





# The Relationship between Computer-Mediated Communication and Online Willingness to Communicate in Second Language among Malaysian Undergraduates

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**Abstract.** This paper examines Malaysian undergraduates' perception of Computer-mediated Communication (CMC), their Willingness to Communicate (WTC) in English as a Second Language (L2) during online class, and the nature of the relationship between CMC and online L2-WTC. Quantitative analysis reveals that Malaysian undergraduates have a favorable perception of CMC, a moderate level of online L2-WTC, and that there is a significant moderate relationship between CMC and online L2-WTC. As such, instructors are reminded to take advantage of technology and to play an active part in ensuring that learning and communication involving the students to take place during online class.

**Keywords:** Computer-mediated communication, willingness to communicate, language learning, undergraduates.

## 1 Introduction

The primary goal of second language learning and teaching is to empower learners to become proficient users of the language, ultimately achieving fluency. In a traditional classroom setting, students have ample opportunities to engage in face-to-face interactions with their instructors and peers in the target language. According to Long's (1996) Interaction Hypothesis, these interactions play a pivotal role in language acquisition, helping learners develop both their language skills and confidence in speaking [1].

### 1.1 Research Background

However, with the increasing integration of online learning in higher educational institutions [2, 3], students and instructors are now often required to convene through platforms like Zoom, Webex, Google Meet, Microsoft Teams, and Skype [4]. This shift

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R. Legino and Y. Ahmad (eds.), *Proceedings of the International Conference on Science Technology and Social Sciences – Social Science Track (ICONSTAS-SS 2023)*, Advances in Social Science, Education and Humanities Research 865,

[https://doi.org/10.2991/978-2-38476-293-4\\_13](https://doi.org/10.2991/978-2-38476-293-4_13)

in the learning environment raises a critical question in the context of second language (L2) acquisition: how willing are the students to communicate in the L2 without the usual face-to-face interactions?

## **1.2 Problem Statement**

While some researchers list the benefits of online learning involving computer-mediated communication (CMC) in language learning and teaching [5, 6, 7], there still remains a significant gap in our understanding of its impact on second language learners' willingness to communicate (WTC). In reality, not much is known about how CMC affects this crucial aspect of second language acquisition [8]. Worse, reference [9] pointed out that inappropriate teaching methodology and lack of oral practice environment might cause problems with the teaching and learning of oral communication.

Therefore, it is imperative to gain insights into how CMC influences second language learners' WTC. This knowledge is essential to ensure the effectiveness of teaching and learning of oral communication in the second language (L2) context. This study, therefore, aims to seek the answers to the following research questions:

1. How do Malaysian undergraduates perceive CMC?
2. What is the level of online L2-WTC among Malaysian undergraduates?
3. Is there a significant relationship between CMC and online L2-WTC?

## **2 Literature Review**

### **2.1 Computer-mediated Communication**

CMC is conceived as any human communication which takes place through the use of two or more electronic devices [10]. The incorporation of CMC in language learning nowadays either in EFL or ESL setting has shown various impacts on students' performance during language learning process. Reference [11] pointed out that the use of text chat and voice chat in EFL setting has disclosed how Synchronous Computer-Mediated Communication (SCMC) and face-to-face (F2F) communication can either be similar or different concurrently, depending on certain task features presented during the tasks. In addition, it has also been found that CMC can affect students' performance in L2 setting depending on the language skills. Reference [12] highlighted that during writing tasks, learners preferred video-chat mode as the medium of CMC rather than text-chat mode as they claimed that they can focus better during the task and that they found it more interesting. In another study, reference [13] found that students' engagement during CMC mode during speaking task has been a challenge due to the lack of non-verbal communications such as gestures and facial expressions. This hinders the learners from taking more turns, negotiating content, displaying positive backchannels and experiencing higher enjoyment during the task. More work needs to be done in order to get the positive results that normally come with F2F communication

[13]. Since much is yet to be discovered about the impact of CMC on students' WTC, this area is seen as worthy of investigation [14, 15].

## **2.2 Willingness to Communicate (WTC)**

Willingness to communicate (WTC) or having the tendency to interact with a person or more than one person is a construct that was proposed by McCroskey and his associate back in the early 80s [16, 17]. It was originally used in the field of first language communication. The construct was later imported into the second language communication field by MacIntyre and Charos in 1996 [18]. Since then, the number of studies on WTC in L2 has been increasing and it has earned its spot in the list of individual difference (ID) variables in second language acquisition [19]. Studies from the second language acquisition field show that learners experience varying degrees of L2-WTC with moderate level being the most reported outcome [20, 21, 22, 23] compared to high [24, 25] and low. While studies on L2-WTC have been gaining traction, not much is known about students' online L2-WTC. Because of that, there is a need to explore this line of research.

## **3 Methodology**

### **3.1 Research design**

This research is predominantly quantitative in nature. Approximately 300 diploma students from three university campuses located in northern Malaysia took part in the study. A three-part questionnaire was used to collect data from the participants. The first part elicited biographical information such as age, gender, and their perceived level of English language ("very good", "good", "average", "poor", and "very poor").

The second part contained the amended Computer-mediated Communication Scale adapted from reference [26]. Eight items which were considered suitable and relevant for this research were adapted from the original scale. The items were translated to Malay Language by a bilingual lecturer (Malay and English language) and later were checked for meaning and consistency by two senior lecturers. Unlike in the original scale in which the participants must read each item and rate it as either "strongly agree", "agree", "uncertain", "disagree" and "strongly disagree", this amended CMC scale asked the participants to read each item and rate it based on their level of agreement from 1 = very low to 6 = very high. The changes were made to make it easier for the participants to respond to each item on a scale. The total scores for the participants would be in the range of eight to 48. The higher the score is, the higher the level of agreement that the participants have regarding CMC.

The third part of the questionnaire contained the amended L2-WTC scale adapted from reference [27]. There were altogether eight items in the scale. Similar to the amended CMC scale, the items for the L2-WTC scale were translated into Malay language by a bilingual lecturer before they were checked for meaning and consistency by two senior lecturers. As for the rating system, unlike in the original scale in which the participants were asked to rate each statement as 1= definitely not willing, 2 =

probably not willing, 3 = perhaps not willing, 4 = perhaps willing, 5 = probably willing, and 6 = definitely willing, this adapted scale asked the participants to read each statement and rate it on a 1 = very low to 6 = very high. It was felt that this adapted rating system would be easier for the participants to understand and use rather than the original one. The total scores for the participants would be in the range of eight to 48, with higher scores indicating higher level of willingness to communicate in English language.

The three-part questionnaire was converted into an online questionnaire using Google Forms. A welcome page consisted of a brief summary of the purpose of the research, definition of key terms, instructions, and consent, greeted the potential research participants. They have to give their consent first in order to proceed to the page which holds the three-part questionnaire. The link to the Google Forms was given to second semester diploma students via their respective English lecturers. The students were invited and encouraged to become participants for the study. In other words, participation was entirely voluntary in nature. Approximately 300 second semester diploma students took part voluntarily in the study.

### **3.2 Data Analysis Procedures**

Statistical Package for Social Sciences (SPSS) version 28 for M1 Apple computer was used to analyze the data. First, to identify the participants' perceptions regarding CMC, the mean score was computed. Second, to identify the level of L2-WTC among the participants, mean score was also computed. Finally, to establish the nature of the relationship between CMC and L2-WTC among the participants, Pearson correlation was used.

## **4 Findings**

This research project investigated matters related to CMC and online L2-WTC among Malaysian undergraduates. About 300 second semester diploma students from three university campuses in northern Malaysia took part in the study. However, after the initial data screening process, only 285 submissions were considered valid for the study. 28% of the respondents were male students and 72% of the respondents were female students. Their ages ranged from 18 to 21 years old ( $M = 19$ ;  $SD = .27$ ). All of them were Malay Bumiputera students. None of them were majoring in English-related courses. In terms of their perceived level of English language, 57% considered themselves as "good" and "very good"; 39% considered themselves as "average"; and the rest or 4% considered themselves as "poor" in the language.

The participants indicated their level of CMC and online L2-WTC by rating the items in the two scales. The Cronbach alpha for the CMC scale was .93 and for the online L2-WTC was .95. These suggest that the two scales were reliable for collecting data. Results for each of the research questions are provided below.

#### 4.1 Malaysian undergraduates' perception of CMC

To answer the first research question, descriptive statistics analysis was utilized. The following cut-offs were used to assign meaning to the level of CMC: 1.00-2.99 = Low, 3.00-4.99 = Moderate, and 5.00-6.00 = High. Table 1 summarizes the participants' responses to all eight CMC scale items. The mean score and standard deviation for each CMC item is also presented.

**Table 1.** Mean score and standard deviation for Computer-Mediated Communication (CMC)

Item	Mean Score	SD
CMC1	4.20	1.005
CMC2	4.28	1.031
CMC3	4.14	1.062
CMC4	4.12	.983
CMC5	4.07	1.111
CMC6	4.26	1.088
CMC7	4.14	1.083
CMC8	4.22	1.010
Overall	4.17	.859

As can be seen in Table 1, the mean score that represents the overall level of CMC among the participants is 4.17 (SD = .86). This indicates that the participants have a favorable attitude towards CMC. Among the eight statements regarding CMC, the top four items that received the highest approval from the participants were items CMC2, CMC6, CMC8, AND CMC1. They considered CMC as a pleasant and effective form of communication during online class. While all the items received a mean score of 4.++ CMC5 received the lowest mean score (M=4.07). This suggests that participating in class discussion via CMC is something that needs to be improved on.

#### 4.2 The level of online L2-WTC among Malaysian undergraduates.

To answer the second research question, descriptive statistics analysis was utilized. The following cut-offs were used to assign meaning to the level of L2-WTC: 1.00-2.99 = Low, 3.00-4.99 = Moderate, and 5.00-6.0 = High. Table 1 summarizes the participants' responses to all ten L2-WTC scale items. The mean score and standard deviation for each item is also presented to show levels of L2-

**Table 2.** Mean score and standard deviation for Online Willingness to Communicate in Second Language (LC-WTC)

Item	Mean Score	SD
WTC1	4.43	1.051
WTC2	4.41	1.037
WTC3	4.47	1.026

WTC4	4.32	1.233
WTC5	4.24	1.189
WTC6	4.28	1.171
WTC7	4.39	1.106
WTC8	4.14	1.189
Overall	4.33	.977

As can be seen in Table 2, the mean score that represents the overall level of L2-WTC among the participants is 4.33 (SD = .98). This indicates that the overall level of online L2-WTC among the research participants is moderate. The top three communication activities that the participants were most willing to do during online class involved interacting with their instructor (WTC3, WTC1, and WTC2). The communication activity that they were least willing to do was giving a speech (WTC8) during the online class. However, they did not mind giving their opinion during online class (WTC 7) as suggested by the mean score for that particular item.

### 4.3 The relationship between CMC and online L2-WTC.

To answer the third research question, the Pearson product-moment correlation test was conducted to analyze the relationship between CMC and online L2-WTC. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. The strength of the correlation was assigned meaning based on the guidelines proposed by reference [28]:  $r = .10$  to  $.29$  = Low,  $r = .30$  to  $.49$  = Medium, and  $r = .50$  to  $1.0$  = Large. The output of the analysis is given below.

**Table 3.** Pearson Product-Moment Correlation Analysis between CMC and online L2-WTC (N = 258)

Variable	Online Willingness to communicate in L2
Computer-mediated communication Pearson Correlation	.38**
Sig. (2 tailed)	.00
N	258

Table 3 indicated that for the research sample ( $n = 258$ ), there was a statistically significant positive correlation that was moderately strong between CMC and online L2-WTC,  $r = .38$ ,  $n = 258$ ,  $p < .001$ . In other words, students who have a favorable attitude towards CMC are likely to be willing to communicate in English (L2) during their online classes, and this relationship is not likely due to random chance.

## **5 Discussion and Implications of Findings**

### **5.1 Discussion**

The first research question of this study was to understand Malaysian undergraduates' perceptions of CMC. Findings show that Malaysian undergraduates have a favorable attitude towards CMC. They perceived CMC as a tool that is beneficial, useful, and positive to be used during online class. This could be due to the fact that the students are very familiar with CMC; having being exposed to it when they were in secondary school back in the year 2020 during the COVID-19 pandemic. This exposure and possibly the efficient and effective way that the teacher and instructor conduct the online class has left a positive impression on these students regarding the use of technology in the teaching and learning process.

The second research question for this study was to identify the level of L2-WTC during online class among Malaysian undergraduates. Findings show that Malaysian undergraduates have a moderate level of online L2-WTC. This suggests that the students are open to speak in the target language especially if they are confident that they know what to say and how to say it [20]. Findings also show that the students are most willing to interact with their instructor the most compared to their peers and others – based on the ranking of the mean score in the questionnaire. This is probably due to the nature and limitation of online classes. For example, in an online class, you are not physically surrounded by your friends as in the normal F2F class. In addition, the internet bandwidth might not be as strong or fast enough to ensure a smooth experience for some learners. Due to that, students prefer to listen and interact with their instructor especially when there is a need to do so. Even though studies by reference [20, 21, 22, 23] were on regular F2F L2-WTC and not on online L2- WTC, they also reported the same findings in which the level of L2-WTC among their respondents were also moderate.

The third research question for this study was to identify whether there was a significant relationship between CMC and online L2- WTC. Findings indicated that there was a significant moderate relationship between CMC and online L2-WTC. This suggests that having a favorable attitude towards CMC can be connected with students being more willing to communicate (in L2) in the online class. On the opposing side, having a negative attitude towards CMC can be connected with students being reluctant to communicate (in L2) in the online class.

### **5.2 Implications**

There are several implications for this study. Since findings indicated that, during online class, students are most willing to interact with their instructor, the instructor, therefore, should use this opportunity to encourage the students to speak in the L2. The instructor can do so by asking questions to the class, and then by selecting a few students to answer the questions. The instructor also can call out a few students to give their comments regarding the topic discussed; or even to ask questions to the class. In addition, the instructor also can get the students to interact with other students in

breakout rooms (if using Zoom, for example) and by giving a clear task and instruction. The key thing is, the instructor has to play an active role here (perhaps even more so than when in a F2F class) to ensure that the students get involved in the learning process.

Another implication for this study is that while the use of CMC has been shown to have a positive relationship with online L2-WTC, instructors need to be reminded that ‘other factors’ contribute more to the students’ L2-WTC during online class. As such, the instructors should not only rely on the use of CMC to get the students to talk. The instructors also should be aware that if the students do not communicate enough during the online class, it could be due to various ‘other’ factors such as anxiety, nervousness, and lack of confidence. In other words, the instructors should be aware that the success or breakdown in communication is not to be attributed to CMC 100%. CMC is important and has its uses and benefits; but it is not the miracle drug for L2-communication.

This research is important in several ways. First, since there is a lack of information regarding Malaysian undergraduates in CMC-related studies, this study helps to fill in the gap by involving Malaysian undergraduates as the participants for this study. Second it helps to identify the level of online L2-WTC among Malaysian diploma students, and the online communication activities that they are most willing and least willing to do. This information will help instructors plan their lessons as well as enable them to provide effective support and guidance to the students. Third, this research shows that there is a significant positive relationship between CMC and online L2-WTC. Due to that, instructors need to ensure that all equipment is ready and in good condition in order to promote L2 communication during the online class.

## 6 Conclusion & Recommendations

This research examined CMC and online L2-WTC among Malaysian undergraduates. Results indicated that the Malaysian undergraduates have a favorable attitude towards CMC. They also have a moderate level of willingness to communicate in L2 during the online class. Results also indicated that there is a significant relationship between CMC and online L2-WTC. Future studies might involve a larger sample size and investigate specific aspects of CMC that can be utilized to enhance students’ online L2-WTC.

**Acknowledgement.** Authors thank Universiti Teknologi MARA for financial support through the Geran Penyelidikan MyRA Science Social (600-RMC/GPM SS 5/3 (097/2021)).

**Paper contribution to related field of study.** This paper contributes to the field of educational technology and second language acquisition.



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