

## **The Impact of Online Social Presence on Omani Female Students' Willingness to Communicate in English**

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### **Abstract**

This paper reports the findings of one of the first research projects to examine the impact of student online social presence, an emerging concept in computer-mediated communication (CMC), on learners' willingness to communicate (WTC) in English as a Foreign Language (EFL). It also examines how learners' WTC is affected by CMC based activities. The study was explanatory and used a mixed-method research design. The participants (n=28) first answered questionnaires before and after completing online communication tasks. Volunteer students (n=13) were then invited to follow-up interviews to expand and elaborate on their questionnaire responses. Levels of significance between students' WTC varied considerably according to communication context and interlocutor types. Interestingly, some respondents indicated that they felt more competent in a F2F environment than an online environment, due mainly to the lower level of social presence of the latter. Students indicated that some aspects of online social contexts, including limited keyboard skills, lack of immediacy, inadequately structured discussion, and limited interactivity had negative effects on their L2 WTC. This study has a number of pedagogical implications that can help EFL instructors to better understand their students' communicative behaviours.

*Keywords:* Arab EFL learners, computer-mediated communication, online EFL learning, online social presence, willingness to communicate.

### **Introduction**

One of the ultimate goals of learning English as a Foreign Language (EFL) is the ability to use it in meaningful social communication. Willingness to Communicate (WTC) has been identified as a key component of second language acquisition theory (Dörnyei et al., 2006), and calls have been made to incorporate it into the second language (L2) pedagogy (Kang, 2005). WTC in L2 acquisition is influenced by linguistic, psychological, socio-cultural, situational, and communicative variables (MacIntyre et al., 1998). MacIntyre et al. (1998) used Gardner's (1988) socio-educational construct as a theoretical foundation for a comprehensive model of L2 WTC.

Arabic is the official language of Oman, while English is the only official foreign language. In recent years, English has been receiving increasing political, economic, and

legislative emphasis as a lingua franca in Oman. It is taught from Grade 1 in public schools and is the medium of instruction in higher education, and the medium of communication among professionals in national and international companies (Al-Issa & Al-Bulushi, 2012). To improve English competence, communicative language teaching (CLT) has become a dominant teaching approach in Oman, and educational technologies have been incorporated into EFL curricula (English Language Curriculum Section, 2010). These efforts notwithstanding, Omani students have below-average WTC and relatively low Self-Perceived Communication Competence (SPCC) in English, in spite of apparent enthusiasm (Al Amrani, 2019).

With the increasing availability, variety, and prevalence of computer-mediated communication (CMC) in L2 instruction over the last decade, links between CMC and WTC have been identified (Wang & Chen, 2009). Recent research suggests that blending the strengths of online technologies and those of face-to-face (F2F) education could significantly enhance learning in higher education (Bonvillian & Susan, 2013). Felix (2002) highlighted the potential of online learning environments to offer "powerful tools, not simply for practising and reinforcing language structures, but especially for the creation of real-life learning tasks in authentic settings" (p.12). Given CMC's increasing universality in L2 learning, students' WTC in the L2 during online discussion deserves a more thorough examination, particularly with regards to gender differences.

Harper (2003) examined the effect of gender differences on students' perception of CMC, finding that a sample of female participants enrolled at two mid-Atlantic universities scored higher than males in terms of their perception of the accessibility, velocity, interactivity, and immediacy of CMC. These variables are related to 'social presence,' a concept which was first coined by Short et al. (1976) and defined as the "degree of salience of the other person in the interaction and consequent salience of the interpersonal relationships" (p.65). Le et al. (2018) found that students had higher WTC in conditions of lower social presence. Since it can affect learner WTC, social presence, as well as other related variables such as communication context and interlocutor type, deserve a thorough examination.

Although the literature suggests that CMC environments may promote EFL learners' WTC in English, more empirical studies are needed to reach a better understanding of the impact of CMC on L2 WTC in different cultures, especially in Arab contexts such as Oman, where a collectivistic view of the self and the concept of "Saving Face" are deeply ingrained. Omani EFL learners have relatively low WTC in English, and their L2 WTC is influenced by the language learning setting, interlocutor type, context, and cultural background (Al Amrani, 2019). This study thus aims to investigate the impact of online social presence on Omani EFL learners' WTC in English in relation to some of these variables; namely, the effect of the type of interlocutor (e.g. friend, acquaintance, stranger) and context (e.g. small group, large group) on the learners' WTC in both F2F and online communication environments.

### **Theoretical framework: Motivation in L2 learning**

Gardner's motivation centric socio-educational model (1988) offers a theoretical foundation for understanding WTC in L2 contexts. This model is particularly well suited to understanding WTC in L2 contexts since it encompasses individual L2 proficiency difference variables (primarily attitudes, motivation, and integrativeness) and the causal

relationship between these variables (Gardner, 1988). 'Motivation' is the main focus of Gardner's model (2000) and refers to the driving force in any situation (Gardner, 2010). Motivated language learners tend to describe learning as fun, challenging, and enjoyable. In Gardner's model, motivation has three elements; first, the motivated learner exerts effort to learn the language; second, they want to achieve the goal; and third, they enjoy the task of learning the language. With a view of these considerations, this study looks at the relationship between text-based CMC language learning activities and Omani EFL learners' WTC.

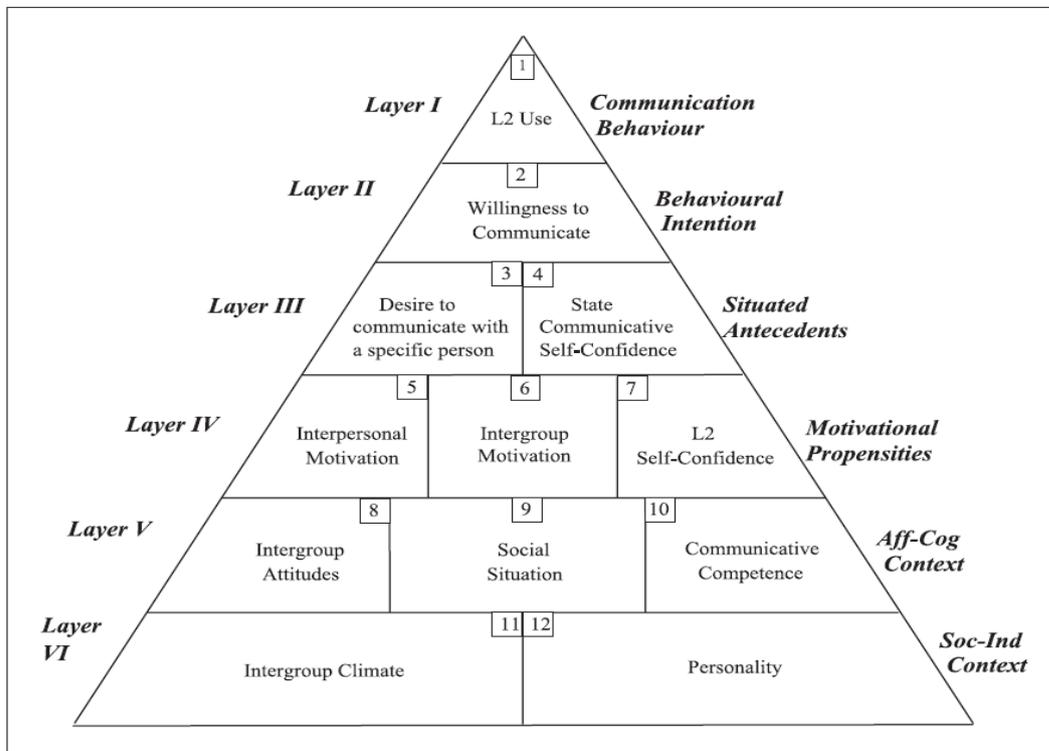
## Literature review

WTC in the L2 refers to a learner's readiness to start a conversation in the L2 when they have an opportunity to communicate with others at a given time and in a certain context (MacIntyre et al., 1998). Several studies indicate that contextual variables like the content of a conversation, the nature of the context, and the interlocutor type have a significant impact on student WTC in the L2 (see Al Amrani, 2019; Mystkowska-Wiertelak, 2018; Peng, 2014; Syed & Kuzborska, 2019). For example, although Omani female EFL students showed slightly below average WTC in English (Al Amrani, 2019), interlocutor type (friend, acquaintance, stranger) and context type (dyad, small group, large group, public) both had a significant influence on their WTC. For instance, Omani females were more willing to communicate in English with friends and acquaintances than with strangers. They were also more willing to talk in small groups than in large meetings, and they were least willing to communicate in English in public (Al Amrani, 2019).

Motivation may also be a determinant of student WTC. Al-Murtadha (2019) found that visualisation and goal-setting can significantly enhance learners' WTC in English. The study found that EFL learners with vivid ideal L2 selves and ambitious language learning goals had high L2 WTC.

SPCC and communication anxiety are the most powerful and immediate determinants of L2 WTC (Peng & Woodrow, 2010; MacIntyre & Doucette, 2010), and comprise the communication self-confidence construct in MacIntyre's et al. (1998) L2 WTC model (see Figure 1). SPCC refers to an individual's self-assessment of their ability to communicate appropriately in a specific context and has a more powerful influence on a learner's WTC than the learner's actual communicative ability in the L2 (McCroskey & McCroskey, 1986). Communication anxiety refers to apprehension or difficulty in communicating with people in certain contexts (Horwitz et al., 1986). Individuals with high communication anxiety tend to avoid and withdraw from communication with others. Al Amrani (2019) found that the type of interlocutor and context had a significant effect on communication anxiety among Omani learners.

**Figure 1**  
MacIntyre et al.'s (1998) L2 WTC model



### Social presence and L2 learning via text-based CMC

“Social presence” is a concept that describes a set of influences on online interaction (Tu & McIsaac, 2002) and online L2 learning (Tu, 2002a). It is defined as an individual’s degree of awareness of another person during an interaction, and the consequent sense of an interpersonal relationship (Walther, 1992). Online social presence is defined as the degree of feeling connected to, perceiving, and reacting to another intellectual entity without being physically present in the same space (Kim et al., 2016; Tu & McIsaac, 2002). Different definitions of social presence differ significantly in their terminology (Richardson et al., 2017), variously using terms like immediacy, intimacy, social interaction, and connectedness (Lowenthal, 2010). CMC in L2 learning provides social presence by means of virtual communities that exert influence on those factors described in MacIntyre’s et al. (1998) L2 WTC model, particularly those of layer V, which relate to affective-cognitive contexts (see Figure 1).

Two main factors amplify social presence in F2F interaction; immediacy, which is the psychological proximity of the interlocutors, and intimacy, which is the perceived familiarity resulting from paralinguistic social behaviours like eye contact, nodding and smiling (Lowenthal, 2010). Although immediacy is difficult to achieve online due to the lack of tools for conveying nonverbal social cues in CMC, different text-based CMC environments may still have various effects on learners’ social presence constructs (Tu, 2002a). For instance, learners may experience less social presence in asynchronous text chat (Gunawardena, 1995), which, due to the time delay involved in communication, has limited capacity to generate intimacy and immediacy. Nevertheless, Gunawardena (1995)

suggested that users of text-based CMC media could engage casually with one another and communicate relevant data in contexts where nonverbal cues were unavailable by using other symbol systems. For instance, emoticons (emotion icons) in CMC communication are considered as a textual indicator of illocutionary force which had three main functions: 1) emotional connotation, mapped directly onto facial expression (e.g., happy or sad); 2) nonemotional connotation, mapped conventionally onto facial expression (e.g., a wink as indicating joking intent; an anxious smile), and 3) illocutionary force indicators that did not map conventionally onto facial expression (e.g., a smile as downgrading a complaint to a simple assertion) (Dresner & Herring, 2010).

Collaborative learning activities can also generate more interactions and increase the perception of mutual connection (Arnold & Ducate, 2006). Appropriate course design and activities have the potential to enhance learners' perception of social presence (Yildiz, 2009). Levy and Stockwell (2006) found that social presence in synchronous CMC, where responses were received in real-time, was higher than in asynchronous CMC, and Yamada (2009) argued that the immediacy of synchronous CMC media might facilitate learners' communication.

### **Impact of CMC on L2 WTC**

Studies examining the impact of CMC on L2 WTC conducted in Japan (Freiermuth & Jarrell, 2006), North America (Kissau et al., 2010), Thailand (Reinders & Wattana, 2010), the USA (Yanguas & Flores, 2014), and Turkey (Buckingham & Alpaslan, 2017) all indicated that CMC could provide more comfortable communication environments for L2 learners and reduce overall anxiety, which could, in turn, enhance their L2 WTC. According to MacIntyre et al. (1998), self-confidence directly influences L2 WTC, so positive self-perception of L2 competence combined with an anxiety-free L2 learning environment results in higher WTC in the L2.

Furthermore, Freiermuth (2001) found that when a group of L2 students utilising text-based CMC were given a task to solve, they exhibited greater WTC than groups using spoken language. The differences in students' WTC could be attributed to the use of CMC rather than to other variables. Freiermuth and Jarrell (2006) pointed out that synchronous online chat provides students with a platform for real conversation where discussions can be held in the absence of social barriers that could inhabit communication in F2F settings. While the results of Kissau et al. (2010) study were not statistically significant (an outcome attributed to the sample size), the students' total language output and the qualitative data offer considerable evidence pointing to communication-related benefits derived by students. Reinders and Wattana (2010) found that an online multiplayer game like Ragnarok Online can successfully increase student enthusiasm, lower anxiety, and improve L2 WTC. This begs the question: Can these results be generalised to all learners in all EFL settings?

### **The current study**

This study presents empirical data that assess a group of Omani female university student perceptions of online learning through involvement with synchronous and asynchronous CMC based activities that were specifically designed to address WTC for EFL students. It is the first to examine the impact of students' online social presence, a

recent emerging concept in CMC, on learners' WTC in an Arab EFL setting in Oman. It also has a number of pedagogical implications that can help EFL instructors to better understand their students' communicative behaviors. The study used the participants' perceptions to inform language learning environment designs optimised to enhance Omani female students' digital fluency, to increase engagement levels, improve overall foreign language proficiency, and increase WTC in EFL settings. The concern of the study centred on the following questions.

1. How do Omani female university students perceive variables relevant to their WTC in EFL in different communication environments (i.e. F2F vs CMC)?
2. How do text-based CMC activities affect student WTC in the L2 in various contexts and with different types of interlocutors?
3. How does online social presence impact Omani students' WTC in English?

### **Research methodology**

A mixed research method consisting of sequential procedures was employed to collect the data for the study. The procedures began with a quantitative analysis in which theories and concepts were tested, followed by a qualitative examination to consider a few cases and individuals in greater depth (Creswell, 2014). The quantitative data were gathered through surveys, and the qualitative data through semi-structured interviews. These interviews were then used to extend and elaborate on the findings from the questionnaires. The interviews helped the researcher to better understand and explain the influence of text-based CMC, and online social presence in particular, on learners' perceptions and attitudes toward crucial communication variables related to L2 WTC.

### **Sampling and participants**

The study took place at Sohar University, the first private university in Oman, where English is the medium of instruction. The human and behavioural ethics panel at Sohar University issued the ethical clearance to conduct the study within a section of the course 'Using Media in English' to make the project meaningful to participants. The main reason for choosing this course was that it was specifically designed to develop students' English communicative competence by using traditional and digital media. Before signing the informed consent, the purpose and scope of the study were explained to informants.

The course was taught in two modes: F2F and online, which made it possible to measure the effect of text-based CMC tasks on learners' attitudes and perceptions of their WTC in English. The first half of the semester took place in a traditional F2F classroom setting, and students had the chance to communicate in pairs, in groups of three or four, and a large group. The second part of the semester was conducted online, with students participating in online discussion forums and chat rooms. They also interacted with each other and their teacher via email. The objective was to allow students to experience the different modes of interaction, including one-to-one and one-to-many, via CMC-based sessions. It is important to note here that students only had access to text-based online communication, as all voice interaction protocol tools were blocked in Oman during the

study.

The students who agreed to participate in the study were 28 female EFL learners. Arabic was the first language of all participants, and most were in their early twenties. More than half of the participants assessed their English language proficiency as being above average. Of the 28 participants who completed the questionnaires, 13 volunteered for the semi-structured follow-up interviews. Participants were given pseudonyms to protect their identities, and they were allowed to speak in Arabic or English during the interviews.

The modest size of 28 participants was expected to be reasonable as the study adopted a mixed-method research design, including both quantitative (questionnaire) and qualitative (semi-structured interview) analyses of students' WTC in EFL. However, the observations here have been limited to the present dataset, and no attempt was made to allow generalisation about Arab or Omani students' WTC in English.

### **Research instruments**

The quantitative instrument of the study was a three-part questionnaire. Part A was designed to gather background information about the participants; part B measured L2 communication variables in F2F interactions, and part C measured L2 communication variables in online interactions. This study differs from previous studies in that the respondents chose from percentages ranging from 0%, 10%, 20%, to 100% to represent the degree to which they were willing to communicate in English in different situations which were likely to occur in their daily lives. If the students had not personally had the experience, they were asked to try to imagine how they might feel about it.

Communication variables assessed included WTC, communication anxiety and SPCC in English. The WTC scale was originally designed by McCroskey (1992). It contains 12 items mainly related to two communication contexts (small groups and large groups) and three types of interlocutors (strangers, acquaintances, and friends). The SPCC scale measures student self-perception of their communication competence. A 12-item questionnaire designed by McCroskey and McCroskey (1986) and used by Yashima (2002) and MacIntyre and Charos (1996) was utilised to measure how confident the respondents felt communicating in English. A communication anxiety scale consisting of 12 items (Yashima, 2002) measured participants' self-assessment of their communication anxiety in English.

After the questionnaires, some participants agreed to participate in follow-up interviews to provide more in-depth information about the influence of CMC on their WTC in English. All interview sessions were audio-recorded after securing permission from the participants. Each interview took approximately 45 minutes.

### **Reliability**

All scales used in this study had high internal consistency reliability as all were above Cronbach's  $\alpha > 0.89$ , as shown in Table 1.

### **Table 1**

*Internal Consistency Reliability of instrumentation*

Scales	Cronbach's $\alpha$	No of Items
F2F WTC in English	0.89	12
F2F SPCC in English	0.90	12
F2F CA in English	0.76	12
Online WTC in English	0.91	12
Online SPCC in English	0.94	12
Online CA in English	0.91	12

**Data analysis**

Larson-Hall (2016) demonstrated that paired t-tests could be run to compare the scores of the same group of participants at two different stages or on two unique measures. To this end, t-tests were conducted using the Statistical Package for the Social Sciences (SPSS) version 23.0 in order to measure the effects of text-based CMC activities on learners' L2 communication variables, including WTC, SPCC, and communication anxiety in English. Then, two-way repeated measures ANOVA was conducted to compare the main effects of interlocutor types on learners' communication variables. Interlocutor types included three levels (friends, acquaintances, strangers) and communication environments consisted of two levels (F2F, online). Next, two-way repeated measures ANOVA was conducted to compare the effects of different contexts on learners' WTC, SPCC and communication anxiety in English. Context types included two levels (small groups, large groups), and communication environments also consisted of two levels (F2F, online). All effects were statistically significant at the 0.05 significance level.

The qualitative data from semi-structured interviews were analysed to elaborate on participants' perceptions about variables relevant to online social presence. The researcher used a deductive approach to analyse qualitative data. The process of thematic content analysis was followed by data analysis. The thematic content analysis involves analysing interview transcripts, identifying themes, and connecting the data from the quantitative analysis to those themes (Burnard et al., 2008).

**Results and Discussion****Quantitative data analysis***The Influence of Communication Environments on Communication Variables:*

As summarised in Table 2 below, the data indicated that overall, the participants had significantly higher WTC when they communicated online, compared to F2F  $t(27) = -2.554$ ,  $p = 0.01$ ,  $d = 0.63$ . They also had significantly higher SPCC online than F2F settings  $t(27) = -2.50$ ,  $p = 0.01$ ,  $d = 0.59$ . Communication setting (F2F and online) did not, however, have a significant effect on their communication anxiety. This finding was expected as CMC could afford a more comfortable environment for interaction and increase students' self-confidence, which in turn facilitated their WTC in the absence of social and cultural barriers that could inhibit communication in F2F settings. CMC could

also provide language learners with a platform for real conversations where meaning could be negotiated in a less anxious communication environment.

**Table 2**

*Paired t-test comparing students' overall communication variables in F2F vs. online environments*

	F2F		Online		t(27)	Sig	Cohens'd	95% Confidence Intervals	
	M	SD	M	SD				Lower	Upper
WTC	5.56	1.74	6.70	1.86	-2.55	.01	0.63	-2.06	-.22
SPCC	5.81	1.77	6.88	1.88	-2.50	.01	0.59	-1.93	-.19
CA	5.17	1.51	5.07	2.00	0.23	.82	-.06	-.79	.98

WTC=willingness to communicate, SPCC=self-perceived communication competence, CA=communication anxiety.

**The Influence of Interlocutor Types on Communication Variables:** As seen in Table 3, interlocutor types had a significant effect on respondents' WTC in English  $F(2, 54) = 25.4, p < .001$ , SPCC  $F(2, 54) = 34.70, p < .001$ , and communication anxiety  $F(2, 54) = 10.47, p < .001$ . For instance, students had the highest WTC and SPCC in English while talking online with friends. WTC and SPCC were the lowest while communicating F2F with strangers. A possible explanation for the low influence of the environment platform on communication variables while interacting with friends is that this type of interlocutor causes little anxiety for students to communicate in English in F2F environments. Thus, the online environment played a minimum role in reducing communication anxiety when interacting with friends.

**Table 3**

*Two-way repeated-measures ANOVA comparing the effects of interlocutor types on communication variables*

	F(2, 45)	Sig	95% Confidence Intervals		Friends		Acquaintances		Strangers	
			Lower	Upper	F2F	Online	F2F	Online	F2F	Online
					M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
WTC	25.4	.001	.22	2.06	6.54 (2.40)	7.37 (2.28)	5.68 (2.14)	6.90 (1.90)	4.46 (1.82)	5.83 (2.02)
SPCC	34.7	.001	.19	1.93	6.67 (2.00)	7.61 (1.98)	5.97 (2.01)	6.93 (2.11)	4.60 (2.05)	6.09 (2.18)
CA	10.4	.001	-.74	1.02	4.13 (2.51)	5.14 (2.67)	4.71 (1.78)	4.83 (2.10)	5.95 (1.90)	5.24 (1.92)

WTC=willingness to communicate, SPCC=self-perceived communication competence, CA=communication anxiety.

**The Influence of Context on Communication Variables:** The quantitative data presented in Table 4 indicates that the context (small groups, large groups) has significant effects on respondents' WTC in English  $F(1, 27) = 6.52, p < .01$ , and SPCC  $F(1, 27) = 6.27, p$

< .01. They had the highest WTC and SPCC in English while talking online with small groups, while they had the least WTC and SPCC while communicating F2F in large groups. A possible justification is that the online environment was a more comfortable platform for communication and provoked less social embarrassment or loss of face when making language errors. It also did not require an immediate response when participating in asynchronous communication such as discussion forums. Context type did not, however, have a significant effect on communication anxiety.

**Table 4**

*Two-way repeated-measures ANOVA to compare the effects of context types on communication variables*

	F(1, 27)	Sig	95% Confidence Intervals		Small group		Large group	
			Lower	Upper	F2F M(SD)	Online M(SD)	F2F M (SD)	Online M(SD)
WTC	6.52	.01	.22	2.06	6.27(1.93)	7.26(2.0)	4.85(1.78)	6.14(1.83)
SPCC	6.27	.01	.19	1.93	6.48(1.86)	7.30(2.16)	5.14(1.90)	6.45(1.75)
CA	.05	.82	-.98	.79	4.57(1.78)	5.08(2.42)	5.77(1.65)	5.07(1.86)

WTC=willingness to communicate, SPCC=self-perceived communication competence, CA=communication anxiety.

Overall, the quantitative data indicated that the respondents had higher WTC in English online than in F2F settings, which supports the findings of previous studies (see Freiermuth & Jarrell, 2006; Kissau et al., 2010, Reinders & Wattana, 2010). However, the results of this study were inconsistent with the studies mentioned above in that the online environment provoked less communication anxiety than the F2F environment, without accounting for interlocutor types and context.

Another significant finding of the current study was that the effect of the communication environment (F2F or online) varied significantly based on the type of interlocutor and context. The data also showed that the influence of the communication environment on respondents' WTC in English varied significantly based on the interlocutor type (friends, acquaintances, strangers) and context (small groups, large groups). The participants had dramatically higher WTC in the online environment than in F2F environments when communicating in English with acquaintances or strangers. They also had higher WTC online while having conversations in small groups rather than large groups.

In terms of culture, Arab students, and females, in particular, are less sensitive to their peers than they are to strangers (Yousef, 1974). This attitude plays a significant role in shaping interpersonal relationships, and it might explain as to why the study participants were less worried about making mistakes and losing face while communicating with friends rather than with acquaintances or strangers, and in smaller, as opposed to larger groups.

### **Qualitative data analysis**

Four main factors affecting students' WTC, SPCC, and communication anxiety in online environments were apparent in the qualitative analysis of the post-questionnaire

follow-up interviews; keyboard skills, immediacy, interactivity, and the structure of discussion. These factors are closely related to aspects of online social presence.

**Keyboard skills:** The respondents indicated that poor typing skills, difficulty writing, and the challenge of spelling difficult words hindered their online communication. Bashyan (interviewee) reported, *I couldn't write everything I wanted to say because I had poor typing skills*. Alana (interviewee) commented, *I couldn't write anything because I had to be careful with vocabulary, spelling, and grammar. I didn't want to make silly mistakes*. She also reported, *I felt more anxious when I communicated online because I am not quick at typing. When I need to reply to online discussions, I spend a lot of time typing my responses, which made me feel anxious*. This suggests that a low level of online social presence by the respondents when using text-based CMC might be due in part to their poor typing skills and inadequate knowledge of supporting communication strategies, such as using spell check, grammar check, and so forth. Nevertheless, Alana (interviewee) stated, *I felt confident participating online because my typing skills had improved by the end of the semester, and it became easy to write one paragraph for the online discussion*.

Thus, users of text-based CMC need to have adequate keyboarding skills to engage in active online conversations. Indeed, Tu (2002a) found that keyboarding skills have a critical impact on the students' perception of social presence in text-based CMC. While students' actual and perceived keyboarding skills, use of spell checks, grammar check, speed, accuracy, and so on are essential for CMC, keyboarding skills are less critical in asynchronous communication such as email and discussion on message boards than in synchronous activities. Surprisingly, none of the students mentioned using these tools, which points to a lack of awareness of strategies for using CMC systems.

**Immediacy:** Participants found it difficult to express meaning online in the absence of social cues and facial expressions. For instance, Alana (interviewee) reported, *in online discussion, I did not see the person I was talking to, so I did not know or see her personality, facial expressions or feelings. Therefore, I did not feel comfortable talking with her*. Some students felt that text-based CMC was disengaging because they could neither express their feelings and emotions, nor understand the feelings and emotions of interlocutors. Some students saw the latter as a very important element in human communication. For instance, Asia (interviewee) was not comfortable during online discussion, because, saying, *I wrote and wrote without having any idea about my friends' reactions*.

In previous studies, students used emoticons such as “☺” for a smiling face and “:-” for a frown to compensate for the lack of social context cues in the online environment (Tu, 2002a). This finding was not apparent in the current study, as none of the students reported the use of emoticons in text-based CMC. Nevertheless, Asia (interviewee) said that she used some paralinguistic and abbreviations such as, *u = you, ur = your*, and so forth.

**Interactivity:** The participants' perceptions of CMC were affected by interactivity. Respondents did not perceive online communication as being serious, because other students sometimes ignored them when they raised questions. Mensa (interviewee) reported, *I did not always get responses from other students*. Bashayer (interviewee) also stated, *in online discussion, I got feedback from one or two students while others were*

*talking separately.* Conversely, group members in F2F discussions listened to them attentively and offered feedback directly.

Social presence requires learning tasks where students are engaged in various communication styles through the use of CMC, including response time, communication styles, task types, the size of discussion groups, and the potential for feedback. Response time is a crucial factor in shaping student conversations via CMC. Receiving late responses in asynchronous communication generated feelings of being rejected or ignored, resulting in low interactivity which in turn affected the level of social presence (Tu, 2002b).

**Structure of Discussion:** Text-based CMC is distinct from F2F communication in that it can raise multiple discussion topics, and topics may shift rapidly and frequently. These characteristics of CMC can have negative impacts on students' online interactions. Bashya (interviewee) stated, *in the online communication, I got feedback from one or two students, while others were talking separately. However, in F2F communication, most students were involved in the discussion.* Asia (interviewee) also mentioned that, *in online discussion, sometimes topics were not related to each other. Each student was talking about a different topic.*

This finding was similar to that of a previous study (Tu, 2002a), in that students could make multiple contributions and could easily launch into a new topic in the CMC environment. As a result, students found it difficult to follow the conversation threads, as multiple topics were discussed simultaneously, disturbing the flow of the discussion. In short, multiple topics and the speed with which the topics changed during synchronous text-based CMC discussions had negative impacts on students' perception of social presence, which in turn affected their WTC in the online discussion. This is consistent with Tu's finding (2002b) that multiple topics and rapid topic changes caused frustration and reduced the effectiveness of online discussions.

Students in the current study also reported that they had great difficulty keeping up in a chat room discussion if too many students were chatting at the same time. For instance, Bashyan (interviewee) reported that, *in online discussion, many students were involved in the discussion so I couldn't write everything.* On the other hand, Alana (interviewee) commented, *I participated more frequently in F2F discussions because we were in small groups.* Anwaar (interviewee) also said, *I participated more in F2F discussions because I had a good chance to listen to each other in the group, but I didn't feel online discussion was that serious.*

This is consistent with Tu's (2002a) finding that when there were more people in real-time discussion, "the discussion was chaos, they lost the sense of who was talking to whom about what, and they were unable to maintain the discussion pace" (p. 15). Moreover, the size of the discussion group significantly influences students' interaction, particularly in synchronous CMC. However, the use of asynchronous CMC (e.g., email and discussion forums) in the current study allowed students to interact with each other at their convenience, and also allowed them to read other students' posts at their own pace. As Mensa and Rosa (interviewees) reported, *we participated more online because we had a good chance to communicate with students from other groups and read their points of view.*

## Conclusion, pedagogical implications and limitations

This paper investigated the influence of online, CMC instruction on key communication variables including WTC, SPCC, and communication anxiety in EFL across various communication contexts (small groups, large groups) and interlocutor types (friends, acquaintances, and strangers). Communication environments (online vs F2F) significantly affected students' WTC and SPCC. Overall, students tended to have higher WTC and SPCC in English while communicating online than F2F. The extent of the influence of the communication environment varied considerably, however, based on the interlocutor type and context.

The findings of the current study support the positive influence of text-based CMC activities on students' SPCC in English, which in turn boosted WTC. Figure 2 shows some of the topics used in CMC discussion forums, along with the number of student contributions to each topic. From 13 interviewees, eight reported that they were more willing to communicate in online environments than in F2F environments, but the low social presence of the text-based CMC environment used in this study seems to have affected the participants' WTC negatively. To enhance online social presence, language instructors should work to improve students' keyboarding skills and train them to employ some online learning strategies like the use of spell check, grammar check, and auto spelling. To promote immediacy, Tu (2002a) recommended that L2 instructors use appropriate paralanguage and emoticons in text-based CMC. At the same time, it is important to be aware that overuse may result in confusion and perceptions of insincerity and impoliteness. Another possible means of boosting online social presence in Omani EFL settings is to enable VoIP communication for English language learning or at least for teleconferencing. This could be an effective means of enhancing telepresence, an area which requires attention since students experienced difficulty expressing their thoughts while typing. One of the solutions suggested by Alana (interviewee) was to have *video chatting*. She reported that *video communication would allow me to see facial expressions of the person I am talking with so I can tell if she is happy or unhappy with me when I talk with her*.

To enhance interactivity, Tu (2002a) recommended keeping the number of students in real-time discussions small, taking turns, encouraging students to listen, privately asking those who remain quiet to participate in the conversations, and monitoring discussions. In addition, students should be familiar with the different features and message styles of each CMC system, including email, discussion boards, and real-time discussion (chat room). Al-Amrani (2009) found that Omani EFL students tended to use many learning strategies that enhance their language learning during the pre-task stage and while processing a learning task. This points to the conclusion that training EFL students in communication strategies improves their classroom WTC (Mesgarshahr & Abdollahzadeh, 2014). Moreover, learning strategies play an essential role in reducing language anxiety and increasing participation (Graham, 1997).

The study presented empirical data that assess factors related to students' interactions via text-based CMC, including their appreciation of the medium, their strengths in using it, and their preferences for online learning, and considered how these findings could help in designing language learning environments that build on students' digital fluency to increase engagement levels, foreign language proficiency, and WTC in EFL settings. It provided an in-depth examination of how learners' WTC changed

through involvement with synchronous and asynchronous CMC-based activities that were specifically designed to address Arab EFL students' WTC. Using multiple data collection techniques enabled a comprehensive interpretation of the impact of CMC on EFL learners' WTC. The results of the quantitative questionnaire were extended and elaborated upon by conducting semi-structured interviews to provide further evidence of the relationship between language learning environments and Omani students' WTC in English.

The participants in the current study were 28 female undergraduate students in a private university in Oman, and the results can be generalised to this group with some certainty. Any further generalisations from this study should be made with caution given the small sample size, however, considering the gender of participants. The study can be replicated with a larger sample size to reach a generalisation about the influence of CMC on Omani learners' key WTC variables in EFL.

Previous studies indicate that L2 WTC could be related to gender variables (MacIntyre et al., 2002). In addition, since the female students in this current study were members of a culture with conservative norms surrounding gender relations, it is expected that their WTC could be significantly affected depending on whether the interlocutors were from the same or opposite gender. One student reported that she felt more comfortable communicating with male students in other groups online rather than F2F. This phenomenon needs further investigation.

## Figure 2

### *Excerpts of topics used in CMC discussion forums*

Forum	Description	Discussions
Week 5: Discussion Board	<p>Do you need the Internet in your life? Why?</p> <p>What do you use the Internet for?</p> <p>Is the Internet a good invention? Why? Or why not?</p> <p>How can the Internet help you to improve your English language learning?</p> <p><b>Please feel free to write your thoughts, ideas, comments or questions about any topics ...</b></p>	250
Week 6: Discussion Board	<ol style="list-style-type: none"> <li>1. What do you know about web search engines before taking this course?</li> <li>2. What is your favorite web search engine? Why?</li> <li>3. What are the benefits of web search engines?</li> <li>4. How can the Internet, in general, and search engine, in particular, help you in your studies?</li> <li>5. How are they different ...</li> </ol>	235
Week 7: discussion	<p>What problems or difficulties have you faced while searching on the Internet using search engines?</p> <p>What are the differences between reading from books and reading on the Internet?</p> <p>Do you think that you need to be trained to read on the Internet?</p> <p>Please post your comments, thoughts and ...</p>	203
Week 8: Discussion Board	<ol style="list-style-type: none"> <li>1. Do you like to send messages to your friends via the email or the normal post/mail? Why?</li> <li>2. Why do most people prefer to use emails than other means of communication?</li> <li>3. What are the differences between the structure of an email message and a normal letter? Which one do you prefer? Why?</li> <li>4....</li> </ol>	188
Week 9: Discussion Board	<p><b>Write a short reflection (100-150 words) on this course.</b></p> <ul style="list-style-type: none"> <li>• Briefly describe the course and your expectations about the course</li> <li>• Write about what you most liked about the course and what you most disliked about it.</li> <li>• Describe your experiences and feelings about the ...</li> </ul>	164

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