6	8	10	12
Comprehension	4	8	12	15	19	23

The scores on each of the five scales were transformed into values represented in Table 1 and the total was calculated so that each student's final score would be obtained. Finally, each student's total score was taken to be the average of the two sets of scores given by the two raters. The researchers found that the inter-rater reliability indices for the pre-and post tests were 0.822 and 0.772, respectively. Also the intra-rater reliability indices for the pre and post-tests were 0.818 and 0.712, respectively. This indicates that the rating of the students had been based on a sound scheme.

S-CMC Software: Yahoo Messenger

Various types of Instant Messaging (IM), Internet Relay Chat (IRC) and Java based chat tools are among the many S-CMC tools available on the Internet. However, since the results of the first questionnaire showed that the Instant Messaging service of Yahoo Messenger is the most popular type of S-CMC tool used by the participants (80% of the participants had the experience of using this service at

least once a day for chatting with their friends or relatives), this software was preferred for the purpose of the present study.

Procedure

On the first day of conducting the research, the first questionnaire was distributed among all the students. Then, in the rest of the class time the oral proficiency of the participants was assessed by structured observation, while the researchers were present at the session, observing the students' performing their regular class activities. It was a 'Listening-Speaking' class and the students were required to talk about the topic selected by the instructor for at least 3 minutes. Both the researchers and the instructor of the course rated the oral proficiency of the subjects independently. It should be pointed out that since the instructor of the course had to cover the course syllabus and grade his students, he needed to rate their oral proficiency by listening to the recorded tracks of the discussions saved on an MP3 Player.

After the pre-test session, the six-week-long treatment sessions started in the computer lab. Since the results of the first questionnaire showed that most of the students were familiar with typing and Chatting, no preparatory and training session was offered to them prior to the treatment. Students went to the computer lab once a week as part of their regular class period to receive the treatment for the total number of six consecutive weeks. In the computer lab each student used a separate PC for his/her online discussion. The students were paired in advance and they knew whom they should start online discussion with. During the treatment period, each session started with the discussion topic given to the participants by the researchers. Then, each dyad started online discussion on the given topic using the IM service of Yahoo Messenger for the period of 45 to 60 minutes. Upon completion of discussion, all participants were required to either email or print their chat logs to the researchers (Table 2).

Table 2
Archive of the transcription of one dyad

[17:04] student 1: What do you think about the topic?
 [17:05] student 2: actually,
 [17:05] student 2: when i was a kid
 [17:05] student 2: i mean a teenager
 [17:06] student 2: my family gave me whole freedom
 [17:06] student 2: u know, i mean
 [17:06] student 2: anyway...
 [17:07] student 1: I think teenagers should decide, but parents must be care about their activities, they should supervise.
 [17:07] student 2: i think parents should be careful about their children
 [17:07] student 2: i agree with u
 [17:07] student 2: about my last sentence,
 [17:08] student 2: i meant that they should watch their behaviors

After completing the treatment, the participants were observed again so that their oral proficiency could be assessed. The observation format was the same as the one used in the pretest. The students were observed while communicating in the regular class period. Using the same rating scale, the participants' oral proficiency was rated by the researchers and the instructor of the course. At the end of the class period, the second questionnaire was administered to obtain information about the students' perception of technology, their attitudes towards and opinions about using CMC.

Results

The first research question of the present study was to see whether S-CMC has any effect on the development of oral proficiency of the learners. The analysis of the data collected revealed that the mean scores of the learners' oral proficiency changed from 70.33 in the pre-test to 81.51 in the post-test. As for the results of the paired samples t-test, it can be said that the difference between the two sets of scores is significant and there has been an improvement in the oral proficiency of the participants. ($t(1/30) = -9.822$, $p = .000$) ($p < 0.05$). Table 3 below shows the results of the paired sample t-test.

Table 3
Results of Paired Samples t-test

	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Paired Samples t-test	-11.1800	6.23474	-9.822	29	.000

The second research question looked into the possible effect of the learners' level of proficiency on their improvement in oral proficiency within the S-CMC environment. In order to find an answer to this question, first all the 30 participants were divided into two equal groups of high and low proficiency based on the mean scores of their pre-test. The learners who had obtained scores above 70 (out of 100) formed the high proficiency group and the ones with scores below 70 were put in the low proficiency one. Then the gain scores of each group were calculated. The result of an independent samples t-test showed that lower proficiency learners outperformed high proficiency ones. Therefore it was found that the level of proficiency matters significantly in improving participants' oral proficiency. Tables 4 and 5 below show the results.

Table 4
Descriptive statistics of the performances of low and high groups in the test of oral proficiency

Level of Proficiency	No.	Minimum	Maximum	Mean	Std. Deviation
Low Proficiency Group Gain Scores	15	7.00	24.50	14.3000	4.67822
High Proficiency Group Gain Scores	15	0.00	17.00	7.7667	5.69733

As Table 4 shows the mean of the gain scores of low proficiency learners (14.30) is almost twice as much as that of the high proficiency ones, i.e. 7.76. After running an independent samples t-test, the researchers came to the conclusion that this difference is statistically significant: $(t(30/2) = 3.485, p = .000)$ ($p < .005$). Table 5 below shows the results.

Table 5
Result of an Independent Samples t-test on the low and high proficiency groups

	Mean	Std. Deviation	T	df	Sig. (2-tailed)
Gain scores of High and Low Proficiency Groups	6.53333	2.26161	3.485	28	.000

The third question of the present study asked about the impact of participants' attitudes towards S-CMC on their improvement in oral proficiency. In the attempt to find an answer to this question, the learners were first divided into two groups, one having a positive and the other a negative attitude towards S-CMC. This was done according to the results obtained from the second questionnaire. Out of the total number of 30 students, eight students had a negative attitude and 22 of them had a positive attitude. Then the means of the participants' gain scores in the oral proficiency test were calculated and an independent samples t-test was run on these gain scores. Table 6 shows the descriptive statistics of the gain scores of the two groups.

Table 6
Descriptive statistics of the participants' gain scores with positive and negative attitudes in the oral proficiency test

	No.	Minimum	Maximum	Mean	Std. Deviation
Students with a Positive Attitude	22	1.00	24.50	12.3864	5.16151
Students with a Negative Attitude	8	.00	20.00	7.3125	7.33357

As the above Table shows the learners' with a positive attitude gained an average of 12.38 in the proficiency test while those with a negative attitude obtained an average of 7.31. This means that the positive attitude group outperformed the negative attitude one. In order to see whether this difference is statistically significant an independent t-test analysis was performed. The results of this statistical measure, shown in Table 7, revealed that there is a statistically significant difference in the means of gain scores of negative and positive attitude groups. ($t(30/2) = -3.114$, $p = .004$) ($p < .005$).

Table 7
Results of an Independent Samples t-test Comparing Means of Gain scores of participants with Positive and Negative Attitudes

	Mean Difference	T	df	Sig. (2-tailed)
Negative and positive groups	-7.2174	-3.114	28	.004

Conclusions and Discussion

The findings of the present study suggest that S-CMC can help teachers provide their students with opportunities in the classroom to go beyond traditional teacher-centered, teacher-initiated interactions in which students primarily answer questions (initiation-response-feedback model). The problem of this interaction is that just one learner can speak at a time and most of the time this one person is the more proficient and more talkative one. Moreover, the less proficient and shy learners, because of linguistic, psychological and cultural barriers, are not part of this interaction or have a small share of it. Also, interaction among learners is a rarity. However, in S-CMC all the learners have the opportunity to initiate the interaction, manage the discussion, give and receive feedback, resolve any misunderstanding together and reach a conclusion in a naturalistic, supportive and non-stressful environment. This means that learners can initiate, participate and be involved in both the process and the product of learning, that is, the ideal environment for developing learners' oral skills.

Considering the problems of learners in most non-English speaking countries who have limited time and opportunities to interact in the target language in and out of the classroom which, in turn, make them "structurally competent students who are often communicatively incompetent" (Johnson, as cited in McDonough & Show, 1993, p.16), technology can be thought of as one of the solutions to overcome these difficulties. Incorporation of technology into teaching practices will make teaching more effective and productive. A large majority of learners are typically able to "use computers at least to receive and send e-mails and browse the World Wide Web and the challenge for language teachers is to shape some of their computer-using experiences into language learning experience" (Warschauer & Kern, 2000, p. 2).

It can also be said that CMC per se cannot result in more and better learning. The fact resides in the way it is used; it can help learners in their language learning process positively. The S-CMC environment without the intervention of the teacher, who should just carefully monitor the learners' actions, can provide the required feedback for the students and help teachers select appropriate topics and platforms. It can therefore be a convenient vehicle for communication.

The results of this study are in line with Chun (1994), Beauvois (1997), Payne and Whitney (2002), Abrams (2003) and Kost (2004) as they confirmed that S-CMC can indirectly develop language learners' oral proficiency. The data collected from the present study and the analyses done indicate that most of the participants prefer S-CMC discussions over FtF ones. The question worth paying attention to is: what are the characteristics of this form of conversation that appear to enhance the development of oral proficiency skills? Several qualities of chatroom discourse can be addressed here. First, interaction in S-CMC is text-based. This helps the students to see the language of communication at the time of conversation. Also, written communication is slower than spoken communication and there is a time lag between sending and receiving a message. This property "provides students with more time to analyze and reflect on content and compose thoughtful responses" (Blake, 2000). Moreover, it allows learners to find the opportunity to read and revise what they have produced before it is presented to the interlocutor. This means that S-CMC may overwhelmingly help the linguistic problems of classroom interaction and allows them to communicate with each other without the worries of poor pronunciation, insufficient production skills or incomprehensible input from their peers or teacher.

Second, S-CMC can reduce anxiety caused by time pressure. It means that in an online environment the students are not under pressure to respond quickly in order to maintain the flow of conversation. They can contribute to the ongoing discussion whenever they feel they are ready. It can also reduce social anxiety that usually results from the fear of making mistakes or feeling shy in front of other learners. Students do not feel stupid or embarrassed when making mistakes and when taking their time to respond during a session. They experiment with the language with little or no fear of failure or negative feedback from others. It means that S-CMC can reduce the second concern of the learners which is psychological problem.

Third, since the role of the teacher changes from full authority, as is the case in traditional classrooms, to less a dominant position in an online discussion, the learners learn to be independent in terms of input, output and feedback which leads to greater autonomy in and control over the learning process. It means that S-CMC can reduce the cultural problems of classroom interaction as well.

Finally, becoming aware of the advantages, disadvantages, special characteristics and limitations of the S-CMC environment as a new mode of communication is necessary for a better matching of the type of L2 interaction needed for certain pedagogical purposes and the availability of resources and instructional time at their local institutions. Although, in the researchers' opinion, technology should be an indispensable part of any teaching situation, only the specific characteristics of any teaching situation can determine its use.

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