

Computer Mediated Communication (CMC) Discussion Tools in the Second Language Classroom

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The use of computer-mediated-communication (CMC) discussion tools, such as the discussion forum and the chatroom, in teaching and learning is not a new phenomenon, especially in the case of distance education. However, the use of these tools in the second language (L2) teaching and learning context is still relatively new. In addition, research on the impact of individual CMC tools on various L2 teaching/learning contexts is still an emerging discipline. Drawing from various recent research findings in the area, this paper aims to discuss the main features of two main discussion tools of CMC—the chatroom and the discussion forum—in an academic setting. The paper will also touch on the respective advantages, problems and difficulties in using these tools. Some suggestions will be made on how language teachers can make these tools work in their classroom. In short, this paper hopes to provide some insights that may help teachers have a better understanding of the CMC discussion tools hence making informed decisions on whether, why, how and when to use them in an academic setting.

■ Introduction

Computer Mediated Communication (CMC) is “communication that takes place between human beings via the instrumentality of computers.” (Herring, 1999:1) Examples of commonly used CMC tools in language teaching and learning are email, chatroom, discussion forum, and the bulletin board. There are, however, other CMC tools used for a more general and non-educational context such as the distribution list, instant messenger, video-conferencing and audio chat. The mode of communication in CMC also varies—it could be text based or with use of audio-visual, synchronous versus asynchronous, one-to-one versus one-to-many versus many-to-many, time and place dependent versus time and place independent.

This paper focuses on the discussion of two CMC discussion tools—discussion forum and chatroom—as they have been most commonly used in the teaching and learning of a second or foreign language. Findings of recent research and studies will be cited to highlight the strengths and weaknesses of the discussion forum and chatroom. Finally, based on experience and research, this paper hopes to give some suggestions on how the online discussion tools can be effectively used in the language classroom.

■ Main features of discussion forum and chatroom

Although both the discussion forum and chatroom are similar in many ways, they have significant differences in the following five aspects.

Feature 1: Time dependent versus time independent

While communication in the chat is time dependent, communication on the discussion forum is time independent. For the chat, because it involves synchronous communication, all the participants must log on at the same time. This also means that participants can get instant feedback on the comments or questions that they post. One interesting observation of the chatroom is that any lull period of even as short as less than a minute will arouse suspicion from other participants if one is still present on the chatroom. Therefore, chatrooms have frequent queries or references to confirm if certain parties are still present in the chat, as shown in Example 1:

Example 1

S1: so where r u guys
S1: cloud apple are u all still there
S2: yes...

or participants could warn others that they would be away for a period of time, then announce their return when they are back (see Example 2).

Example 2

S3: i need to go to e ladies..
S4: me too
S5: heehe
S5: left the 2 of us
S6: yup
S4: hello
S4: we're back
S5: welcum back

The discussion forum, on the other hand, is time independent. Participants could log on and enter their contributions at anytime they want. Because of this, feedback is not necessarily instantaneous, rather it is delayed.

Feature 2: Use of abbreviations, symbols, emoticons and simplified syntax

Even though participants on both modes of online discussion do use abbreviations, emoticons and simplified syntax, the frequency of use in the chatroom is much more significant than in the discussion forum. This could be attributed to the conversational or speech-like nature of the chatroom where one is conversing or chatting with the other parties, as if face-to-face. Example 3 is taken from the beginning of a chatroom communication where three male students were making small talk about their Physics tutorial and football, before they got into the actual discussion of the topic they were assigned. Emoticons were used in five instances to express the students' feelings.

Example 3

S6 to ALL: hello
 S7 to ALL: ha ha
 S6 to ALL: later got phy tut?
 S8 to ALL: got... but no do
 S8 to ALL: champion brand
 S7 to ALL: going to win money in the upcoming matches today
 S6 to ALL: u made yr bet?
 S7 to ALL: no no
 S6 to ALL: /me say hi
 S7 to ALL: 😊
 S8 to ALL: 😏😏
 S7 to ALL: interesting
 S7 to ALL: 👍
 S6 to ALL: 🤖
 S7 to ALL: 🤖
 S6 to ALL: hehheh
 S7 to ALL: ha ha so fun
 S6 to ALL: hello

Unlike the chatroom, the occurrence of abbreviations and emoticons tend to be much less in the discussion forum. Even when they are used, they are used rather sparingly, like what one would do in an email. It could be hypothesized that such a case is due to the asynchronous nature of the discussion forum, that is, there is much less pressure in terms of time to make a response immediately. Furthermore, unlike the chatroom, the structure of the discussion forum is less similar to a face-to-face conversation where instantaneous response is expected.

The excerpt in Example 4 is taken from a forum where students responded to the issue of human cloning. These are the same students who participated in the chatroom

as in Example 3—students who were familiar with both online discussion tools. When compared, the tendency to use abbreviations and emoticons is less demonstrated in the discussion forum.

Example 4

S7: I am very happy to show my opinion here, that is cloning of human being must forbidden and controlled by the law!!!
 Because I am unique in the world . ^ _ ^
 And """"
 S8: Science should be based on morality!
 If cloning human is allowed,
 How can this world be?
 If one is cloned,
 It is not equal to the person that is cloned!
 There will be a revolution on cloning human, I believe.
 S6: Hello. My name is S6. But I am not sure of my number. I mean I am S6No.1 or S6No.2 or S6No.3 or chNo.4 or ... S6No.n...
 Who can tell me the truth?

In short, participants do make use of emoticons to compensate for the lack of non-verbal cues, mainly facial expressions and gestures, in both modes of communication. Granted, for communication to take place and messages to be conveyed effectively, participants will have to be familiar with and understand what the emoticons and abbreviations represent or mean.

Feature 3: Nature of "talk"

Nature of "talk" here refers to how participants communicate or how conversations are carried out on the discussion forum and chatroom. The first issue is the presence of openings and closings in the conversation. Unless the participants use pseudonyms or nicknames, the technology can automatically detect the identities of the participants. Therefore, it is optional for openings and closings to be present on the discussion forum and chatroom (Murray, 2000). In other words, participants could enter the discussion forum and chatroom without identifying themselves nor addressing or acknowledging the other participants, and leave without signing off. Nevertheless, one does observe that in the chatroom, there is a series of frequent acknowledgements, greetings and farewells; whereas in the discussion forum, such discourse is scarce. Examples 5a, 5b 5c and 5d show portions of three chatrooms where openings and/or closings are present.

Example 5a

S9 to ALL: hello
 S9 to ALL: nice to meet u all
 S10 to ALL: hello
 S11 to ALL: haha
 S10 to ALL: hehe

Example 5b

S12 to ALL: hi
 S13 to ALL: no idea
 S15 to ALL: hello all
 DF to ALL: what topic shall we choose?
 S13 to ALL: shall we do e same topic
 S13 to ALL: ?
 S12 to ALL: about pollution
 S14 to ALL: that is boring leh
 S12 to ALL: hum
 S15 to ALL: hello
 S12 to ALL: oh, can't see, S15
 S15 to ALL: hello 🙄

Example 5c

S9 to ALL: sigh have to write essay
 S9 to ALL: so many things to do...
 S10 to ALL: byeeeee
 S9 to ALL: sigh..
 S9 to ALL: bye bye 😊
 S11 to ALL: byebye

Example 5d

S16 to ALL: okay.. I am signing out
 S17 to ALL: 🙄
 S17 to S16: 🙄

The second issue with the nature of “talk” is the length of responses, which varies between the chatroom and discussion forum. In a study conducted by Schneider, Kerwin, Frechtling and Vivari (2002), which compared face-to-face and chatroom discussion, when they looked at the number of words per comment, they found that chatroom participants used very brief utterances. They attributed this to the urgency felt by participants to post their responses before the discussion proceeded to other topics. The urgency to say something fast stems from the wait time in the chatroom, which is short, and the expectation of other participants who may get impatient if they do not receive immediate replies. In addition, in an active chatroom, the page scrolls up so fast that participants may not have time to read a lengthy message. And if they want to read the message after it moves up from the working screen, they will have to scroll up the page for the message. This creates inconvenience and the common practice is that chatroom participants usually keep their responses brief. On the other hand, in the asynchronous situation of the discussion forum where the urgency to be fast is not apparent, participants have the time to think through their message before they post it up. This may encourage them to craft longer messages. Having mentioned this, there is no doubt there are many brief and concise responses on the discussion forum. Nonetheless, compared to the chatroom, the tendency of participants to write longer in the discussion forum seems to be stronger.

The third issue of nature of “talk” is turn taking. Sacks, Schegloff and Jefferson (1974) postulate that there is a turn taking system governing every conversation. Among others, they suggest features and rules applicable to the construction of turn, allocation of turn, and

coordination of the transfer of turn. In addition, repair mechanisms are used where there are overlaps in a conversation. A number of studies have looked at the number of turns in the chatroom. Chun (1994) looked at the writing products of students studying German who used the chat between 15 and 25 minutes, and she found that the number of entries or turns ranged from 2.8 to 17.8 for each student. Kern (1995), when comparing transcripts of oral discussion and chatlog of a chatroom discussion, found that there were 2 to 3.5 times more turns in synchronous chat. This indicates not only the frequency of turn talking, but also the participation level of members in the chatroom.

In terms of time lapse between turns, it is very minimal or sometimes even non-existent in the chatroom. Also, there are many overlaps within each conversation. The time lapse in the discussion forum, however, varies and is controlled by the frequency and particular times in which participants join the discussion forum, especially if there is a deadline attached to it. For example, students tend to enter the discussion forum either at the beginning when it has just opened or at the very end when the closing deadline to make contributions draws near.

As for sequencing of turns in the chatroom and discussion forum, although they largely display the current-speaker-selects-next turn-taking structure (Sacks, Schegloff & Jefferson, 1974), there are many occurrences where speakers self-select. Therefore, the possibility and potential for participants overlapping one another is much greater than in the face-to-face context (Murray, 2000). Excerpts of the same chatroom in Example 6 clearly illustrate the frequent occurrences of overlapping.

Example 6

(9:25:43 AM) S18 to ALL: hello
 (9:26:19 AM) S18 to ALL: lets discuss (*referring to the classroom task*)
 (9:26:19 AM) S19 to ALL: ARSENAL GOING TO WIN THE MATCH TODAY YEAH
 (9:29:14 AM) S18 to ALL: the impact of air pollution?
 (9:29:36 AM) S20 to ALL: impact of air polution should be our problem?
 (9:29:55 AM) S19 to ALL: i think can
 (9:29:55 AM) S20 to ALL: then how to reduce air polution be solution part?
 (9:30:14 AM) S18 to ALL: yah so will b impact n solution
 (9:49:03 AM) S19 to ALL: you sure the lab 2 results come out ??
 (9:49:14 AM) S20 to ALL: my friend got full marks!
 (9:49:26 AM) S20 to ALL: and his programme not very well written one
 (9:49:26 AM) S18 to ALL: how can man?

Note that in this three-member chatroom, participants were constantly posting messages simultaneously, not being aware that they were overlapping one another. This could get confusing when the size of the chatroom increases. Yet, chatroom participants accept this as part and parcel of the online discussion tool. Similarly, in the case of the discussion forum, one may notice that the day and time of many postings either overlap or are a fraction of seconds or minutes among one another.

In conclusion, in turn-taking, the discussion forum and chatroom do not conform to the no overlap principle and principle of orderly turn alternation, as opposed to face-to-face communication (Herring, 1999).

Feature 4: Syntactic complexity

The syntactic structure in both the chatroom and discussion forum is interesting and varied. It ranges from a one-word utterance, a demonstration of feelings via emoticons, a phrase, a brief noun clause, to a simple sentence, and a paragraph with complex sentences. Sotillo (2000) compared the syntactic complexity of English as a Second Language (ESL) learner output in synchronous and asynchronous CMC. Her study found that because of the longer time lapse in the asynchronous mode, in this case the discussion forum, students produced sentences which were more complex than the synchronous mode. More subordinate and embedded subordinate clauses were used. In the chatroom, on the other hand, students used shorter clauses and sentences.

In addition, the language of the chatroom is similar to that of the Short Messaging Service (SMS) text, which resembles spoken discourse. Both the chatroom and SMS are inundated by frequent use of abbreviated spelling of words, content or lexical words without verbs, dropping of articles, prepositions, slang etc., even in an academic context where the discussion focuses on academic issues and topics. Common abbreviated words are:

- "K" which means "okay";
- "u" which means "you";
- "4" which means "for";
- "2" which means "to", "too"

There are, however, many other sophisticated abbreviated words that have been concocted and many more to appear in the future. Here's an example, which means "See you at Starbucks tomorrow."

"c u @ *\$s 2mrw"

Nonetheless, there hasn't yet been such a wide spread use of SMS-type language in the discussion forum of an academic setting. This could be because of the delayed and asynchronous nature of the discussion forum where participants are not able to check any doubts with one another immediately. Therefore, not knowing how familiar with SMS-type of language the other participants are, the discussion forum participants may be more cautious in their use of abbreviated words.

Feature 5: Focus of discussion

Staying focused on a topic is one of the most difficult things to control in a chatroom, even when participants are given specific tasks to do and accomplish. One of the aspects that McCarthy, Miles, Monk, Harrison, Dix & Wright (1993) attempted to look at in their study was maintenance of focus in a synchronous communication mode. They asked the participants to complete a task and found that their participants had a difficult time staying on task. Like in a face-to-face context, it is rather natural for "chatters" to side-track. Ideas bounce around and certain threads of an idea may be further pursued. Therefore, the entire communication consists of multiple threads, some of which may not be relevant to the topic. Likewise, in the discussion forum, once a participant follows a certain thread, the other forum participants may pursue it without being consciously aware that they have gone off track. Unless there is someone in the group who realises this and draws the group back to the main issues or topics discussed, or a moderator who guides the group back on track, this detour or deviation from the actual topic of discussion could go on for a long time. Nevertheless, with the discussion forum, it is easier for participants to notice that they have gone off the topic because the topic of each posting is displayed on the screen as a header. This is not so with the chatroom, with no topic headers to remind its members.

To sum up, these are the inherent nature and features of the discussion forum and chatroom. Some of these features may be of assistance to language teachers, while some may pose difficulties.

■ Advantages and problems of the discussion forum and chatroom

The discussion in this section on the strengths and weaknesses is a synthesis of recent research done on the impact of synchronous (Sullivan & Pratt, 1996; Beauvois, 1998a, 1998b; Lee, 1998; Harris & Wanbeam, 1996; Skinner & Austin, 1999; Chun, 1994; Warschauer, 1996; Kern, 1995; Leppanen & Kalaja, 1995; Sotillo, 2000; Jaeglin, 1998) and asynchronous (Harris & Wanbeam, 1996; Sengupta, 2001; Sotillo, 2000) modes of communication on different aspects of language learning. In these studies, the group size ranges from two to more than 10 participants. Research methods that were used to examine the influence of the CMC discussion tools also vary; some studies used quantitative research methods whereas others qualitative ones. In addition, anecdotal accounts of the author's students who participated in the discussion forum and chatroom will also be presented to provide the students' perspective of the CMC discussion tools. Table 1 gives a brief and concise description of the advantages and problems of the discussion forum and chatroom.

Table 1 Synthesis of advantages and problems of the discussion forum and chatroom

Item	Description	Forum	Chatroom
1	More positive attitude towards writing	+	+
2a	Writing apprehension decreases; less stressful environment	+	+
2b	Fear of lack of good language skills	-	-
3a	Equaliser of participation structures, i.e. more equal participation, less domination by a particular person, shy and less performing students participate more (as compared to face-to-face discussion)	+	+
3b	Some dormant participants who "listen" but do not "speak"	-	-
4	Increase in language output (quantitative), e.g. number and length of entries, longer sentences	+	+
5	Demonstration of syntactic complexity in terms of sentences, ranging from simple to complex structures; and lexical range	+	+
6a	Demonstration of more well developed ideas	+	+
6b	Fear others will ridicule ideas/thoughts	-	n/a
7	Increase in writing scores (compared to face-to-face context)	+	+
8	Demonstration of more social interaction, i.e. participants more likely to initiate topics, more display of discourse functions	+	+
9	Some evidence of transfer of skills, from writing to oral skills	+	+
10	Evidence of less teacher talk, more student talk	+	+
11	More time to reflect and think before responding	+	+
12	More use of target language due to lack of contextual (non-verbal) cues	+	+
13	Difficulty in keeping up with discussion	-	-
14	Information overload	-	-
15	Lack of motivation to participate after novelty diminishes or if topic is not of interest	-	-
16	Hassle of logging on and off	-	-
17	Teacher and student familiarity with tools important	-	-
18	Discussion less focused, lacks coherence and continuity	-	-

Note: '+' symbol represents an advantage; '-' symbol represents an obstacle

The main advantages of the discussion forum and the chatroom over face-to-face discussions are that they allow the participants the liberty to think before responding. Consequently, the language output and ideas are found to be of a higher quality. There is also evidence to show that these online discussion tools have a positive influence on the oral skills and attitude towards writing.

On the other hand, the key problem of the discussion forum and chatroom is that participants find it hard to keep up with the discussion. This is especially true in the context of the chatroom where being absent from the chat for a mere couple of minutes could require one to either scroll the screen to read through what has transpired or to interrupt the discussion by asking others what one has missed. In the case of the discussion forum, this could be many postings away. Such inconvenience plus the hassle of logging onto the website could very well deter already unconvinced and unmotivated participants from contributing to the discussion. In addition, teachers' familiarity, comfort, confidence and competence in using the online discussion tools have a significant impact on the shape of the discussion.

Besides the obvious advantages and problems of the discussion forum and chatroom, there are a few aspects where the online discussion tools could be both an

advantage and a problem. First, while some found participants to be less apprehensive when they did discussions online, others found participants anxious about their language skills as mistakes will be obvious and glaring in the written form. Second, although findings show that there was a more balanced participation and contribution by the participants via the online discussion tools, there was a small number of participants who did not contribute anything to the discussion. Because of the absence of the physical self, one could get away undetected without making any contributions. These could be uninterested participants or those who prefer to "listen" and not "speak". Whichever the case, the online discussion tools allow one to "hide". Third, while the delayed reply feature of the online discussion tools allows for more expression of well developed and well thought ideas, some participants worried about the acceptance of their ideas. This fear is escalated when participants of the online discussion tools do not know each other well.

The following comments of participants who had used either the discussion forum or the chatroom for their discussion in an academic context best summarize this section on the advantages and problems of the online discussion tools (see Table 2).

Table 2 Participants' feedback on the use of online discussion tools

Participant	Comments (Advantages)
1	"The advantages are we can write what we want to write and everyone in the class has equal opportunity to express his/her opinions." (chatroom)
2	"I guess the best thing about using the discussion forum is that it gives you a chance to really think through what you want to say before saying it. Also, for those who are more reserved, this is an excellent opportunity to say what you want to without fear of being rebutted directly."
3	"It (chatroom) allows us to be bolder in asking and discussing certain issues."
4	"Many opinions post on the forum are useful. I get to know more about other people's ideas and arguments."
5	"I think discussion forum is good as it does not rush us into giving views and opinions like in face-to-face discussions which we might not be able to really organize what we want to say."
6	"I think it makes me have a feeling to take things easy because if I were to use the discussion forum, I would tend to link it to something like chatting on the net with my friends. Maybe any crazy ideas could come from a discussion forum."
7	"Fun. A break from the normal way of discussing." (chatroom)
8	"The discussion forum provides us an opportunity to "listen" to others' view which will eventually benefit us greatly. Since it allows anyone from the class to participate anytime from anywhere, the discussion is not limited to one classroom session alone. Hence, the forum should be encouraged and utilised."
9	"The discussion forum allows students to prepare their points before uploading it. However, while allowing us to present our thoughts in a smoother flow, face to face discussions will achieve a more spontaneous and immediate response from students, which could be better and generates more discussions with the people present. An online discussion takes more time as students have to check back on what's new. However this concept can also be a plus point as students can participate at a time which fits their schedule."
Participant	Comments (Difficulties)
10	"Face to face discussions will achieve a more spontaneous and immediate response from students, which could be better and generates more discussions with the people present."
11	"With the face to face discussion, I feel it is more sincere."
12	"I feel that it is easier to voice opinions in class rather than typing it out and organizing thoughts."
13	"A bit of hassle logging on."
14	"Because of people have more time to think before they write, so people may not really express the true opinions but opinions that comfort people."
15	"There was only one topic posted. Late response to topic is very difficult since most of ideas are already there. Hence the feeling of repeating the same thing."
16	"There are times when the question is too general and there are many ways which we can interpret it. As a result, there is some uncertainty on what to write and the length of the reply."
17	"Most of us just put our own opinions there and seem to have no comment on others."

■ How to make discussion forum and chatroom work in the language classroom

Despite the problems and difficulties in the implementation of the online discussion tools, they are a powerful medium in helping students in language learning. There are a number of effective measures that can overcome these inherent features of the online discussion tools.

Keep group size manageable

It is best to keep the group size at a maximum of four participants for the chatroom and six for the discussion forum. These are optimum sizes where participants can get to know one another more while at the same time not feel intimidated. For supervision and monitoring purpose, it is also easier for the teacher or moderator to keep track of the level of participation of each member in the discussion. In addition, it is easier to detect members who have kept silent.

Monitor discussions periodically

One of the best online discussions is one that is both participated and moderated by members of the discussion group. In most discussion groups, there is usually one or two who will act as the moderator, which is true of face-to-face discussions as well. In such a situation, the role of the teacher is none other than to monitor the discussions periodically. However, there may very well be groups where an obvious moderator is not present. In this context, the teacher will have to ensure that the discussion is on track and offer guidance when the situation necessitates it. The most important thing one should be constantly aware of is that the online discussion should be a platform for members to express and contribute their thoughts and feedback on particular issues comfortably and confidently. In other words, the teacher should try not to dominate the discussion nor appear intimidating.

Provide feedback

When to give comments and feedback on the online discussions is sometimes a tough call. Apart from reminding members who have gone off topic, teachers will have to use their own discretion to decide when and if the discussion would benefit from their input. One good thing for teachers to remember is to try not to give judgemental comments but to pose provoking questions or questions that require the participants to think critically. Unlike a face-to-face discussion, students on the online mode have more time to reflect and should be able to respond with more thought-out and mature arguments. Occasionally, there may be disputes or heated arguments in the discussion. If there is no moderator within the group, then the teacher will have to act promptly to re-focus the group. Otherwise, it will be a great deterrent for members to re-enter the discussion.

Behind-the-scene work

Behind-the-scene work refers to individual personal messages sent by the teacher to particular members of the discussion group. Behind-the-scene is important to sustain online discussions for an extended period of time. For example, instead of publicly reminding members who have not contributed, it is more effective for the teacher to send a note to these members prompting them to participate. Alternatively, the teacher could send motivating messages to individual students who show progress or who have contributed something good. Such personal notes will assist in ensuring more quality messages while sustaining the interest, motivation and enthusiasm of the members.

Plan and implement follow-up activities

Similar to face-to-face discussions, clear objectives and goals should be conveyed prior to any online discussion.

Furthermore, students should be informed of any follow-up activities. They must see that the discussion is related and relevant to some learning modules or objectives. That is why follow-up activities are crucial. Using the online discussion tools merely for the sake of utilizing the technology is not going to work because once the sense of novelty fades, the motivation to go online will fade as well.

Set ground rules or guidelines

Teachers should set basic ground rules, especially for discussions in an academic context. These rules could include no use of abusive language, no attacking individuals, no inflammatory messages etc. Teachers could also set other rules that they deem appropriate, for example, no use of abbreviated words/spellings, write complete sentences in the discussion forum etc. However, it is best to keep the rules simple and brief so that students do not get put off.

■ Conclusion

Like any other language learning/teaching aids, teachers need to use the online discussion tools to know what they can do for their students. "Any CALL activity that is assigned and used within a language class is influenced by the way in which the teacher introduces and structures it." (Chappelle, 2001:54) Although there are difficulties, they can be overcome through appropriate adaptations. The online discussion tools are indeed a useful interactive medium that awaits teachers to utilize and maximize for their students.

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