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Student-Student versus Instructor-Student in Online
Interactions: A Study of Second Language Performance
and Social Presence of Saudi University English as
Foreign Language Learners

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*Thanks to Allah (God) Almighty
Who enabled me to do and complete this research*

I dedicate this thesis to my:

Parents,

Wife,

Children,

Sisters and Brothers

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Abbreviations

ACMC	Asynchronous Computer-Mediated Communication
C	Clause
CMC	Computer-Mediated Communication
CMDA	Computer-Mediated Discourse Analysis
CoI	Community of Inquiry
EAP	English for Academic Purposes
EFC	Error-Free Clause
EFL	English as a Foreign Language
EFT	Error-Free T-unit
ELD	English Language Department
ESL	English as a Second Language
FFEs	Focus on Form Episodes
FLT	Faculty of Languages and Translation
FtF	Face-to-Face
IH	Interaction Hypothesis
KKU	King Khalid University
KSA	The Kingdom of Saudi Arabia
L1	First Language
L2	Second Language
L	Lexical
LMS	Learning Management System
LW	Lexical Word
SCMC	Synchronous Computer-Mediated Communication
SCT	Sociocultural Theory

SLA	Second Language Acquisition
T	T-unit
TA	Teaching Assistant
TL	Target Language
TTR	Type-Token Ratio
W	Word
ZPD	Zone of Proximal Development

Thesis Text Styles

The Conventions of the Thesis's Texts

Text Source	Typeface
Thesis main text	Palatino, 12 point size, 1.5 space, and justified.
Online interaction transcripts data	Courier, 11 point size, 1.5 space, justified, and both sides are indented.
Questionnaire data	Times New Roman, 11 point size, single space, justified, and both sides are indented. Parts that were originally in English are typed in bold style.
Interview data	Lucida Sans, 11 point size, single space, justified, and both sides are indented. Parts that were originally in English are typed in bold style.
Quotations	If 40 words or longer: quotations are set apart from text, 11 point size, and indented equally at both sides without quotation marks. Palatino, 11 point size, 1.5 space, and justified.

Abstract

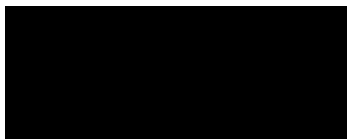
In computer-mediated communication (CMC) environments, there is an extensive body of research which has looked at the nature of language learning of English as a foreign language (EFL) students within and beyond the classroom setting. However, most of this research has focused on the pattern of student-student interactions and extensively on the modality of synchronous CMC. The nature of instructor-student CMC interactions on online discussion forums remains unexplored in both L2 and Saudi EFL learning contexts. This study investigates how Saudi EFL students perform their language and project their social presence when they interact with (as opposed to without) their instructor in online discussion forums. Throughout an entire academic semester in a prestigious university in Saudi Arabia, 49 Saudi EFL students interacted in student-student and instructor-student online exchanges to discuss argumentative topics in their educational discussion forums. The present study employed a mixed-methods research approach and data were collected from transcript of participants' online interactions, questionnaires, and interviews. Students' L2 performance was examined using a textual analysis method to determine linguistic fluency, lexical density, linguistic accuracy, and grammatical complexity (Wolfe-Quintero, Inagaki, & Kim, 1998). To examine their social presence, the study applied a content analysis method by using the model of social presence in the framework of a community of inquiry (Garrison, Anderson, & Archer, 2000, 2001). The role of the instructor in instructor-student online interactions was examined qualitatively using a content analysis method by means of a template which was developed during the study. The study findings show that in student-student online exchanges, Saudi EFL students produced significantly higher rates of lexical density and social presence but lower rates of linguistic accuracy. Conversely, in instructor-student online exchanges, students produced significantly higher rates of linguistic accuracy but lower rates of lexical density and social presence. No significant differences were found in students' fluency and grammatical complexity between the two phases of online exchanges. The instructors' presence and scaffolding were found to influence Saudi students in

instructor-student online exchanges. Students noticed their language errors, paid attention to linguistic accuracy, learnt new lexical and grammatical features, and engaged in reflective interactions. Furthermore, Saudi students were found to have positive perceptions towards instructor-student online exchanges and they valued their instructors' online interactions as helpful for their L2 development. The present study concluded that instructor-student online exchanges provided Saudi EFL students more opportunities to develop their language than student-student online exchanges. Finally, some implications for L2 performance, social presence, and the role of the instructor in online discussion forums are discussed and recommendations for future research are presented.

Declaration of Authorship

I declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Arts, Monash University, is wholly my own work and has not previously been submitted for any other degree. I declare that to the best of my knowledge all sources used and any help received in the preparation of this thesis have been acknowledged.

Ali Hussein Alamir



Date: 13 August 2014

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Part I: Context

Chapter One: Introduction

1.1. Background

The present study was undertaken in the English Language Department (ELD) of the Faculty of Languages and Translation (FLT) at King Khalid University (KKU) in Saudi Arabia (SA). The ELD is one well-known English foreign language academy in SA and in the Middle East. It provides Saudi students (males and females) with a Bachelor (BA) degree of Arts in English language following the completion of a four-year full-time study program, which enables them to be English teachers or interpreters in SA. To complete their BA degree, Saudi EFL students must study various English courses which include linguistics, applied linguistics, English literature, and language translation. The ELD also offers postgraduate programs of Masters of Applied Linguistics and Language Translation.

Because of cultural reasons, education is segregated in Saudi Arabia and there are two sites of ELD at different locations with different leaders. One department is for male instructors and students and the other one is for female instructors and students. However, the two male and female sites are run by the same FLT. The ELD consists of a large number of qualified English language instructors (males and females) with PhDs and MAs in the fields of linguistics, applied linguistics, English literature, and language translation. The instructors teaching in the ELD are from Saudi Arabia and other countries, namely Egypt, Syria, Jordan, South Africa, the United States, India, Bangladesh, and Pakistan. Most of them have undertaken their PhDs and MAs at American and British academic institutions. Non-Saudi instructors outnumber Saudi instructors in the ELD because of the lack of Saudi English as a foreign language (EFL) instructors in Saudi Arabia.

Most of the English courses are taught face-to-face (FtF) in the ELD. Every English course usually ranges from 20 to 35 students because of the large enrolment numbers. This usually makes it difficult for the instructor and students to discuss or collaborate with each other during learning tasks. However, all English courses are supported by

the KKU learning management system (LMS). The LMS incorporates different communicative channels such as the Blackboard and Moodle educational environments that aim to support EFL students and instructors to learn and interact collaboratively with each other inside and outside their FtF classrooms. Computer and Internet labs as well as Wi-Fi access points around the campus are provided for students and instructors by KKU. However, several students cannot get access to their Blackboard accounts when they are outside the campus of KKU because of the lack of internet connection in their rural areas or they cannot afford to pay for it.

Both blended (FtF and online) and online learning modes are offered at KKU but English courses in the ELD are taught by using a blended way of learning (i.e., FtF and online classes). EFL students and instructors at the ELD have been using the blended way of learning since 2010-2011. However, they have been predominantly using the Blackboard system for delivering the contents of their English courses and the use of online discussion forums remains inactive in their language learning. Although the online environment has the potential to support the teaching and learning processes, the extent to which Saudi EFL students would benefit from the use of online discussion forums when they interact with their peers and instructors has remained unexplored. Importantly, how they produce their language and project their social presence when they interact as student-student and instructor-student in the online discussion forums has yet to be revealed.

1.2. Online Interaction and Second Language Learning

Computer-mediated communication (CMC) environments have been of great interest to second language (L2) researchers because they have opened unprecedented opportunities for L2 learning in EFL education (e.g., W. Anderson & Corbett, 2013; Chapelle, 2005; Chun, 1994; Hanna & de Nooy, 2009; Herring, 2004; Isharyanti, 2009; Kessler & Bikowski, 2010; Levy & Stockwell, 2006; B. Smith, 2004; Sotillo, 2000; Warschauer & Kern, 2000). Sengupta (2001) states that CMC “combines several features which make it a powerful new medium of interaction in the classroom” (p. 105). This is because it can provide L2 learners with opportunities to negotiate meanings with their

peers (e.g., Akayoğlu & Altun, 2009; B. Smith, 2004) and to socially interact with their instructor (e.g., L. Lee, 2008; Sotillo, 2000) and it can allow them to exchange with other interlocutors anytime and anywhere (e.g., Hadjistassou, 2008; Paiva & Rodrigues-Junior, 2009). For instance, CMC has facilitated students' lexical acquisition when they interacted with their peers (B. Smith, 2004) and supported their noticing and attention to linguistic form when they interacted with their instructors (L. Lee, 2008). CMC was also found to promote behavioral, emotional, and cognitive engagements when EFL students and their teacher interacted with each other (Yang, 2011). Students in CMC environments can "study at their own pace, chat [and post] for emotional effects, and reflect on learning processes" (Yang, 2011, p. 182).

Besides other benefits such as reducing anxiety and motivating engagement (Freiermuth & Jarrell, 2006; Warschauer, 1996), CMC has a significant role in providing a promising avenue for collaborative language learning among students and between students and their instructor (Hadjistassou, 2008; Nor, Hamat, & Embi, 2012; Paiva & Rodrigues-Junior, 2009; Zeng & Takatsuka, 2009). It is widely accepted that CMC promotes students' L2 learning inside and outside the classroom setting, whether it is via synchronous (SCMC) (e.g., real-time chat and videoconferences) or asynchronous (ACMC) (e.g., online discussion forums and wikis) modes of communication (e.g., Sotillo, 2000; Stockwell, 2010; Yang, 2011).

In CMC environments, there is an extensive body of research which has looked at the nature of language learning (e.g., L2 performance and discourse functions) of EFL students within and beyond the classroom setting. However, most of this research has focused on the pattern of *student-student* CMC interactions (e.g., Hadjistassou, 2008; Kessler, 2009; Sengupta, 2001; B. Smith, 2004; Zeng & Takatsuka, 2009) and extensively on the modality of *synchronous* CMC interactions (i.e., real-time chat) (e.g., Isharyanti, 2009; Lai & Zhao, 2006; Peterson, 2009; B. Smith, 2008). Therefore, *instructor-student* interaction has received less attention from L2 researchers. L2 studies have been arguing for the potential influence of the presence of the instructor in CMC environments. For instance, because students were rarely found to correct their errors and negotiate

meaning in student-student CMC interaction, Liang (2010, p. 45) argues that “instructors may need to proactively model, scaffold and support revision-related online discourse” to help students develop their language. Zeng and Takatsuka (2009) lend support to this by noting that some students “missed learning opportunities” during their student-student text-based CMC dialogical collaboration and they argue that “the missed opportunities would never be regained without the teacher’s helpful intervention” (p.444). Thus, it can be argued that the role of the instructor in CMC environments is seen as beneficial because it can help students to resolve learning problems and develop their language. Zhao and Bitchener (2007) point out that:

interactional language activities occur either between the teacher and other learners or between learners themselves. It is important to investigate the nature of both types of interactions in terms of the opportunities they can provide for comprehensible input, modified output and feedback of various kinds (p. 434).

Despite the emergence of CMC technologies in L2 learning, the provision of instructor-student CMC interaction remains unexplored particularly in the modality of *asynchronous* CMC interaction. Yang (2011) points out that student-teacher CMC interaction is essential for language learning especially when students collaboratively engage in problem solving and knowledge building. Yang (2011) claims that “[p]revious studies have emphasized the relationship between students’ engagement and learning performance, and yet the context in which students and the teacher interact to engage each other has been ignored” (p. 181). To help gain insights about online interactions among students and their instructors, the present study investigated the nature of instructor-student CMC interactions in conjunction with student-student CMC interactions in a Saudi EFL context in terms of students’ L2 performance and social presence.

1.3. Statement of the Research Problem

In the L2 and Saudi EFL contexts, little research has been conducted to examine the nature of students' L2 performance and social presence when they interact in student-student and instructor-student online exchanges. Moreover, most studies in the L2 context have been extensively focused on the L2 production of student-student online exchanges and on how CMC modes of communication and learning task types have affected students' L2 production. However, research which looks at how L2 students interact and produce their language in instructor-student online exchanges is scarce and the nature of instructor-student online interactions remains unexplored in both L2 and Saudi EFL contexts. More importantly, how students produce their language and project their social presence when they interact with (as opposed to without) their instructor in online discussion forums has not been fully explored in the L2 context. Therefore, the present study sought to investigate how Saudi EFL students perform their language and display their social presence when they interact in student-student and instructor-student online exchanges.

1.4. Aims of the Study

The present study had four aims. First, the study examined Saudi students' L2 performance in student-student and instructor-student online exchanges. It aimed to investigate how Saudi students' perform their language in terms of fluency, lexical density, grammatical complexity, and linguistic accuracy. Secondly, the study explored Saudi students' social presence in student-student and instructor-student online exchanges. It aimed to look at the extent to which Saudi students project their social presence and the types of their social presence behaviors. The third aim was to examine the interactions of EFL instructors and whether the roles they played influenced Saudi students' L2 performance and social presence in their online discussion forums. Lastly, the present study aimed to gauge Saudi students' perceptions of their instudent-student and instructor-student online exchanges. Putting students' perceptions under scrutiny aimed to help understanding students' L2 performance and their social presence in student-student and instructor-student online exchanges. The present study intended to

gain insights about online interactions among Saudi students and between Saudi students and their instructors and to help fostering L2 learning when using online discussion forums in their EFL context.

1.5. Study Approach

The present study employed a mixed-methods research approach and used quantitative and qualitative methods to collect and analyse the data of participants. Data were collected from transcripts of participants' online interactions, questionnaires and interviews. A synthesized analytical approach was used to investigate students' L2 performance and social presence. Students' L2 performance was examined using text analysis methods to determine linguistic fluency, lexical density, linguistic accuracy, and grammatical complexity (Wolfe-Quintero et al., 1998). To examine their social presence, the present study applied content analysis methods by using the model of social presence in the framework of a community of inquiry (Garrison et al., 2000, 2001). Furthermore, the role of the instructor in instructor-student online interactions was examined qualitatively using content analysis methods by means of a template which was developed during the present study. To investigate participants' questionnaires and interviews, descriptive and statistical analysis methods were employed.

1.6. Significance of the Study

Because of the proliferation of online learning in tertiary education, it is essential to examine the nature of Saudi students' L2 performance and social presence when they interact with their peers and instructors in online educational forums. Also, the body of L2 research is still lacking CMC studies into how EFL students perform their language and display their social presence in student-student and instructor-student online exchanges. It was hoped that the findings of the present study would make a contribution to rectifying this gap in the literature and help to inform Saudi EFL teaching and learning. The present quantitative and qualitative findings showed that instructor-student online exchanges provided Saudi EFL students greater opportunities to develop their target language by paying more attention to linguistic accuracy, engaging in negotiations, learning new grammatical and lexical features in comparison to student-

student online exchanges. These findings give more support to the claim of the Interaction Hypothesis (Long, 1996) as interaction with the instructors was found to trigger students' attention to language errors, encourage them to adjust their language problems, and facilitate their language acquisition. The findings also give more support for the claim that interpersonal interaction between student and the expert is seen as essential for promoting L2 learning (Lantolf & Thorne, 2006; Swain, Kinnear, & Steinman, 2011). The social presence findings showed that Saudi EFL students had higher degrees of social presence when they interacted in student-student online exchanges than in instructor-student online exchanges. It was concluded that the presence and absence of the instructors influenced the language performance and social presence of Saudi EFL students when they interacted in their online discussion forums.

1.7. Thesis Organization

Chapter two critically reviews L2 learning in the CMC context, with a review of the relevant literature on L2 interaction, theoretical frameworks, social presence, and study questions. Chapter three provides a description of the study's analytical approaches and outlines and describes the methodology in terms of data and analysis methods. Chapters four, five, six, and seven report on the results from the data while chapter eight discusses the findings in relation to the research questions and their implications for L2 learning in the Saudi EFL context. Chapter nine provides a summary of the study findings, with a discussion of conclusions made, together with the limitations of study, and provides recommendations for future L2 research in the CMC context.

Part II: Literature Review

Chapter Two: Reviewing the Related Studies

2.1. Computer-Mediated Communication (CMC)

The first use of CMC in the L2 learning and teaching context dates back to the 1990s and since then CMC has been used in educational settings as a tool for promoting different modes of language learning. CMC is defined as “predominantly text-based human-human interaction mediated by networked computers” (Herring, 2007, p. 1). It “is an environment in which students [and instructors] can participate in communication to express and obtain information in a meaningful way” (Luke, 2006, p. 26). CMC uses two different modes of communication, namely asynchronous CMC (ACMC) where there is some delay between when messages are sent, received and answered (e.g., online discussion forums, wikis, and blogs) and synchronous CMC (SCMC) where communication takes place in real time (e.g., chat rooms of text-, audio-and video-conferencing nature). Recently, several electronic platforms, such as Moodle, Blackboard, WebCT, have included different modalities of CMC which allow different interactional patterns to occur whether as one-to-one, one-to-many, or many-to-many interpersonal exchanges.

It should be noted that the linguistic features of CMC communication vary according to the nature of the medium, and to the social and cultural contexts of the communication. The linguistic discourses produced by participants in CMC environments are shaped by the technological features of the CMC system (Herring, 2004). Compared to FtF settings, the language used by participants in CMC exchanges tends to be linguistically less correct and less complex (Herring, 2001). Participants also tend to use abbreviations and the replacement of letters by numbers (e.g., *thank u 4 ur time*) which suggests that they intentionally economize their language when they interact with interlocutors in CMC environments. In the L2 context, CMC allows learners to communicate with their peers and the teacher and with other learners and native speakers (Kern & Warschauer, 2000), and it provides them with the opportunity for social interaction (Kern, 2006). CMC is seen as a useful pedagogical tool for L2 learning because it has “different discourse

features which may be exploited for different pedagogical purposes”(Sotillo, 2000, p. 82). It can support L2 students and improve the performance of their language learning (Yang, 2011) because it “seems to promote greater learner engagement and hence participation in task based activities.” (L. L. Tan, Wigglesworth, & Storch, 2010, p. 21). From a language intercultural standpoint, CMC has the potential to shape intercultural communicative competence among language learners (see, e.g., part II: *New Technologies and Intercultural Communication* in Sharifian & Jamarani, 2013b). W. Anderson and Corbett (2013) underscore how CMC has this potential by stating that:

Computer-mediated communication affords the opportunity for language learners to engage with “otherness” immediately, and activities can be devised to involve participants in online intercultural exchanges that involve the expression, interrogation, and negotiation of their “whole personality and sense of identity” (pp. 100-101).

The text-based of ACMC and SCMC is widely believed to be a more effective medium (than audio- or video-based medium) for facilitating language and social interaction amongst students and between students and their instructors (Hadjistassou, 2008; Herring, 2001; B. Smith, 2004). This is because the text-based CMC medium can encourage negotiations of meaning (B. Smith, 2004), enhance language collaboration (Paiva & Rodrigues-Junior, 2009), and it provides the necessity for managing online written discourse (Lai, 2005; Sotillo, 2000). Yamada (2009) and Yamada and Akahori (2007) found that text-based of SCMC increased the grammatical and lexical consciousness of L2 learners. Yamada (2009) concludes that “text chat allows learners to be conscious of grammatical accuracy and modify errors without feeling rushed” (p. 831). Zeng and Takatsuka (2009) found that “[t]he text-based medium amplified learners’ mutual attention to linguistic form and fostered their collaborative construction of knowledge” (p. 443).

Compared with synchronous text-based CMC, asynchronous text-based CMC has been seen as a promising medium for enhancing L2 learning because it enables students to construct their knowledge during the process of reading, thinking, and writing

(Abrams, 2003; Sengupta, 2001; T. Zhang, Gao, Ring, & Zhang, 2007). Sotillo (2000) found that the nature of asynchronous text-based CMC contributed to the length and sophistication of students' L2 discourse because it allowed them more time to plan their contributions and observe their grammar, spelling, and punctuation. T. Zhang et al. (2007) lend support to this by finding that social interactions in discussion forums promoted students' critical thinking in the sense that delayed-time exchanges allowed students to read, think, reflect and reshape their ideas. To sum up, asynchronous text-based CMC (i.e., APMC) is seen as a powerful medium for L2 learning because it has the capacity to allow students more time and space for reading, writing, revision, reflection, interaction, and collaboration with interlocutors anywhere and anytime. The present study will undertake its investigation in the context of APMC (specifically in online educational discussion forums) because little research into L2 interaction using this medium has been conducted in the Saudi EFL context, particularly where students personally interact in student-student and instructor-student online exchanges.

2.1.1 Asynchronous CMC and L2 Learning

APMC has the potential to increase learners' participation in terms of the quantity and quality of language output (Chun, 1994; Kern, 1995; Sotillo, 2000; Warschauer, 1996). Warschauer (1996) found that L2 students in APMC interactions produced longer exchanges and more formal and complex language than in FtF interactions. In terms of quality, L2 students were observed to be linguistically more sophisticated during their APMC interactions than in FtF interactions (Kern, 1995). Findings by Sotillo (2000) support Kern (1995) and Warschauer (1996) as APMC encouraged language interaction among L2 learners and helped them develop the quality of their L2 written discourse. APMC interaction was perceived by L2 learners as less threatening than FtF interaction which, in turn, could increase their confidence in interacting with other participants (Warschauer, 1996, 1997). APMC provides students with a stress free environment helping them feel more comfortable and be more willing to participate than in FtF classroom situations (Freiermuth & Jarrell, 2006). This is because online interaction seems to reduce social barriers, which can be found in FtF interaction, and enables

students to interact more willingly with other interlocutors. Garton, Haythornthwaite, and Wellman (1997) explain the role that the online setting plays in reducing social barriers by pointing out that “CMC tends to underplay the social cues of participants by focusing on the content of the messages rather than on the attributes of senders and receivers” (p. 6). Freiermuth and Jarrell (2006) found that the APMC environment provided students with more opportunities to express their ideas freely to others, even to participants they did not feel comfortable with in FtF interaction. They suggest that willingness to communicate is seen as a key factor for successful L2 interaction in the online environment.

2.1.2. Noticing and Attention to Linguistic Forms

The opportunity for enhancing noticing, paying attention to linguistic forms, and detecting grammatical errors can increase because the text-based CMC medium provides L2 students ample time for processing their writing (Lai & Zhao, 2006; B. Smith, 2008; Warschauer & Kern, 2000). It has been claimed that conscious noticing of input is necessary for language learning to take place (Schmidt, 1990). Kormos (2000) emphasizes the role of attention in influencing the accuracy of learners’ output. She explains that “improvement in linguistic accuracy should also entail increased attention paid to grammatically accurate language production” (p. 346). This suggests that noticing cannot be achieved by students without a degree of attention to their language problems during learning activities. In the CMC context, Lai and Zhao (2006) observed that text-based chat enhanced students’ noticing of their own mistakes because it allowed them enough time to process their language input and pay attention to their own L2 output. This shows that the medium of text-based chat can afford L2 students more opportunity for attention to linguistic forms than the medium of non-text-based chat (Chapelle, 2005; Warschauer & Kern, 2000). L. Lee (2008) argues that text-based CMC affords students an adequate modality through which L2 noticing is enhanced.

In the CMC context, most of the L2 research on noticing and attention has been on student-student online interactions (e.g., Kessler, 2009; Kessler & Bikowski, 2010; Lai & Zhao, 2006; B. Smith, 2004, 2008). However, researching instructor-student CMC

interactions has received scant attention. Moreover, most of the research into noticing and attention in the CMC context has focused on synchronous CMC chat and asynchronous CMC has not been fully explored. The present study aims to address this omission in the research.

2.1.3. The Interactions of Students and Instructors

Several L2 studies have investigated students' L2 interaction in CMC environments (e.g., L. Lee, 2008; Loewen & Reissner, 2009; B. Smith, 2004; Sotillo, 2000). For instance, L. Lee (2008) looked at the potential for expert-to-novice feedback on L2 students' focus-to-form attention in a text-based CMC chat interaction. The role of the expert students in L. Lee (2008)'s study is comparable to the role of instructors in the current study. This is because the expert students were advanced level of proficiency speakers and they scaffolded novice students and provided them with linguistic corrective feedback. L. Lee (2008) found that expert-to-novice interactions enhanced students' L2 attention to their linguistic errors. What is interesting in Lee's study is the role of experts in terms of scaffolding students' focus on linguistic forms and resolve linguistic problems. L. Lee (2008) explains in her study that while the experts were scaffolding students' exchanges, through collaborative interaction in the text-based CMC chat, "students gained confidence in correcting their linguistic errors from dependent performance (other-regulation) where they received the most explicit feedback to independent performance (self-regulation) where almost no collaborative help was needed" (p. 67). Expert-student CMC interaction is seen as useful because the expert can scaffold students' attention on their linguistic errors (e.g., L. Lee, 2008).

In a seminal study, Loewen and Reissner (2009) examined the amount and the characteristics of focus on form episodes (FFE) of English as a second language (ESL) tertiary students in the CMC and FtF contexts in Auckland. A class of 14 ESL students (two of whom spoke Arabic as their L1) with a native English teacher were involved in a student-student and teacher-student text-based CMC chat. The other two classes, which included 27 ESL students and three native English teachers, chatted as teacher-student in a FtF interaction. During the CMC and FtF interactions, the L2 students were

requested to complete an opinion gap exercise called the Prisoner Task. Loewen and Reissner (2009) found that FFEs occurred in all three contexts of interaction. However, FFEs occurred more in FtF teacher-student interaction and students paid more attention to their language in CMC teacher-student interaction than in the other interactions. The authors attributed the differences in the amount of FFEs in their study to “the presence of teacher [which] appears to result in more FFEs, regardless of the modality of interaction” (Loewen & Reissner, 2009, p. 110). Thus, the presence of the instructor as the knowledge authority can influence the quantity of students’ interactions in CMC with students engaging in frequent FFEs such as repairing and modification.

What is interesting in the findings of Loewen and Reissner’s study is that, as compared to teacher-student CMC interaction, no self-corrections were made by L2 students when they interacted in student-student CMC exchange. The researchers explain that “the mere presence of a teacher in the chatroom encouraged students to pay more attention to the accuracy of their language rather than focusing only on meaning” (p. 110). The presence of the instructor can influence not only the quantity but the quality of students’ linguistic accuracy as well. However, in their study, they did not interpret how teachers may have indirectly affected the amount of their students’ self-corrections. Loewen and Reissner (2009) conclude that “focus on form can occur in both online and face-to-face communicative tasks, although there are factors, such as the modality of the interaction and the presence or absence of a teacher, that may affect such focus on form” (p. 112). On the basis of the above findings, it can be argued that the instructor’s presence or scaffolding can influence the quality and quantity of students’ linguistic accuracy in the CMC environment. L. Lee (2008) argues that L2 students gain confidence in correcting their language errors from the CMC interaction of the experts.

Although delayed text-based CMC exchange (i.e., APMC) has been seen as useful for paying more attention to language errors than the real-time text-based CMC exchange (i.e., SCMC) (Warschauer & Kern, 2000), Stockwell (2010) found that students’ L2 interactions were grammatically more accurate in the SCMC chat than in the APMC forums. Once again it was *the presence of the teacher* which led students to avoid taking

risks in writing during their SCMC chat interaction. In terms of the modalities of SCMC and ACMC, Stockwell (2010) concludes “that plurality provides learners with opportunities to develop different areas of their L2. SCMC puts pressure on learners to produce language quickly whereas ACMC may promote output that is more syntactically complex” (p. 101). However, regardless of the modality of CMC in online interactions, it can be pointed out that the presence or absence of the instructor plays a major role on how students shape and perform their L2 in CMC environments.

2.2. The Theoretical Framework for L2 Interactions

The term *interaction* is reviewed based on the literature of L2 and CMC contexts, and it is defined for the present study. Following this, the perspectives of second language acquisition (SLA) Interactionists and Sociocultural theory (SCT) are reviewed and selected as a framework for understanding the nature of interactions which take place among students and between the experts and students.

2.2.1. Defining Language Interaction

An extensive examination reveals that an extremely wide range of discourse types (written and spoken) which takes place in communicative interpersonal activities (such as in conversation, negotiation, discussion, socialization) is referred to as interaction. Because interaction is a broad social communicative phenomenon, it would be worth distinguishing it from the term *communication*. Fuchs (2006) points out that the term *interaction* has not been clearly distinguished from the term *communication*. Interaction is defined “as a verbal and non-verbal communicative action between at least two conversation partners which requires that each person addresses at least one contribution to the other person” (Henrici, 1995 cited in Fuchs, 2006, p. 32). However, Fuchs (2006) distinguishes between the two terms (interaction and communication) by suggesting that “interaction cannot be reduced to communication because this would suggest excluding non-verbal interaction...interaction must be considered a social phenomenon” (p. 33). On the other hand, the term *communication* is used to refer to “a range of activities—communication practices—that involve talking and listening, writing and reading, performing and witnessing, or, more generally, doing anything

that involves ‘messages’ in any medium or situation” (Craig, 2006, p. 39). This means that people in their daily practices (e.g., conversation, writing letters, calling people, emailing, and mobile text messaging) are involved in communication with other people in different settings (e.g., face-to-face, print, phone, or online). Another definition for communication is provided by Rubin, Rubin, and Piele (2005) as “a process by which people arrive at shared meanings through the interchange of messages. When people create and manage meanings and share their understanding of social reality, many things become communication events” (p. 3).

In the L2 context, the term interaction has been widely defined and seen as important in understanding how second languages are learnt (e.g., Ellis, 1999; Gass & Alvarez Torees, 2005; Long, 1996; Mackey, 1999; Storch, 2002). Broadly, interaction can be viewed as a social activity which occurs between interlocutors and it “refer[s] to the interpersonal activity that arises during face-to-face [or online] communication” (Ellis, 1999, p. 1). However, it also refers to “intrapersonal activity involved in mental processing” in the sense that intrapersonal interaction can occur in our mind “when different modules of the mind interact to construct an understanding of or a response to some phenomena” (Ellis, 1999, p.1). Ellis (1999) goes further to explain the relationship between interpersonal and intrapersonal interactions by stating that:

Interpersonal and intrapersonal interactions are closely connected with regard to both our use and our acquisition of language. That is, intrapersonal interaction is required in order to interact interpersonally and, also, interpersonal interaction serves to trigger intrapersonal operations, including those that are involved in language acquisition. (p. 3)

Thus, interpersonal and intrapersonal interactions are seen as essential for the development of second language. In terms of how interaction is manifested, Chapelle (2005) notes that the term interaction is used “as the superordinate concept that includes any type of two-way exchanges” that can be “enacted through the use of linguistic or nonlinguistic means” during FtF or online communication (p. 54).

In the L2 classroom, interaction has also been referred to as learners' communicative "exchanges in which there is some indication that an utterance has not been entirely understood" during their learning with other learners or with the instructor (Gass & Alvarez Torees, 2005, p. 2). In this sense, L2 learners are involved in interaction (e.g., negotiation of meaning, feedback, or recast) with other learners or with the instructor for the sake of solving a learning problem or understanding any complex aspect of their target language (TL) (e.g., lexicon, morphology, syntax or phonology). Thus, learners' input and their attention to the problems of learning (e.g., misunderstanding, incomprehensibility or complexity) during their interaction are seen as priming devices for the development of their TL learning (Gass & Alvarez Torees, 2005; B. Smith, 2004). Yamada and Akahori (2007, p. 40) state that interaction refers to "meaningful communication to enable understanding, and drives comprehensi[ble] input" which occurs when interlocutors repair and modify their utterances because of incomprehensibility or misunderstanding during their L2 learning. However, interaction (which is termed dyadic or group interaction) in some L2 studies has been referred to as a collaborative communicative activity that takes place jointly among learners in the classroom in order to accomplish a learning task (e.g., writing or putting together a jigsaw puzzle) (e.g., Storch, 1999, 2002, 2005). This type of (dyadic or group) collaborative interaction is also seen as useful for enhancing learners' L2 learning (Storch, 2005).

In the CMC context, the term interaction has been widely used but L2 researchers tend not to define it explicitly in their studies. However, L2 researchers in the CMC context have referred to interaction as the communicative discourse exchange (written or spoken) that takes place jointly either among L2 learners or between learners and the instructor during a learning task (e.g., Abrams, 2005; Akayoğlu & Altun, 2009; Isharyanti, 2009; Kessler, 2009; Paiva & Rodrigues-Junior, 2009; B. Smith, 2004; Sotillo, 2000). Therefore, based on the above definitions of L2 interaction, interaction, whether it takes place jointly in FtF or CMC settings, can be seen as a communicative activity that serves to solve the problems (e.g., misunderstanding, incomprehensibility or

complexity) which arise during L2 learning and it can include a wide range of communicative interpersonal as well as intrapersonal interactions. Overall, L2 interaction can be seen as a complex phenomenon that serves to characterize the linguistic behaviours of interlocutors in social learning situations.

In line with previous studies (Chapelle, 2005; Ellis, 1999; Fuchs, 2006; Sotillo, 2000; Storch, 2002, 2005), the term *interaction* in the present study was defined as a communicative activity of a two-way exchange that takes place jointly during a language learning task among L2 students (student-student) or between the instructor and students (instructor-student). Interaction in the present study takes place in students' online discussion forums and it includes negotiation of meaning, repairing errors, modifying misunderstanding, exchanging ideas, reflecting on thoughts, providing feedback and suggestions, scaffolding, and socializing. Because of the importance of interaction in fostering students' L2 learning in CMC environments, the present study was motivated by the perspectives of SLA Interactionist.

2.2.2. SLA Interactionist Perspectives

From the standpoint of SLA *Interactionists*, there is a robust relationship between interpersonal interaction and L2 learning (e.g., Ellis, 1999; Long, 1996; Mackey, 1999). Long (1996) in the Interaction Hypothesis (IH) states this argument:

I would like to suggest that *negotiation for meaning*, and especially negotiation work that triggers *interactional* adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways. (pp. 451–452,)

The central claim made by Long (1996) about the IH is that taking part in interaction can facilitate L2 development. Interaction, therefore, is seen as an essential activity in the learner's language development. Ellis (1999) points out that the general claim of the IH is that "engaging in interpersonal [...] interaction in which communication problems arise and are negotiated *facilitates* language acquisition" in the sense that "it creates conditions that foster the internal processes responsible for interlanguage development" (p. 4). Long (1996) argues that interaction facilitates language acquisition because of the

conversational and linguistic modifications that occur during interlocutors' utterances and that provide learners with comprehensible input. This claim has been confirmed by SLA researchers in FtF contexts (e.g., Foster & Ohta, 2005; Mackey, 1999; Zhao & Bitchener, 2007). Foster and Ohta (2005) looked at the students' meaning negotiation and patterns of interaction when problems arose during their L2 interaction. They found that students frequently repaired and reworded their utterances and focused more on forms than on content. Mackey (1999), in a study that investigated ESL learners' participation in conversational interaction, observed that interaction without active participation—just watching interaction or taking part in interaction without negotiation—had some limited effects but did not result in L2 development.

SLA Interactionists see learning as taking place when L2 learners engage in solving language problems by means of interactional activities with other interlocutors. Although Zhao and Bitchener (2007) found more frequent student reactive but less initiated pre-emptive form-focused episodes (FFE) in teacher-student interactions as compared to student-student interactions, they point out that “[b]oth teachers and learners are actually doing what SLA theorists claim is needed for L2 acquisition” (p. 445). Based on the results of their study, Zhao and Bitchener (2007) conclude that, from a pedagogical perspective, incidental FFEs during meaning-focused interaction are seen as useful because “they are used by learners and teachers as a means of dealing with linguistic difficulties either in the interaction between learners or between the teacher and learners” (p. 455).

2.2.2.1. L2 Interaction

A considerable body of CMC research grounded in the SLA Interactionist theoretical framework indicates that the processes of language learning during L2 interaction in CMC environments are relevant to those processes which have been examined in the literature on FtF interaction (e.g., Akayoğlu & Altun, 2009; Hegelheimer & Tower, 2004; Isharyanti, 2009; B. Smith, 2004; Sotillo, 2000). For instance, CMC was found to facilitate learners' input and output in L2 learning in terms of providing modified and comprehensible input (Hegelheimer & Tower, 2004). B. Smith (2004) found that there is

a direct link between negotiated interaction and lexical acquisition when L2 learners interact in a CMC environment. That is, CMC helped students' recognition and production of new lexical items during their student-student L2 interaction. B. Smith (2004) concludes that "learners can [interact] and do negotiate meaning when problems in communication arise in a CMC environment...learners can [interact] and do provide one another with preemptive input in this electronic environment" (p. 387).

Sotillo (2000) found that L2 learners engaged in productive interactions (i.e., lengthy and syntactically complex discourse) when they interacted with their peers and instructors in CMC environments. She points out that "CMC technologies have the potential to enhance the process of second language acquisition and encourage the formation of electronic communities of learning" (p. 107). Sotillo argues that the nature of collaborative interaction in constructing meaning through textual exchanges in CMC seems to facilitate learner output which is seen by SLA researchers as necessary for the development of the learner's acquisition system. Isharyanti (2009) examined the interactions of EFL Indonesian students when they interacted with their peers in CMC dyad chats. The results of the study suggest that engagement in interactive tasks such as jigsaw and decision-making in a CMC environment can provide opportunities for EFL students to practise their English because it can expose them to a natural English interaction which is very rare in EFL contexts. Because interaction is essential for L2 learning in CMC environments, the present study was also motivated by the SLA Sociocultural perspectives.

2.2.3. SLA Sociocultural Perspectives

Lantolf (2004) states that *sociocultural theory*—which is influenced by the work of L. S. Vygotsky—is "a theory of mind...that recognizes the central role that social relationships and culturally constructed artefacts play in organizing uniquely human forms of thinking" (pp. 30-31). The term *sociocultural* is used in reference to social and cultural contexts of human activity (Thorne, 2005). Vygotsky (1978) argued that human cognitive development and functioning are mediated by the social and cultural contexts of everyday activities and accordingly, development is social. That is, sociocultural theory

provides a framework through which cognition can be examined systematically without separating it from social context or human agency (Thorne, 2005). External social activities such as interaction and collaboration are seen as essential for enhancing cognitive functions in language learning (Swain, Brooks, & Tocalli-Beller, 2002). Therefore, it has been argued that learning in the L2 context takes place within the social and cultural contexts of human activity (e.g., Lantolf & Thorne, 2006; Swain et al., 2011).

The concept of *linguaging* is seen as useful for L2 development. Based on Vygotsky's *sociocultural theory* (Vygotsky, 1978), this concept comes from the claim that "language is one of the most important symbolic systems we have at our disposal in the development and mediation of voluntary actions" (Swain et al., 2011, p. 43). *Linguaging* is an internal interactional dialogue between the person and himself/herself and can be known as *an intrapersonal communication* (Lantolf & Thorne, 2006) or *a private speech* (Swain et al., 2011). In fact, both inter/intra-actions which occur function to mediate learners' cognition by controlling and organizing their thinking when they are faced with language learning problems. Such activities that are derived from interpersonal interaction (i.e., expert-to-learner) as well as intrapersonal interaction (i.e., learner-to-himself/herself) can provide good opportunities for L2 development (Swain et al., 2011).

Considerable attention has been given to how L2 learners use their new language to mediate their psychological activities while they are doing a task (e.g., Lantolf & Thorne, 2006; McNeil, 2012; Swain et al., 2011). McNeil (2012) states that "interaction from a sociocultural standpoint originates, and is observable, through the social relationships of joint activity" (p.398). Knowledge is constructed by the interactions of individuals within society, and learning is the internalization of the social interaction (Vygotsky, 1978). Vygotsky (1978) believed that when learners engage in interaction in problem solving activities in collaboration with more capable peers they venture into a zone where they have access to tools that are more advanced than those they usually employ, which he called the *zone of proximal development* (ZPD). This suggests that interacting with an expert such as an advanced learner or the instructor promotes more efficient

learning than when novices scaffold each others' ZPDs (Lantolf & Thorne, 2006; Storch, 2002; Swain et al., 2002).

2.2.3.1. Peer Scaffolding

Scaffolding was originally used by Wood, Bruner, and Ross (1976) and they define it as "a kind of process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his [sic] unassisted efforts" (p. 90). Swain et al. (2011) point out that the "ZPD and scaffolding support each other both conceptually and syntactically" (p. 26). Thus, the concept of scaffolding is seen as compatible with the Vygotskian ZPD (Swain et al., 2011) and it is "[t]he graduated and contingent nature of the assistance provided by the expert" in order to help the novice accomplish tasks in L2 learning (Storch, 2002, p. 121). Scaffolding can occur when L2 learners work collaboratively in accomplishing learning tasks (e.g., C.-Y. Lee, 2009; L. Lee, 2008; McNeil, 2012; Storch, 2002; L. L. Tan et al., 2010) and peers support their L2 learning by scaffolding each other's ZPDs when they solve learning problems and manage their cognitive and social behaviours (Swain et al., 2002). For example, Storch (2002) found that L2 students scaffolded each other's performance in collaborative and expert/novice interactional patterns. She suggests that there is a great learning opportunity for L2 students when they are involved in collaborative or in expert/novice social interactions.

In the L2 context, a considerable body of interaction research refers to scaffolding as *peer assistance* (e.g., Foster & Ohta, 2005; Storch, 1999; Storch, 2002, 2005, 2011; Swain et al., 2002; Wigglesworth & Storch, 2009). Storch examined the grammatical accuracy and complexity of L2 students who composed individually and collaboratively with their peers in two studies (Storch, 1999, 2005). Storch (1999) found that students who worked collaboratively produced more accurate L2 texts than those who worked individually. She suggests that collaborative learning can increase learners' attention and motivation to focus on grammatical accuracy. Similarly, Storch (2005) found that students who worked collaboratively produced more grammatically accurate and linguistically complex texts than those who worked individually. Storch (2005) claimed that peer-collaborative writing encouraged students "to discover ideas together and exposed

them to different views” and afforded them the opportunity “to give and receive immediate feedback on language” (p. 168). Therefore, peer-collaborative interaction can be seen as useful because it has the potential for improving students’ L2 accuracy and complexity.

Wigglesworth and Storch (2009), likewise, have found that L2 students produced more accurate language when they collaboratively interacted in peer-peer learning than those students who worked individually. They conclude that peer-peer collaborative interaction offered learners several opportunities “to share ideas and pool their language knowledge” (p.460). Foster and Ohta (2005) examined their students’ L2 interaction quantitatively and qualitatively in terms of meaning negotiation and patterns of interaction when problems arose. They found that students in both data sets of L2 English and Japanese frequently repaired and reworded their utterances and “assist[ed] each other to both find the right form and to express meaning” (p. 424). Foster and Ohta (2005) conclude that, from a sociocultural perspective, students were found to rely more on their peers’ assistance. This indicates that students during their L2 classroom interaction have been benefiting from scaffolding by their peers to promote their L2 performance and develop their language.

2.2.3.2. Instructor Scaffolding

What has been concluded recently in peer-collaborative interaction seems to support the claim made by Swain et al. (2002) that “the collaborative dialogue in which peers engage as they work together on writing, speaking...activities mediates second language learning” (p. 181). However, scaffolding occurs not only in *student-student* L2 interaction but it can also occur in *teacher-student* L2 interaction (Swain et al., 2011). The assistance provided by the teacher as *the expert* is evident in L2 contexts and has been found essential for language learning (e.g., McNeil, 2012; Mercer, 1995; Zhao & Bitchener, 2007). For example, Zhao and Bitchener (2007) investigated incidental FFEs of teacher-learner and learner-learner L2 interactions. They found that there were more reactive FFEs in teacher-learner interactions than in learner-learner interactions and they attributed this to the fact teachers were observed to be more active than learners in

responding to learners' linguistic errors. Zhao and Bitchener (2007) stress that "[i]t is more often the teacher than other learners who realizes that learners are making systematic errors on a given form and who responds accordingly, either in the form of explicit or implicit feedback" (p. 433). This shows that the role of the instructor during students' L2 interaction is seen as central for L2 development. Conversely, students in Zhao and Bitchener's study were found to engage more frequently in pre-emptive FFEs in learner-learner interactions than in teacher-learner interactions. Zhao and Bitchener (2007) explained that "learners were more likely to ask questions of each other than of their teacher" (p. 444). This indicates that L2 students may feel reluctant to interact with the teacher frequently and this may be because of the status of the instructor as the knowledge authority. Based on their results, Zhao and Bitchener (2007) suggest that L2 teachers should try to provide L2 learners with more opportunities for attempting incidental FFEs but they "are not advocating that teachers regularly focus on form if there is a risk of it inhibiting language fluency" (p. 445).

2.2.3.3. Scaffolding in CMC Environments

In the CMC context, sociocultural theory has been seen as a useful for understanding how L2 learners transform their cognitive, linguistic and social activities and how these activities are mediated by the computer and internet technology (Warschauer, 2005). Sotillo (2000) found that L2 students engaged in interactive and lengthy CMC exchanges during their L2 interaction with their peers and instructors. From a sociocultural standpoint (Vygotsky, 1978), Sotillo (2000) points out that CMC discussions "exemplify ideal environments because they encourage the intense social interaction and textual meaning construction and negotiation deemed crucial for human learning and development of higher-order cognitive functions" (p. 102). This shows that L2 students can also benefit from L2 interaction and collaboration in co-constructing their knowledge and developing their language when they interact with their peers and instructors in CMC environments.

It has been widely observed that scaffolding can occur between L2 students and their instructor and among students in CMC environments (e.g., L. Lee, 2008; Paiva &

Rodrigues-Junior, 2009; Salaberry, 2000; Zeng & Takatsuka, 2009). Salaberry (2000) investigated students' L2 interactions in discussion-based CMC conferencing and he found that students hardly engaged in repairing with their peers. Salaberry (2000) defined scaffolding "as the conditions created by a knowledgeable person that may help the less experienced participant extend and improve his/her knowledge of the language system" (p. 20). However, Salaberry (2000) placed emphasis on the role of the instructor in his study because scaffolding by the expert appeared to help learners develop language output. L. Lee (2008) lends support to Salaberry (2000) by observing that scaffolding by the experts in CMC enhanced students' attention to errors and encouraged them to feel confident in correcting their linguistic errors.

A seminal work that examined peer-peer interactions using the framework of sociocultural theory is the study by Zeng and Takatsuka (2009) which focused on the students' L2 collaboration and mutual engagement in CMC. It was found that students collaboratively solved each other's language problems and that CMC facilitated their dialogues and enhanced their language learning. Based on their results, Zeng and Takatsuka (2009) conclude that "learners were not simply 'information processors'...sending and receiving messages; rather they were 'mutual scaffolders'...offering and receiving assistance for better joint productions in this socially situated context" (p. 444). In instructor-student interaction, Paiva and Rodrigues-Junior (2009) examined the interactions of students with their peers and instructor in an online discussion forum. They observed that students were concerned with ways of providing feedback and support to their peers and they were able to improve in giving their mutual support and in their levels of confidence. In their study, the role of the teacher was also seen as helpful for students' social and cognitive presences in the online community.

In the Saudi EFL context, the findings which were reported by AbuSeileek (2007) support the positive influence of interpersonal interaction between students and the expert in facilitating SLA in the CMC context. AbuSeileek (2007) conducted an empirical study to examine students' listening and speaking achievements in a computer-based

chat system (i.e., Netsupport School) and FtF traditional way when they worked cooperatively and individually with the instructor as the facilitator. The FtF cooperative and individual groups were used as control groups for online cooperative and individual groups. The main finding of the study is that students who learnt in the online cooperative way scored significantly better than those who learnt in the online individual way.

What seems interesting in the findings of AbuSeileek (2007) is that the instructor taught both two online groups but he only interacted with the online cooperative student group. It can be argued that the fact that the online cooperative learning was found to be more helpful for students than the online individual learning may be because they collaborated with the expert during the learning task. This is, from a sociocultural perspective, seen as useful for L2 learning because the instructor in AbuSeileek (2007) interacted online with the students by questioning, discussing answers and providing them with corrective feedback. Furthermore, students' responses were positive in that they felt that working cooperatively provided them more chance to benefit from the instructor. AbuSeileek (2007) explained that most students in the online cooperative group "felt that they got a [sic] more individual attention from the instructor in the computer-based class" (p. 508). Therefore, *more individual attention* which was given by the instructor during online interaction can be conceived of as scaffolding which is, from a sociocultural standpoint, seen as essential for promoting language learning among learners.

2.3. Online Discussion Forums

Online discussion forums are asynchronous CMC forms, which were first used in the mid-1980s, and are nowadays often used in educational contexts as a tool for promoting students' L2 learning by providing them with a social learning space where they can interact with one another and collaborate in knowledge building (Hadjistassou, 2008; Montero, Watts, & García-Carbonell, 2007; Nor et al., 2012; Thomas, 2002). Hadjistassou (2008) defines the online discussion forum as "an online forum which offers a pedagogically-constructive learning environment that fosters a community-centered

approach" (p. 348). Kosunen (2009) points out that "asynchronous computer conferencing creates a promising space for enhanced, collaborative learning as students comment, compliment and criticize each other's messages" (p. 338). Paiva and Rodrigues-Junior (2009) support this by noting that "[i]nteraction through discussion groups encourages participants to work in a cooperative way and at the same time allows students to preserve their individuality" (p. 60). Based on the findings of her study, Hadjistassou (2008) "argue[s] that the discussion board can effectively guide and engage ESL students in a constructive activity which can help them understand the writing assignment and expand beyond the conventional and individually-construed modes of learning" (p. 357). Furthermore, Armstrong (2010) points out that writing activities are of great benefit to instructors and learners in terms of helping L2 learners to explore their ability to communicate in the target language. Harklau (2002) gives support to this by stating that "[r]eading and writing are likewise powerful means of linguistic input, output and interaction albeit lacking the immediacy of face-to-face communication" (p. 334).

L2 students not only have language learning opportunities in online educational discussion forums but Internet public discussion forums can have the potential to promote students' language and culture learning (see, e.g., *Learning Language and Culture via Public Internet Discussion Forums* by Hanna & de Nooy, 2009). Hanna and de Nooy (2009) emphasize the use of Internet public discussion forums beyond the L2 classroom:

Online public discussion in a foreign language offers the potential for learners to experience cultural difference unfettered by physical location. And it provides a venue for language learners and teachers to focus *not* on language *and* intercultural communication but on language *as* intercultural communication. (p. 186)

Therefore, online discussion forums, whether they are integrated with public Internet sites or with private educational platforms, have the potential for L2 learners to socially interact with other interlocutors and promote different competences in their L2 learning. Nor et al. (2012) conclude that "the online discussion forum as a platform for learning

provides greater opportunities for interaction among students and lecturers compared with the traditional face-to-face mode of instruction" (p. 252).

2.3.1. Using Online Discussion Forums in L2 Learning

There has been a growing emphasis on the use of online discussion forums in L2 tertiary education because of the opportunities the forums offer students in their blended and online learning contexts (e.g., Chang, 2012; Hadjistassou, 2008; Hanna & de Nooy, 2009; Kol & Schcolnik, 2008; Kosunen, 2009; Montero et al., 2007; Nor et al., 2012; Paiva & Rodrigues-Junior, 2009; Ritchie & Black, 2012; Saude et al., 2012). Stockwell (2010) notes that discussion forums allow students extra processing time which helps them to better comprehend and achieve more accurate output. Montero et al. (2007) observed that participation in forums in a topic-oriented discussion helps students to identify language problems and solve them, and develop the acquisition of the linguistic and communicative skills. Discussion forums played an essential role in supporting collaborative L2 learning. They allow students "to ask questions, express their thoughts, share resources, and justify their opinions beyond the four walls of the classroom" (Nor et al., 2012, p. 237). Hadjistassou (2008) found that discussion forums facilitated interactive exchanges among L2 students by enabling them to share their opinions, thoughts and personal experiences which helped them to collaboratively compose their writing and improve their writing skills.

Discussion forums can allow students to interact with their peers and instructors outside of the FtF class times and at their convenience (Nor et al., 2012). Nor et al. (2012) indicate that discussion forums promote students' collaborative learning and provide them with greater learning opportunities. Paiva and Rodrigues-Junior (2009) argue that learning in the educational discussion forums originates from the collaborative interaction between the instructor and students. Central to the role of instructor, discussion forums can promote higher rate of peer interactions because the instructor's intervention is seen as minimal compared to that in FtF classroom (Kosunen, 2009; Nor et al., 2012).

Furthermore, participation in discussion forums can have a positive influence on students' argumentative skills (Ritchie & Black, 2012). Ritchie and Black (2012) observed

that “[t]he forums forced [students] to choose a topic, read about it, obtain different points of view, and develop their own, therefore entering a community of practice” (p. 349). Hadjistassou (2008) lends support to this by arguing that “asynchronous postings on the discussion board could provide a pedagogical paradigm to promote a multilayered approach on [sic] L2 learning” (p. 357). Interestingly, Hadjistassou (2008) drew this conclusion based on her study’s findings.

The asynchronous forums, then, whether used as tools to formulate paper topics, to examine their peers’ topics and generate effective constructive feedback, or to evaluate how practical and valuable the online forums were, provided evidence of a cooperative activity promoting a high level of engagement, motivation, and active communication. ESL students utilized these ACMC beyond the course requirements in their effort to develop stronger writing skills and to establish a strong relationship between them. (p. 356)

Although online discussion forums have been under scrutiny by researchers for about two decades, the nature of students’ L2 interactions when interacting in student-student and instructor-student online exchanges needs further investigation. Hadjistassou (2008) points out that “the conditions for offering engaging and constructive [exchanges] in asynchronous forums are much more complex and have not been fully explored” (p. 358). Paiva and Rodrigues-Junior (2009) conclude that in instructor-student exchanges “[w]e are still learning how to behave in online educational forums, and research can show us what is underlying this online environment” (p.66). Yang (2011) asserts that “[p]revious studies have emphasized the relationship between students’ engagement and learning performance, and yet the context in which students and the teacher interact to engage each other has been ignored” (p. 181). The current study aims to shed light on the nature of students’ interactions by investigating how students use language and display their social presence when they interact online with their peers and instructors.

2.4. Student-Student and Instructor-Student Interactions

2.4.1. Earlier L2 Studies of CMC Interaction

CMC studies conducted before 2001 (e.g., Chun, 1994; Kern, 1995; Salaberry, 2000; Sotillo, 2000; Warschauer, 1996) were hampered in terms of their research design and focus. Many were (1) conducted in computer labs during class time, (2) used computer network applications, and (3) focused on comparing the nature of different learning modalities (i.e., SCMC, APMC, and FtF). Compared with the features and affordances which the CMC technology has nowadays, students' L2 interaction and performance of earlier CMC studies might have been influenced by the constraints of CMC in its early stages. However, the contribution of insights and significant outcomes of those studies to CMC literature should not be underestimated. For example, it was found that text-based synchronous and asynchronous CMC exchanges helped L2 students develop discourse skills, increased production and language interaction, supported equal participation among students, and decentralized the role of the instructor (Chun, 1994; Kern, 1995; Salaberry, 2000; Sotillo, 2000; Warschauer, 1996).

What is important for the present study is insight into L2 students' interaction with their peers and instructors and how they produced their language in CMC environments. For instance, Chun (1994) observed that replies to teacher questions outnumbered student replies to their peers although students directed more questions to their peers than to their instructor. She points out that the instructor's role was decentralized during CMC interactions and this provided L2 students with more opportunities to learn and practise different kinds of communicative competency with their peers. Kern (1995) lends support to this by finding that L2 students interacted more with their peers than instructors and they directed more questions to their peers than to their instructor. The researcher notes that "[d]irect student-to-student interaction stimulated students' interest in one another, contributed to peer learning, and decreased students' reliance on the instructor" (Kern, 1995, p. 470).

Kern (1995) also observes that students' CMC interactions suffered from grammatical errors. Students did not pay attention to linguistic accuracy when they interacted with

their peers. They may have focused on the meaning more than on form as found in Kern (1995). However, this could be because the two instructors rarely interacted with their students—one instructor posted the topics and the other interacted in only one discussion. This lack of instruction suggests that students do not pay more attention to their linguistic accuracy or are reluctant to correct their language mistakes when their instructor is not participating.

Warschauer (1996) also found that when the instructor was absent student-student CMC discussions were longer, had more equal participation, and were more lexically and syntactically complex than FtF discussions. The instructor merely monitored students' CMC participation. Although linguistic accuracy was not assessed in his study, Warschauer (1996) concluded that electronic discussion was beneficial for students in acquiring more sophisticated communicative skills.

The role of the expert in CMC has been seen as essential for scaffolding students' language development. Although the study by Salaberry (2000) was conducted on students' of Spanish, the following exchanges are cited here to show how scaffolding occurred in instructor-student CMC interaction and seemed to trigger the learner to use a new knowledge (Salaberry, 2000, p. 20).

CMC Exchange One (English translation):

R: Why? What did you do that you didn't like S1?

S1: In class we did exercises that do not help. All the exercises were very boring.

CMC Exchange Two (English translation):

S3: A man needed money and he had two men take his wife.

S1: Why did he need money? Why doesn't he work?

As can be seen from the above, after the researcher scaffolded student S1 during CMC interaction, student S1 questioned student S3 two questions. Thus, the scaffolding provided by the expert during instructor-student CMC interactions can lead to a development in the students' target language.

In Sotillo (2000), “both teachers [of synchronous and asynchronous CMC exchanges] tried to keep the discussion of academic readings focused...by reframing questions, scaffolding, and providing implicit corrective feedback through modelling” (p. 106). However, it was found that SCMC interactions were more highly interactive and mainly controlled by students as compared to ACMC interactions. This shows that the instructor might not have interacted as frequently with students in SCMC interactions. In terms of linguistic accuracy, ACMC interactions were found to be more accurate than SCMC interactions. In ACMC interactions, “49% of the discourse functions identified were classified as student responses to teacher questions or prompts” (p. 104). This proportion indicates that the forum’s instructor may have interacted more frequently with students than the chat’s instructor. Based on the findings of Sotillo (2000), the frequency of instructor’s online interactions appeared to affect the quality of students’ language production.

In terms of scaffolding in student-student CMC exchanges, Sengupta (2001) explored the nature of students’ CMC exchanges on the bulletin boards when they were learning language in their web-based classrooms. She observed that students were learning from their peers by providing scaffolding through responses and opinion discussions. In terms of discourse functions, students’ CMC exchanges in Sengupta (2001)’s study were found to be dominated by two moves; that is, agreeing with and complimenting their peers.

The earlier L2 studies did not look into how L2 students performed when they interacted with as opposed to without their instructor. The dynamic of student-student and instructor-student CMC interactions in promoting L2 learning has yet to be fully explored.

2.4.2 Current L2 Studies of CMC Interaction

Unlike the early stages of CMC research, studies currently are carried out in blended and online classrooms where an internet connection is available and students can interact with their peers and instructors via interactive learning platforms (e.g., Blackboard and Moodle) inside and outside the physical of the L2 classroom (e.g., Alwi,

Adams, & Newton, 2012; W. Anderson & Corbett, 2013; Kessler, Bikowski, & Boogs, 2012; Miyazoe & Anderson, 2010; Nor et al., 2012; Paiva & Rodrigues-Junior, 2009; B. Smith, 2008; Stockwell, 2010; Yang, 2011). In tertiary education, the new era of CMC technology has provided greater opportunities for L2 students to develop their language because it offers them different social channels (e.g., forums, chats, blogs, podcast, and wikis) through which they can socially communicate and interact with their peers and instructors. Current CMC research which looks at how students interact in student-student and instructor-student CMC exchanges will be reviewed in this section.

In a qualitative study, Hadjistassou (2008) looked at the nature of online collaborative interactions among ESL students in discussion forums at an American state university. Seventeen ESL students in a FtF writing course collaboratively interacted looking at their paper topics, posting their feedback, sharing personal experiences, and offering suggestions before composing their final written work. After analysing the student forum interactions qualitatively, Hadjistassou (2008) found that students engaged in cooperative and constructive peer feedback activity by sharing their writing and offering feedback. She also found that cooperation in online discussion forums helped students acquire complex writing strategies and establish a strong connection with their peers.

What is interesting and relevant to the present study is that Hadjistassou (2008) found students did not engage in grammatical corrective feedback during these discussions. Hadjistassou (2008) reported that “as it appeared on the discussion board, no effort was made to correct their grammatical and/or punctuation errors” (p. 353). This was the case possibly because they were focussing more on meaning than on form. Another likely reason could be the absence of the instructor. From the findings of Hadjistassou (2008), it can be deduced that cooperative peer-feedback activity seemed to help students write constructively and develop their writing strategies but, on the other hand, it did not seem to help them improve their linguistic accuracy. It can be contended that if the instructor had been present in the online discussion forum students can put more effort into the linguistic accuracy of their writing.

By looking at the nature of peer-peer interaction in a CMC environment, Zeng and Takatsuka (2009) investigated the dialogues and language of mutual engagement of Chinese EFL students (N=16) who interacted with their peers in text-based CMC exchanges. Students participated voluntarily and collaborated weekly in pairs in eight text-based chats to produce a product and a comment on both content and form. The study analysed students' online interactions, survey responses, and the results of two post-tests. The findings show that students mutually attended to their peers' language use and their mutual attention to language form enhanced their L2 development. Students were observed to engage collaboratively in attending to each other's language problems. This observation shows that students scaffold each other during CMC exchanges and this was seen as useful for their L2 learning.

However, based on their findings, Zeng and Takatsuka (2009) noted that there were some language problems which could not be resolved by students. Students "missed learning opportunities" when they interacted with their peers and this may be related mainly to factors such as the students' lack of ability and external resources or lack of assistance from other people (p. 444). Nevertheless, for many other students in this study, they claim that "the missed opportunities would never be regained without the teacher's helpful intervention" (p. 444). Thus, the instructor's scaffolding is useful for drawing students' attention to linguistic form and resolving learning problems in CMC interactions. Zeng and Takatsuka (2009, p. 444) assert that "the guiding role assumed by the teacher seems particularly crucial in the CMC context" and they suggest that EFL teachers should encourage their students to reflect on their own online interactions.

Liang (2010) examined peer-peer text-based chat CMC interactions of Taiwanese L2 students in an EFL writing course and she found that meaning negotiation, error correction, and technical actions rarely occurred in the students' online interactions. In her study, students focused more on content than on negotiation of meaning. Although the modality of SCMC might not have allowed students sufficient time to revise and repair their L2 writing with their peers, Liang (2010) lends support to Zeng and Takatsuka (2009) by arguing that "instructors may need to proactively model, scaffold

and support revision-related online discourse” to help students develop their L2 writing in online peer-peer CMC interactions (p. 45). This argument gives more support to the claim that scaffolding during students’ online exchanges by the instructor can help students develop their language.

Over a five-year period from 2005 to 2009, Stockwell (2010) collected data from EFL students (N=24) at a Japanese university to investigate their L2 performance when they interacted with their peers in text-based chats and online discussion forums. Students collaborated in chat sessions with the teacher facilitating, using Moodle, to write a short weekly article about a given topic and they worked together in the forums to post messages without the assistance of the teacher. Stockwell (2010) found that students produced longer but less accurate interactions in the discussion forums than in the chats, although no significant differences were found in the study.

What seems important for the present study is that Stockwell (2010) argues that one of the likely reasons for less complex but more accurate student language in the chats than in the forums was because of the presence of the teacher in the chat discussions, besides the fact that students may have chosen to use grammatical forms they felt confident with given the limited time-frame of SCMC exchanges. Stockwell (2010) states that “the presence of the teacher was very real, and this may have led learners to avoid taking risks in writing messages, opting instead to take care in writing to avoid embarrassment in front of the teacher” (p. 99). This argument was supported earlier by Loewen and Reissner (2009).

In a mixed-methods study, Miyazoe and Anderson (2010) examined the use of three asynchronous online writing tools (i.e., forums, blogs, and wikis) by L2 students (N=61) in an EFL blended course in a Japanese university. The course had FtF instruction and online activities and its objective was to help L2 students improve their English skills (i.e., listening, speaking, reading, and writing). Weekly during the course, students discussed topics in the forums, translated passages collaboratively from English to Japanese in the blogs, and engaged in free writing in the wikis. The instructor observed students’ online interactions but did not participate in the online activities. Students

were given screen names to hide their identities from their peers and the instructor so that this could reduce the fear of making L2 errors and encourage them to be productive in the online activities.

According to Miyazoe and Anderson (2010), students had positive perceptions of their EFL blended course and they favoured the wikis, the blogs, and the forums in that order. The text analysis of students' online written interactions showed that, over the course of two semesters, the lexical density and complexity became much richer in the forums and the blogs than in the wikis. However, students did not comment on one another's postings on the blogs. Miyazoe and Anderson (2010) argue that this was because "there was so much interaction planned and expected in forum and wiki activities, and blogs were optional" (p. 193).

In instructor-student CMC interaction, Yang (2011) recently looked at the L2 learning of Taiwanese EFL students (N=118) and their engagement in student-teacher online interactions using APMC and SCMC modes in an English drama-based course. The objective of this course was to enhance students' interest in terms of behavioural, emotional, and cognitive dimensions by involving them in authentic learning environments. Students interacted with their peers in small groups with three teaching assistants (TAs). The role of the TAs was to facilitate students' group discussion in SCMC chats and revise their language in APMC exchanges. The data included students' pre- and post-tests, engagement in SCMC and APMC exchanges, and a questionnaire. Yang (2011) found that students' engagement was promoted during their student-teacher online interactions and they significantly performed better in their drama-based course. Student-teacher synchronous chat interaction was found to enhance students' emotional and cognitive engagement by allowing them to express thoughts and opinions and acquire knowledge of L2 vocabulary and sentences respectively. Student-teacher asynchronous interaction in the discussion forums was found to enhance students' cognitive engagement by constructing collaborative knowledge for problem-solving in writing. Therefore, in both student-teacher SCMC and APMC interactions, TA scaffolding was seen as useful for students' behavioural, emotional, and cognitive

engagement during their L2 learning. More importantly, interaction with the teacher was also found to help students engage “in critical thinking to detect a lexical error” (p. 191). Yang (2011) notes that “[p]uzzling over problems with word meanings, grammar, and sentence structure in L2 (English) involved student[s]...[in] greater cognitive engagement, which then motivated [them] to rewrite [their] text[s] for improvement” (p. 191). This improvement underscores the role of the expert because it has been seen as essential for facilitating and promoting students’ L2 learning in CMC environments (e.g., L. Lee, 2008; Yang, 2011). Furthermore, from a sociocultural standpoint, the expert’s scaffolding is seen useful for developing students’ critical thinking about lexical errors and promoting behavioural engagement with grammatical corrections.

In terms of students’ perceptions of student-teacher CMC interactions, Yang (2011) found that 72% of students agreed that they were able to share their thoughts and ideas with their peers and teachers, 83% believed that the teacher encouraged them in expressing their thoughts, and 90% thought that they had good interactions with their teachers and TAs. Students overall had positive attitudes towards their CMC interactions with their instructors because they seemed to encourage students to express their thoughts and enhance their L2 learning. Despite the positive influence which instructors had on students’ L2 learning, Yang (2011) acknowledged that the study did not discuss student-student CMC interaction and she stated that, for future research, “[i]t would be helpful to understand the different impacts caused by the teacher and their peers” on the students’ engagement in L2 learning in the CMC context. This statement by Yang (2011) is motivation for the present study as well as for other L2 researchers to undertake further research in this area.

In a more recent study, Nor et al. (2012) investigated the discourse patterns of social interactions generated by Malaysian and Arab students (N=20) who were studying an English L2 course in their Masters of Applied Linguistics program. The discussion forums, which were blended with FtF classes, were developed to provide students with more opportunity to discuss the course materials. Participation was neither compulsory nor graded in this course. However, the lecturer encouraged students to participate and

contribute as much as possible. Students discussed a topic with their lecturer over the course a week. The lecturer contributed minimally by posting four times for each topic. Students were found to actively engage in providing feedback to one another and to their lecturer, in order to clarify and discuss the topics, and they were observed to express their agreement and disagreement collaboratively. This shows that students and the expert engaged in scaffolding of their learning which affected their language production and online participation. However, it should be noted that the findings of Nor et al. (2012), were derived from students who were at postgraduate level which could be why they put so much effort into participation and learning in the discussion forums. Given that students were found to engage in active collaborative language exchanges with their lecturer in Nor et al. (2012), collaboration with the expert, from the SLA sociocultural perspective, is seen as useful for students' L2 development.

2.5. Students' L2 Performance in CMC Environments

In the CMC context, several researchers have examined students' L2 performance in terms of fluency, lexical density, grammatical complexity and linguistic accuracy (e.g., Kol & Schcolnik, 2008; Miyazoe & Anderson, 2010; Ritchie & Black, 2012; Sotillo, 2000; Stockwell, 2010). This section will review the linguistic features examined in the above studies and the strategies used to measure students' L2 performance.

Sotillo (2000) examined the discourse functions and syntactic complexity of L2 learners' productions quantitatively and qualitatively. In her study, she defined syntactic complexity as "the ability to produce writing that shows how ideas and large chunks of information are represented with the use of subordination and embedded subordinate clauses" and discourse functions as "categories of behavior in electronic discourse, such as requests, responses, apologies, greetings, complaints, and reprimands" (p. 84). To code her students' online interactions, Sotillo (2000) used T-units as defined by Hunt (1965)—a T-unit is a main clause with its subordinate clauses—in addition to clauses and words. She used both frequency measures (e.g., T-units (T), error-free T-units (EFT), clauses (C), error-free clauses (EFC), and words (W)) and ratio measures (i.e., EFT/T, EFT/C, EFC/C, and W/T) to examine the L2 performance of students during their CMC

interactions. Sotillo (2000) found that students who exchanged using threaded discussion forums produced lengthy and more syntactically complex L2 written discourse than those who used the real-time chat discussions. In terms of syntactic complexity, students used more subordinate and embedded subordinate clauses and a larger average of T-units when they interacted in the forums as compared with the chats. Sotillo (2000) observed that L2 students did not pay attention to linguistic accuracy in their chat discussions because they appeared to focus on meaning rather than on form. She also relates this to the nature of the SCMC mode in terms of real-time or synchronous chat which does not allow students to focus on forms when they interact with their peers and the instructor. Conversely, Sotillo (2000) found that students in “the asynchronous discussion forum paid more focal attention to language forms and grammatical structure” (p. 106). She argues that “writing in delayed-time conditions is affected by audience expectation (teacher and other students as audience)” (p. 105). Based on her findings, Sotillo (2000) concludes that online discussion forums help students to pay more attention to their language than the text-based chat discussions.

Other L2 researchers (e.g., Kol & Schcolnik, 2008; Miyazoe & Anderson, 2010; Ritchie & Black, 2012) used text analysis tools (e.g., textalyser <http://textalyser.net/>) to examine the fluency, lexical diversity, and language complexity of students’ L2 online forum interactions. In terms of fluency, lexical diversity and sophistication, and syntactic complexity, Kol and Schcolnik (2008) found that there were no significant differences between the first and last forums in which their students interacted in student-student online exchanges. Ritchie and Black (2012) and Kol and Schcolnik (2008) found similar findings. Both earlier studies argued that one semester was not enough time for students to develop significant improvements in the language of their online interactions. Contrary to Kol and Schcolnik (2008) and Ritchie and Black (2012), Miyazoe and Anderson (2010) in a period of one semester observed that students’ syntactic complexity appeared to have increased.

Stockwell (2010) also investigated lexical density, grammatical complexity, accuracy, and the discourse functions of chat and forum discussions. Lexical density was

measured by looking at the types of vocabulary used in relation to type-token ratio (TTR) and complexity and accuracy were measured by utilizing the mean length of communication units (c-units) and the percentage of error-free c-units respectively. Stockwell (2010) found that there was marginally more variation of vocabulary in the forums than in the chats and students also spelled words more accurately in the forums than in the chats, although there were no significant differences found in the study. In terms of grammatical complexity and accuracy, students' interactions were found to be more complex but less accurate in the forums than in the chat discussions.

With regard to the discourse functions in the two CMC interactions, Stockwell (2010) observed that some students in the chat discussions used Romanised mother tongue words, abbreviated and non-capitalized forms of words, and copied spelling errors from their peers. However, these features did not occur in the students' discussion forums. Rather, some students made references to their peers' earlier postings during the forums. This indicates that L2 students exhibit different discourse features which make it linguistically unique for that CMC modality.

In another study, Armstrong (2010) investigated the fluency, accuracy, and complexity of L2 students' written language produced in FtF classes as compared with that produced in the online discussion forums of a college intermediate Spanish class. The study compared and analysed three types of writing (i.e., graded essay, ungraded essay, and ungraded online postings) produced by the students over one semester. Students discussed predetermined topics with their peers in the forums and while their writing was not graded, extra credits were given for participation. The instructor posted the first three topics but did not participate in the forums. Following Wolfe-Quintero et al. (1998), Armstrong (2010) applied the measures of fluency, complexity, and accuracy which were determined by seven different measures. These included the mean length of T-unit (MLTU), the mean length of error-free T-unit (MLEFT), the mean length of clause (MLC), error-free T-units (EFT), error-free T-units per T-unit (EFT/T), errors per T-unit (E/T), and mean length of clauses/T-unit (C/T). Fluency was defined as the rate and length of written discourse produced in a limited amount of time, accuracy looked at

the errors in grammar and vocabulary, and complexity referred to the use of simple and complex clauses (Wolfe-Quintero et al., 1998).

Armstrong (2010) found that students' writing in the discussion forum was significantly more accurate (i.e., more EFTs) but less fluent (i.e., shorter MLC and MLTU) than their essays produced in the FtF sessions. There was no significant difference in the complexity of students' writing in the three types of writing activities. The researcher attributed the production of more EFTs in the discussion forum to the fact that students wrote their posts out of class time, possibly using additional resources and editing their writing before posting it to the forums. It was also found that students did not interact with each other in the forums. "They responded to the initial question posed but made no attempt to respond to or challenge another student's entry with few exceptions of students mentioning that they agreed with another's opinion" (Armstrong, 2010, p. 698). L2 students appeared reluctant to interact with their peers and engage with their contributions in the forums. The presence of the instructor then, should be necessary to encourage students to interact with L2 students and promote their engagement in L2 learning.

The present study will also investigate Saudi EFL students' social presence, which has received little attention in previous CMC studies. Social presence is seen as necessary for promoting students' L2 performance (Yamada, 2009; Yamada & Akahori, 2007) and will be reviewed in the following sections.

2.6. Social Presence in CMC Environments

2.6.1. Defining Social Presence

Social presence has been defined "as the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people' " (Garrison et al., 2000, p. 89). However, Garrison (2009b) revised the definition of social presence "as the ability of participants to identify with the group or course of study, communicate purposefully in a trusting environment, and develop personal and affective relationships progressively

by way of projecting their individual personalities” (as cited in Garrison, 2011, p. 34). Garrison (2011) indicates how the revised definition is seen as beneficial by stating:

A significant advantage of this definition is that it better conveys the dynamic nature of the social presence construct in a progressively developing community of inquiry.

That is, it places purpose and open communication within the community as a priority that then leads to increased group cohesion.

Other researchers have defined social presence as the “degree that individuals perceive others to be real in the online environment” (Gallien & Oomen-Early, 2008, p. 466) or “the ability to ‘feel’ the other person’s presence during the mediated communication interactions” (Caplan, Perse, & Gennaria, 2007, pp. 43). The definition of social presence of the *model of social presence in the Community of Inquiry (CoI) framework* (Garrison et al., 2000, 2001) will be used in the current study.

2.6.2. Online Social Presence

Social presence is seen as essential for students’ L2 learning when interacting with their peers and instructor in CMC environments (e.g., Yamada, 2009). Yamada (2009) points out that “[s]ocial presence is a significant concept for considering the method of connecting interaction to learning” (p. 822). Yamada (2009) concludes that “social presence effectively promotes interaction in communicative language learning, raising the consciousness of learning and leading to increased learning performance such as the frequency of utterances and grammatical modification, as suggested by previous SLA research” (p. 831). However, Yamada (2009) argues that “[i]t is not clear how social presence affects learning performance directly and indirectly” (p. 831).

Even though online exchange lacks paralinguistic and facial communication cues, it still is a vehicle for generating social presence amongst participants (Caplan et al., 2007; Garrison et al., 2001; Herring, 2001). Herring (2001) indicates that facial expressions and physical actions can be represented textually by using compensatory strategies such as emoticons and typing action verbs. Using graphical elements for self-presentation can help sustain social relationships within the members of online learning community (Caplan et al., 2007). Participants in CMC interactions can also indicate emotions by

“using emoticons, typing in CAPITAL LETTERS, and typing acronyms like *lol* to add some emotion to the written text” (Sharifian & Jamarani, 2013a, p. 10).

Ko (2012) recently explored the influence of different communication media (i.e., FtF, synchronous CMC with headset, and synchronous CMC with webcam and headset) on L2 students’ perception of social presence development. The study found that students’ highest perception of social presence was in the synchronous CMC with webcam and headset and the lowest was in the synchronous CMC without the webcam. Ko (2012) observed that the main factors which influenced students’ perceptions of social presence in the three learning modes were “the availability of nonverbal cues, peers’ immediacy, and the feeling of being ‘real’ ” (p. 77). Even with the limitation of a small-sample size (N=12), Ko (2012) concludes that “the learning mode had major effects on the participants’ perception of social presence” and “[t]he availability of facial expressions played a vital role in improving the participants’ social presence in CMC” (p. 79).

In particular, social presence in text-based CMC interaction was found mostly enhanced by the use of emoticons (Ko, 2012). The use of emoticons substituted for non-verbal cues (Ko, 2012). Loewen and Reissner (2009) lend support to this by arguing that the use of emoticons in CMC is important for L2 learning because students used them to engage in “form-meaning mapping” (p. 106). In their study, the emoticons “typically provoked a reaction from the teacher” and they “were viewed by the participants as an important part of the interaction” (p. 106). This is because emoticons are seen as useful for communicating meaning where it can be sometimes difficult to communicate using language (Crystal, 2006). The presence of an image of participants during CMC interactions motivates students to communicate in the second language and helps them to understand their peers’ situation through non-verbal devices (Yamada & Akahori, 2007). Ko (2012) lends support to this by concluding that the availability of facial expressions played a crucial role in enhancing social presence.

2.6.3. A Theoretical Framework for Social Presence

The present study will employ the CoI¹ theoretical framework (Garrison et al., 2000, 2001): “[A] community of inquiry provides the environment in which students can take responsibility and control of their learning through negotiating meaning, diagnosing misconceptions, and challenging accepted beliefs—essential ingredients for deep and meaningful learning outcomes” (Garrison, 2011, p. 22). This framework has been widely employed by L2 researchers because it has been developed for ALCMC exchanges and it can be easily applied to identify the participants’ cognitive, social, and teaching activities in online discussion forums (e.g., Arnold & Ducate, 2006; Lomicka & Lord, 2007; Luzón, 2011; Martins & Braga, 2009; Paiva & Rodrigues-Junior, 2009; Pawan, Paulus, Yalcin, & Chang, 2003; Saude et al., 2012; Yildiz, 2009; Yodkamlue, 2008). Arnold and Ducate (2006) point out that “[t]he choice of framework depends on the type of discussion and the learning objectives” (p. 45). The online discussion task in the present study aims at offering Saudi EFL students opportunities for practising their language in terms of reading, grammar, vocabulary, and writing skills.

In this framework, Garrison et al. (2000) argue that learning takes place through the interaction of three essential elements (i.e., cognitive presence, teaching presence, and social presence) in online learning communities. They also argue that to improve cognitive presence, social and teaching presences should be involved. Social presence is seen as essential for fostering relationships among learners in online communities because it appears to have a positive impact on their satisfaction and performance (Richardson & Swan, 2003). Behaviours indicating social presence exchanges that reflect mutual awareness and recognition of others’ contributions are confirmed to be the most prevalent (Yodkamlue, 2008). Rourke, Anderson, Garrison, and Archer (2001) indicate that these social behaviours (mutual awareness and recognition of others’ contributions) can “build and sustain relationships, express a willingness to maintain and prolong

¹ Community of inquiry Web site: <http://communityofinquiry.com/>

contact, and tacitly indicate interpersonal support, encouragement, and acceptance of the initiator” (p. 7).

2.7. Students’ Social Presence in CMC Environments

Although there is a growing body of research in the L2 context which has recently looked at the social presence of L2 students when they interact in CMC environments (e.g., Ko, 2012; Luzón, 2011; Saude et al., 2012; Yamada, 2009; Yamada & Akahori, 2007; Yildiz, 2009), little research has been carried out specifically to examine how L2 students display their social presence in online discussion forums in both student-student (e.g., Yodkamlue, 2008) and instructor-student (e.g., Paiva & Rodrigues-Junior, 2009) online exchanges. Most of the research has sought to examine how the medium influences students’ perception of social presence and has focused predominately on studying the social presence of student-student exchanges in the modes of SCMC interactions (e.g., video, audio, and text chat conferencing) (e.g., Ko, 2012; Yamada, 2009; Yamada & Akahori, 2007). Some research has had quite a different focus and has looked at the social presence of students from different disciplines of English for academic purposes (EAP) in higher education (e.g., Luzón, 2011; Saude et al., 2012; Yildiz, 2009). Even so, their research focus was concerned with measuring the participants’ social presence density in forums (Saude et al., 2012), examining the manner in which participants develop group relationships and create social meaning through online interactions (Luzón, 2011), and investigating the influence of the forums on the participants’ social presence (Yildiz, 2009). Therefore, in existing CMC literature, less attention has been given to studying how L2 students project their social presence when they interact in student-student as opposed to instructor-student exchanges in online discussion forums. More importantly, the social presence of L2 students when they interact in instructor-student online exchanges remains unexplored.

As mentioned above, having a partner’s image in text-based chat increases students’ consciousness of accuracy (Yamada, 2009; Yamada & Akahori, 2007) “because the image allows subjects to easily see their partner’s level of understanding” (Yamada & Akahori, 2007, p. 62). It has been also found that the webcam and the use of emoticons enhances

students' social presence and reduces their communication anxiety (Ko, 2012). Social presence appears to help L2 students to be conscious of grammatical and lexical accuracy, improve their interactivity in CMC interactions (Yamada, 2009; Yamada & Akahori, 2007), and reduce their interaction anxiety when they interact, particularly with those whom they have met online for the first time (Ko, 2012).

Several studies have used the model of social presence in the CoI framework (Garrison et al., 2000, 2001) to investigate how learners project their social presence (e.g., Arnold & Ducate, 2006; Lomicka & Lord, 2007; Martins & Braga, 2009; Pawan et al., 2003). The participants in these studies were EFL teachers and it is possible that their findings are not appropriate for Saudi EFL students simply because the findings were reported from teachers, not students. However, it should be pointed out that some studies (e.g., Yodkamlue, 2008) have compared the findings of their EFL students' social presence with the findings of that of EFL teachers.

In a qualitative study, Paiva and Rodrigues-Junior (2009) examined the interactions of L2 students in an online reading and writing course in a Brazilian university. Students were prospective English teachers and the objective of the course was to provide students with authentic language experience and an opportunity to practise the English language. Using the framework of Garrison et al. (2000) and Rourke et al. (2001), Paiva and Rodrigues-Junior (2009) observed that students engaged in social and cognitive presences by providing feedback and support to their peers. Students were seen to use modal verbs, capitalization, repetition of characters, emotions, and punctuation in their utterances. Paiva and Rodrigues-Junior (2009, p. 62) point out that "[c]apital letters work as a device for calling careful attention" in the discussion forum and emotions and self-disclosures served as triggers for other students to project their social presence.

In terms of the role of the instructor, Paiva and Rodrigues-Junior (2009) observed that the teacher became involved in the discussion forum with students by giving support and instructions (i.e., teaching presence). Although the teacher exercised her power by using imperatives she was seen to soften her imperatives by the use of modal verbs and polite expressions. Therefore, the teacher was found to utilize "saving face strategies...to

secure students against possible 'harms' during the course of the interaction" in the discussion forum (p.66). This underscores the role of the teacher in terms of helping students "to maintain complete harmony among them and to provide a warm environment for holding their discussion" (p. 66). On the basis of the findings of Paiva and Rodrigues-Junior (2009), the role of the instructor was seen as useful because the instructor provided students with teaching support (e.g., instructions and feedback) which enhanced their emotional and cognitive exchanges.

In terms of student-student online interactions, Yodkamlue (2008), using the CoI framework (Garrison et al., 2000, 2001), found that social presence promoted students' cognitive presence and a strong significant relationship ($r=.956$ at $p=.000$) was revealed between students' social and cognitive presence. Yodkamlue (2008) argues "that social presence created affective communication and established a social connection that stimulated a learning environment for participants to share and contribute more knowledge and ideas" (p. 83). There was also a positive relationship between students' social and cognitive presences and the degree of their online participation. These presences encouraged students to create dynamic discussion and collaboration when they interacted. According to Yodkamlue (2008), the social presence activities occurred more frequently than the cognitive presence activities. Yodkamlue (2008) argues that "the nature of non-academic online discussions in which participants communicate with one another without any interference from teachers seems to influence frequent occurrences of social activities" (p. 96). This can raise a question as to whether the presence of the instructor in online discussion forums has a negative effect on student social presence. Yodkamlue (2008) lends support to Garrison et al. (2000) by emphasising that the presence of the teacher is seen as essential for the development of online learning communities, however, the lack of the teacher's presence in her study provided an understanding of how students developed their social presence and cognitive presence without the teacher's facilitation. The present study will investigate how L2 students develop their social presence online both with and without their instructors and address the current gap in the literature.

In the L2 context, several methods have been used to examine student social presence in CMC interactions. For instance, the social presence of L2 students has been investigated quantitatively and qualitatively by utilizing video-recording and questionnaires (e.g., Yamada, 2009; Yamada & Akahori, 2007) and journals, observations, and interviews (e.g., Ko, 2012). A large number of L2 studies have investigated social presence by applying content analysis methods to the transcripts of students' interactions (Arnold & Ducate, 2006; Lomicka & Lord, 2007; Luzón, 2011; Martins & Braga, 2009; Paiva & Rodrigues-Junior, 2009; Pawan et al., 2003; Saude et al., 2012; Yildiz, 2009; Yodkamlue, 2008). Content analysis is "a research methodology that uses a set of procedures to make valid inferences from text" (T. Anderson, Rourke, Garrison, & Archer, 2001, p. 10) and "a technique to extract desired information from a body of material...by systematically and objectively identifying specified characteristics of the material" (C. Smith, 2000, p. 314). S.-C. Tan, So, and Chai (2011) point out that "content analysis research has provided useful insights as to how to better design online learning environments as well as to reveal the complex nature of online interaction" (p. 612). As with Yodkamlue (2008) who employed Garrison et al.'s (2000, 2001) content analysis techniques, she points out that this content analysis is useful because it allows the examination of the texts of students' online interactions quantitatively and qualitatively. Therefore, the present study will utilize the same content analysis (Garrison et al., 2000, 2001) to analyse students' social presence in line with previous L2 studies (e.g., Arnold & Ducate, 2006; Lomicka & Lord, 2007; Luzón, 2011; Martins & Braga, 2009; Paiva & Rodrigues-Junior, 2009; Pawan et al., 2003; Saude et al., 2012; Yildiz, 2009; Yodkamlue, 2008).

Based on the previous literature of L2 and CMC research, it can be noted that there is a dearth of research on how EFL students perform their language and project their social presence when they interact in student-student as opposed to instructor-student online exchanges. The role of the instructor during students' L2 interactions in online discussion forums also remains unexplored.

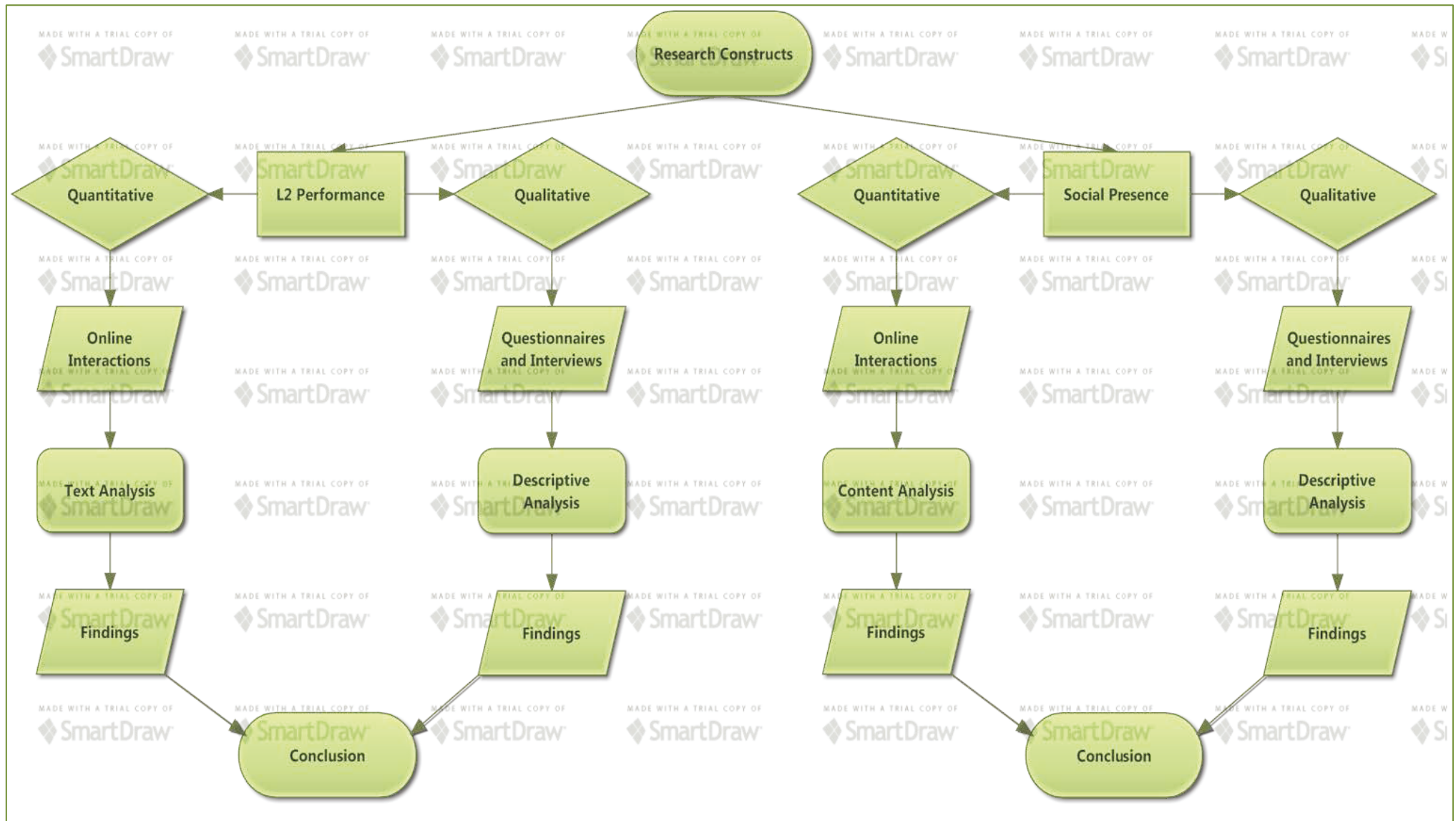
2.8. Study Questions

After reviewing a considerable body of L2 research in the context of CMC and noting the research gap, the present study addressed the following research questions.

- 1) Do Saudi EFL students have significant differences in their L2 performance between their student-student and instructor-student online exchanges?
 - 1.1. What are the qualities of Saudi students' L2 performance in their student-student and instructor-student online exchanges?
- 2) Do Saudi EFL students have significant differences in the degrees of their social presence between their student-student and instructor-student online exchanges?
 - 2.1. What are the qualities of Saudi students' social presence in their student-student and instructor-student online exchanges?
- 3) Do different EFL instructors produce different rates of discourse functions, participation, and social presence when they interact with their students in instructor-student online exchanges?
 - 3.1. What are the qualities of instructors' interactions in instructor-student online exchanges?
- 4) Do different EFL instructors influence Saudi students' L2 performance and the degree of their social presence in online exchanges?
 - 4.1. How do EFL instructors influence Saudi students' L2 performance and the degree of their social presence in instructor-student online exchanges?
- 5) Do Saudi EFL students have significant differences in their perceptions of interactions between their student-student and instructor-student online exchanges?
 - 5.1. What are the qualities of Saudi students' perceptions of interactions in their student-student and instructor-student online exchanges?

Part III: Methodology

Chart 1: The Processes of Studying L2 Performance and Social Presence



Chapter Three: Study Design and Implementation

3.1. Mixed-Methods Research

A mixed-methods research methodology was utilized in the present study in line with previous L2 studies (e.g., Miyazoe & Anderson, 2010; Yang, 2011). Utilizing mixed-methods research was deemed appropriate and necessary to “arrive at a full understanding of the nature of the online social groupings” (Herring, 2004, p. 369). Mixed-methods research refers to the use of qualitative and quantitative methods in a study in terms of the ways data are both collected and analysed. Dörnyei (2007) believes that using a mixed-methods approach in conducting research might provide advantages in understanding the phenomena under investigation. The purpose of using a mixed-methods research is (a) to obtain a fuller picture of the phenomena under investigation, (b) to confirm the findings of one method against the other (Sandelowski, 2003), and (c) to reach large audiences, by appealing to those who support either a mixed or mono-methodological approach (Dörnyei, 2007). Johnson and Onwuegbuzie (2004) argue that the main goal of mixed-methods research is “not to replace either [qualitative and quantitative] approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies” (pp. 14-15). Mackey and Gass (2005) stress that utilizing mixed-methods methodology in L2 research “should not be viewed as opposing poles in a dichotomy, but rather as complementary means of investigating the complex phenomena” (p. 164). The rationale of mixing both qualitative and quantitative methods in studying a phenomenon is to find out to what extent and in what ways the results of qualitative data analysis serve to contribute to a more comprehensive understanding of the results obtained from quantitative data analysis or vice versa (Creswell, 2009).

Since mixed-methods research involves both qualitative and quantitative methods, there is no defined rule in setting the optimal sample size for a study (Dörnyei, 2007). It is argued that qualitative researchers tend to involve fewer numbers of participants in their research and are less concerned with the generalizability of the study outcomes

(Mackey & Gass, 2005). A well-designed qualitative study “usually requires a relatively small number of respondents to yield the saturated and rich data that is needed to understand even subtle meanings in the phenomena under focus” (Dörnyei, 2007, p. 127).

By using mixed-methods methodology, the present study aims to investigate Saudi students’ L2 performance and social presence quantitatively by analysing the transcripts of their online interactions and qualitatively by gauging the perceptions and experiences of their L2 performance and social presence. The present study also aims to examine the interactions of the instructors and the roles they play qualitatively by analysing the transcripts of their online interactions and interviews.

3.2. A Methodology for Analysing Students’ L2 Performance

L2 researchers have employed several methods to analyse the language performance of L2 students in the CMC context. To start with, Nor et al. (2012) applied a content analysis by using quantitative and qualitative analysis methods, using a collaborative learning behaviour model and a transcript analysis tool to code and analyse discourse patterns. Stockwell (2010) investigated students’ discourse features holistically by examining the interactions of SCMC and APMC discussions “to identify if there were any specific features that might distinguish each of the modes of CMC communication that occurred while undertaking the tasks” (p. 92). Sotillo (2000) used a coding scheme and applied a text analysis method based on linguistic frequencies and ratio measures (e.g., Wolfe-Quintero et al., 1998). Similarly, Armstrong (2010) conducted a text analysis method to analyse the fluency, accuracy, and complexity of students’ L2 postings.

Other researchers (e.g., Zeng & Takatsuka, 2009) have used language-related episodes (LREs) to analyse students’ L2 interactions and mutual engagement and others have used focus on form episodes (FFE) (Loewen & Reissner, 2009). Akayoğlu and Altun (2009) have employed a computer-mediated discourse analysis approach (CMDA) following Herring (2004) to analyse the functions of students’ negotiation of meaning in text-based CMC chat while Hadjistassou (2008) used qualitative and descriptive analysis methods. Some L2 researchers applied computer text analysis tools like

WordSmith (Montero et al., 2007), and other researchers (e.g., Kol & Schcolnik, 2008; Miyazoe & Anderson, 2010; Ritchie & Black, 2012) used the *Textalyser* online tool (<http://textalyser.net/>) to analyse the fluency, lexical density, and lexical and syntactic complexity of L2 student language in online discussion forums.

However, Herring (2004) suggests that researchers should also utilize other methods of analysis such as interviews, surveys, and psychological experiments in order to obtain a fuller picture of the phenomenon under scrutiny. W. Anderson and Corbett (2013) underscore the use of triangulation in their study by stating that “the triangulation of data and insights from forum postings, class discussions, and post-course interviews perhaps makes possible a fuller understanding” (p. 113). Thus, to obtain richer data researchers have been placing greater emphasis on employing a mixed-methods approach (e.g., Miyazoe & Anderson, 2010; Yang, 2011). Miyazoe and Anderson (2010), for instance, used a text analysis of online interactions, in addition to surveys, and interviews, while Yang (2011) has conducted pre- and post-tests, discourse analysis of CMC interactions, and questionnaires. In line with Miyazoe and Anderson (2010) and Yang (2011), the present study will employ a mixed-methods approach in order to obtain richer data and to better understand the language performance of L2 students in online exchanges.

3.3. The Methodology Used for Analysing Students’ L2 Performance

A text-analysis method to measure students’ L2 performance was applied. The present study used measures of fluency, lexical density, grammatical complexity, and linguistic accuracy adopted previously by Wolfe-Quintero et al. (1998) and which have also been used by many other researchers (e.g., Armstrong, 2010; Sotillo, 2000; Stockwell, 2010). Table 1 illustrates the analysis approach of the present study.

Table 1: Linguistic Measures

Analysis Approach		Linguistic Indices (Wolfe-Quintero et al., 1998)		
	Fluency	Lexical Density	Grammatical Complexity	Linguistic Accuracy
Text Analysis	The ratio of words to total number of T-units (W/T) produced.	The ratio of lexical words to total number of words (LW/W) produced.	The ratio of clauses to total number of T-units (C/T) produced.	The ratio of error-free T-units to total number of T-units (EFT/T) produced.
	The ratio of words to total number of clauses (W/C) produced.			The ratio of error-free clauses to total number of clauses (EFC/C) produced.

3.4. The Study's Approach to Analyzing Social Presence

The model of social presence (Garrison et al. 2000, 2001) was applied in the present study. This model was adopted from Garrison et al. (2000, 2001), Arnold and Ducate (2006), and Yodkamlue (2008) applications. The model of social presence in Table 2 is divided into three categories, namely emotional expression, open communication, and group cohesion.

Table 2: Model for Assessing Social Presence based on Garrison et al. (2000, 2001), Arnold and Ducate (2006, p. 49) and Yodkamlue (2008, p. 68)

Social Presence	Emotional Expression = ability/confidence to express feelings related to educational experience	Humor	
		Self-Disclosure =sharing of feelings/attitudes/experiences/interests	
	Open Communication = reciprocal/respectful exchanges	Mutual Awareness	Use of reply feature
			Quoting directly
			Directing a comment at an individual
			Referring explicitly to content of others' messages
		Recognition of each other's Contributions	Explicitly expressing appreciation/agreement
Complimenting others			
Encouraging others			
Group Cohesion = activities that build/sustain a presence of group commitment; focused collaborative communication that builds participation/empathy			

Rourke et al. (2001) have developed a coding scheme and defined three behavioural categories of social presence (affective, interactive, and cohesive). These three categories constitute twelve indicators to help identify the social presence behaviours in the online discussion environment. This coding scheme by Rourke and colleagues² was employed in the current study to help capture the social presence behaviours in the transcripts of

² The same researchers of the framework of CoI

participants' ACMC interactions (see [Appendix N](#)). The scheme gives definitions and examples of social presence behaviours to aid in their coding and identification.

3.5. The Synthesized Analysis Approach Used

In the present study, a synthesised approach of two investigative levels (i.e., language performance and social presence) was developed for examining student-student and instructor-student online exchanges (see Table 3). This synthesized approach was drawn from two disciplines, namely second language learning in the field of applied linguistics and online learning in the field of education. It has been pointed out that using a multi-disciplinary analysis approach in CMC should substantially contribute to the understanding of the phenomena under investigation (Herring, 2001). Thus, the synthesized approach aimed to investigate the nature of students' interactions by measuring their L2 performance (Wolfe-Quintero et al., 1998) and the degrees of their social presence (Garrison et al., 2000, 2001).

Table 3: The Study's Synthesized Analysis Approach

Analysis Level	Language Performance (Wolfe-Quintero et al., 1998)			
	Fluency	Lexical Density	Grammatical Complexity	Linguistic Accuracy
Text Analysis	The ratio of words to total number of T-units (W/T) produced.	The ratio of lexical words to total number of words (LW/W) produced.	The ratio of clauses to total number of T-units (C/T) produced.	The ratio of error-free T-units to total number of T-units (EFT/T) produced.
	The ratio of words to total number of clauses (W/C) produced.			The ratio of error-free clauses to total number of clauses (EFC/C) produced.
Social Presence (Garrison et al., 2000, 2001)				
Content Analysis	Emotional Expressions	Open Communication		Group Cohesion
	The frequency of emotional expression behaviours.	The frequency of open communication behaviours.		The frequency of group cohesion behaviours.

According to Table 3, the synthesized analysis approach has two investigative focuses, namely cognitive, by measuring students' L2 performance using the text-analysis method and social, by measuring the degrees of their social presence using the content-analysis method. The present study examined the transcripts of participants' online interactions by applying text-analysis and content-analysis methods; investigated students' perceptions by applying questionnaires and interviews and used both quantitative and qualitative methods to analyse these as well.

3.6. The Study's Approach to Analysing Instructors' Interactions

The role of the instructor during students' L2 interactions has been seen as crucial in CMC environments (e.g., AbuSeileek, 2007; Alwi et al., 2012; L. Lee, 2008; Loewen & Reissner, 2009; Nor et al., 2012; Paiva & Rodrigues-Junior, 2009; Salaberry, 2000; Sotillo, 2000; Stockwell, 2010; Yang, 2011; T. Zhang et al., 2007) and thus this role was also examined in the present study. For instance, instructors played a major role in facilitating students' L2 interactions in CMC (Sotillo, 2000). They engaged with L2 students by reframing questions, scaffolding, and providing implicit corrective feedback through modelling. Sotillo (2000) found that the role of the instructor was essential for promoting the efficacy of students' L2 learning in CMC. She argued that the role of the instructor can "affect the learning outcomes and effectiveness of the students' language learning experiences" in CMC environments (p. 106). Paiva and Rodrigues-Junior (2009) lend support to this argument by observing how instructor supported students' interactions and they point out that learning in the discussion forums originated from the interaction and collaboration between instructors and their students. The instructor has been seen to play a central role in promoting students' L2 learning in instructor-student CMC interactions in the L2 literature (e.g., Alwi et al., 2012; L. Lee, 2008; Loewen & Reissner, 2009; Nor et al., 2012; Salaberry, 2000; Sotillo, 2000; Stockwell, 2010; Yang, 2011). However, how EFL instructors interact and display their social presence when they interact with their students in instructor-student online interactions has not been fully explored. The present study investigated the interactions of the instructors and

their roles by applying a template for analysing the transcripts of their online exchanges (see Table 4).

Table 4: A Template for Analyzing Instructors' Online Interactions

Analysis Level		Explanatory Level	Observations	Data Method	Analysis Method
Content Analysis	Linguistic	Interaction Discourse Function	Negotiations Feedback Opinions Questions Agreements Emotions Compliments Suggestions Greetings	Online interactions transcripts	Qualitative analysis
	Participatory	Interaction Rate	Number of posts in the forum Number of words in the forum	Online interactions transcripts	Qualitative analysis
	Social	Social Presence Density	Frequencies of social presence behaviours in the forum per 1,000 words	Online interactions transcripts	Qualitative analysis

As can be seen in Table 4, this analytical template has three analysis levels (i.e., linguistic, participatory, and social) and looks at discourse type, interaction direction and rate, and social presence density. It is hoped that by applying this analytical template the role of the instructor, his or her interaction and the display of social presence can be more deeply understood. Individual interviews were also conducted to examine the perceptions and experiences of the instructors to add to this knowledge.

3.7. Methodology

3.7.1. Data Collection Methods

Three data collection methods were utilised. The main data collection method was (1) the transcript of the participants' interactions in the discussion forums. In this method, data were collected from two consecutive online exchange phases: (I) student-student online exchanges and (II) instructor-student online exchanges. The transcripts of online

exchanges were analysed in order to examine students' L2 performance and social presence in student-student and instructor-student online exchanges.

The other two data collection methods employed were (2) student questionnaires and (3) student and instructor individual interviews. The questionnaires aimed to examine student perceptions of interactions in student-student and instructor-student online exchanges. The interviews aimed to understand the experiences of students and instructors in terms of L2 performance and social presence in the two phases of online exchanges.

3.7.1.1. Student Questionnaires

Questionnaires are the most popular method used for research in the social sciences because they can provide researchers with qualitative insights and quantifiable data (Mackey & Gass, 2005). A questionnaire was designed for this study (see [Appendix D](#)) in line with other L2 studies (e.g., Miyazoe & Anderson, 2010; Yang, 2011). Importantly, the questionnaire was utilised to examine students' perceptions of their interactions in the two phases of online exchanges. The questionnaire was undertaken in the students' native language (i.e., Arabic) to ensure that students could provide accurate responses and avoid misleading answers about the study phenomena (Mackey & Gass, 2005). Because the questionnaire was completed in Arabic, both the English and Arabic versions were reviewed in advance of the study and validated by a certified translator (a Saudi PhD professor in the field of Arabic and English Translation) to make sure that both language versions were identical.

The questionnaire consisted of six A4 sheets, divided into four sections, and comprised structured closed and open ended questions. The questionnaire sought to discover students' personal and background information, rate their computer and internet literacy, investigate their perceptions, and elicit their experience of the online interactions they took part in. Questionnaires were distributed after students had participated in both phases of online exchanges. The questionnaires were given to students by instructors in class time and students completed them at home. Eighty students (61.5%) returned them to the researcher at the FLT in sealed envelopes. Lack of

time due to assignments and mid-term exams towards the end of the semester have prevented several students from completing and returning their questionnaires.

One of the pitfalls of any questionnaire is that it might not provide a holistic picture of the phenomena being investigated (Dörnyei, 2007; Mackey & Gass, 2005). To circumvent this, individual interviews were also conducted to better understand students' experiences in student-student and instructor-student online exchanges.

3.7.1.2. Student Interviews

Interviews are the most utilized data collection method in qualitative research and they are used to examine phenomena such as informants' perceptions and experiences. The aim of individual interviews was to elicit more explicit additional data from the informants (Mackey & Gass, 2005), and explore the depth and breadth of the respondent's context in the present study (Dörnyei, 2007). Student interviews were designed by the researcher (see [Appendix E](#)). As with the questionnaires, interviews were conducted in the interviewees' first language (i.e., Arabic) to "remov[e] concerns about the proficiency of the learner impacting the quality and quantity of the data provided" (Mackey & Gass, 2005, p. 174). Likewise, both the English and Arabic versions were reviewed in advance of the study and certified by the same interpreter.

Student interviews consisted of three sections of structured open-ended questions. The interview sought to explore the students' experiences and perceptions of their online exchanges. Interviewees were interviewed by the researcher in a conference room at the ELD. The researcher's role was to encourage interviewees to respond freely to questions and explain their perceptions and experiences in terms of L2 performance and social presence in the online exchanges. Each interview lasted about 50 minutes and it was voice recorded by the researcher using a small digital voice recorder. In the current study, 21 students (15%) attended individual interviews with the researcher. The pressure of final examinations prevented many of the students from participating in the interviews.

3.7.1.3. Instructor Interviews

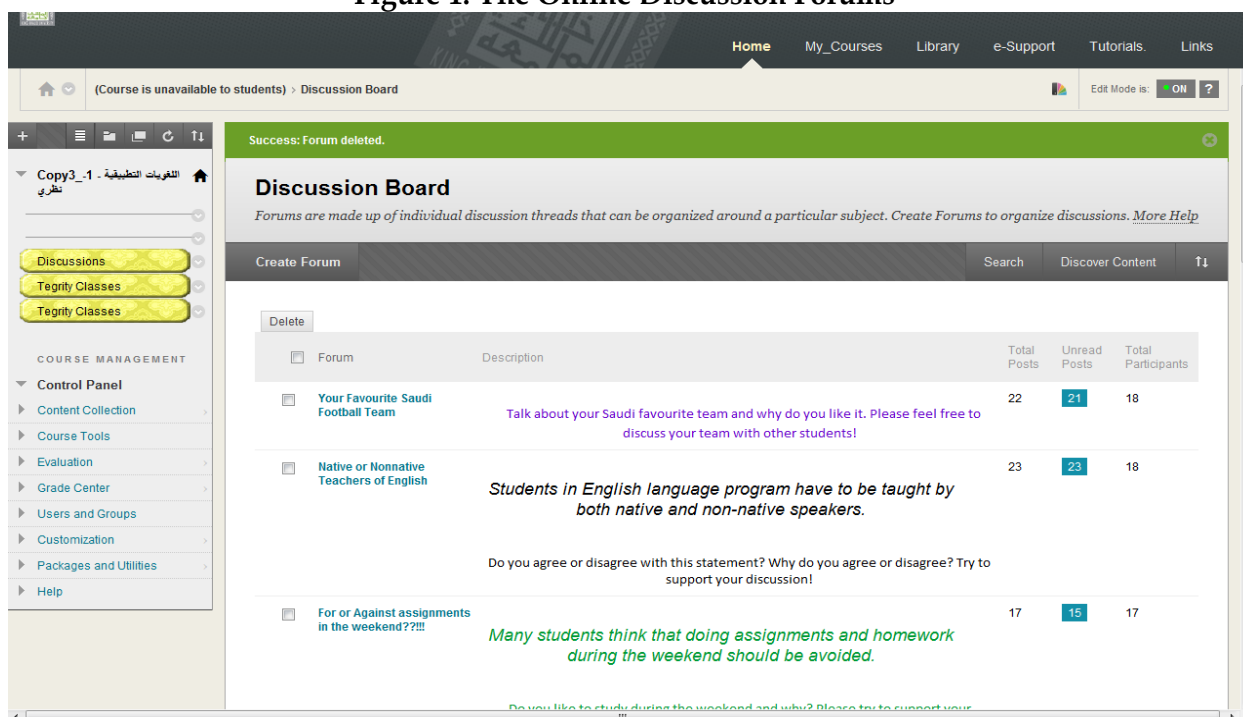
Instructors in the present study were interviewed twice by the researcher. First, before the commencement of the study, instructors were interviewed to obtain their EFL online teaching background and ensure that they have good experiences about using discussion forums in their EFL context. Secondly, after the study, instructors who participated in the present study were interviewed to investigate their perceptions and experiences of instructor-student online interactions. The interviews which were conducted after the study consisted of structured open-ended questions (see [Appendix F](#)). Instructors had the choice of being interviewed in Arabic or English to give them the opportunity to clearly explain their feelings about their online interactions and the roles they played when they interacted with their students in the discussion forums. Instructors in the present study primarily used Arabic language but they sometimes switched to English language when they described the performance of their students. Before conducting the interviews, instructors were given a questionnaire of 11 questions that sought to gather their EFL background information (see [Appendix G](#)). The three instructors who participated in the present study were individually interviewed by the researcher in a conference room at the FLT. Each interview lasted about 60 minutes and was voice recorded by the researcher using a small digital voice recorder.

3.7.2. Materials

3.7.2.1. Online Discussion Forums

The forums of the online discussion board in the Blackboard system of KKU (<http://elc.kku.edu.sa/en>) were used in the present study. Figure 1 shows the format of the online discussion forums which were used in the current study.

Figure 1: The Online Discussion Forums



The online discussion forums were accessed by the participants via the Blackboard system using their university personal accounts. Editing icons, spelling checker, uploading attachments and video and audio files were already existed in the discussion forums but emoticons were not. The researcher worked with IT staff at KKU to activate emoticons but unfortunately this feature was unavailable in the current version of the Blackboard system. Consequently, the researcher informed students and instructors about this technical issue in advance of the study and resolved this issue by providing them with a print list of commonly used emotional characters and symbols in CMC environments.

Moreover, helpful guidelines and URLs about the use of the discussion forums were provided for the participants to ensure that they were comfortable using the interface and features of the forums. Students were also informed that they could ask for any assistance from their instructors regarding the use of the discussion forums and this often was taken up by some students.

3.7.2.2. Discussion Topics

The objective of the discussion topics was to help students practise their English language and interact with other interlocutors in their online discussion forums because

it is difficult for them to use English outside their FtF classroom. Participants were requested to participate by using argumentative topics which were developed for the present study. The discussion topics aimed to encourage students to produce their language and benefit from their L2 input and output. The topics were seen as a useful tool with which students could practise their English and interact socially with their peers and instructors in the online discussion forums.

Fourteen topics were developed by the researcher and the instructors (see [Appendix B](#)) “so that [students] will not waste time ‘surfing’ the Internet to find a topic” (Ritchie & Black, 2012, p. 358). The themes of the topics were deemed appropriate because they were relevant to the participants’ EFL context and their ordinary Saudi lifestyles. Hadjistassou (2008, p. 385) suggests using “culturally-relevant topics” for EFL students to enhance their participation in online discussion forums. The present study ensured that the topics were divided evenly, counterbalanced, and randomly assigned to student-student and instructor-student online exchanges. For example, students in the forums discussed their opinions about a *favourite football team* in student-student online exchanges, and similarly they discussed their opinions about their *favourite shopping mall* in instructor-student online exchanges as presented below.

[Student-Student Online Exchange]

What is your favourite Saudi football team?

Talk about your favourite Saudi team and why do you like it? Please feel free to discuss your favourite Saudi team!

[Instructor-Student Online Exchange]

What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it? Please feel free to discuss your shopping mall!

The topics were structured in two ways, namely questions and statements, and they were followed by some instructions. Students were directed to argue for or against the

answers of topic questions and statements, give their own opinions freely, and support their arguments. They were not forewarned of the topics in order to minimise the influence of factors (such as advanced preparation, including vocabulary study) that could possibly affect their L2 performance. Although students' English courses were blended, none of the topics were discussed in advance by students or their instructors during their FtF classroom.

Students had to discuss no more than two topics each week. Because discussions were asynchronous, they could discuss at any time and without any time restrictions (e.g., Hadjistassou, 2008; Paiva & Rodrigues-Junior, 2009; Sengupta, 2001). Students were aware that they had to first interact in student-student online exchanges for five weeks and then they had to interact in instructor-student online exchanges for a further five weeks. In the phase of student-student online exchanges, students were aware that their instructors would post the topics on the forums but they were not aware that their instructors would read their posts. Instructors posted the topics for the forums without any participation or provision of any further instruction throughout the course of student-student online exchanges.

3.7.2.3. Instruction Type

All English courses in the present study were of a blended learning mode, namely FtF and online learning. In terms of assessment in these blended courses, the instructors allocated 70% of the course marks for FtF learning and 30% for online learning. In the online learning, students had to access the Blackboard system for several tasks. Along with participation in the discussion forums, students had to read course materials and announcements, download lecture slides, undertake quizzes, submit assignments, and communicate with their peers and instructors using emails.

3.7.3. Procedures

3.7.3.1. Recruiting Participants

After obtaining the ethics approval from Monash University (see [Appendix H](#)), the researcher travelled to Saudi and undertook the present study in the ELD at KKU. After meeting the chairman of ELD, the researcher started to recruit participants for the study.

Invitation letters were posted on the students' bulletin board in the department and the instructors received invitations via their mail boxes in the department. Students and instructors who expressed their interest and willingness to participate met the researcher, signed consent forms after they had read the explanatory statements and understood the research project (see [Appendix I](#) for consent forms). Arabic translation along with the English explanatory statements and consent forms were made available for the participants to ensure that they understood the research project.

265 students and eight instructors (from 12 undergraduate English blended courses) initially consented to participate in the present study. However, only 130 students and three instructors (in five English blended courses) actually participated in the current study. This was for various reasons: the lack of instruction and guidance, the low levels of students' language proficiency and learning motivation, and their perceptions about using discussion forums. These reasons are discussed in detail in [Appendix A](#).

3.7.3.2. Participants

One hundred and thirty Saudi undergraduate male EFL students participated in the present study during the first semester of the academic year of 2010-2011 in student-student and instructor-student online exchanges (see Table 5). They were sourced from the ELD of the FLT. Because of cultural reasons, education is segregated in Saudi Arabia and it was difficult to recruit female participants in the present study.

Table 5: Students Who Participated in the Present Study

Courses	A	B	C	D	E
Students	24	29	32	25	20
Total	130 students				

The participants were enrolled in Applied Linguistics (I), Applied Linguistics (II), and History of English Language. Students were lower-intermediate-modest English language users according to their language placement test (Allan, 2004) which was administered by the researcher at the ELD. Their questionnaires indicated that their native language was Arabic and their mean age was 23 years. They had studied English for about nine years in Saudi. They often used computer and internet and they

sometimes used online discussion forums in their EFL context. They had studied English in a blended way for about 17 months.

Three non-Saudi male EFL instructors whose native language was Arabic also participated in the present study. They were recruited from the ELD of the FLT at KKU. Instructor Ibrahim held a high administrative position in the FLT beside his EFL teaching position. Instructor Adel used to live and teach English native speakers in the United States before he joined the FLT. Instructor Omar is the youngest instructor and he has just been promoted as an associate professor in the FLT. Further background information about the instructors is presented in Table 6.

Table 6: Instructors' Background Information

English Course	Course A	Course B & C	Course D & E
Instructor	Instructor 1	Instructor 2	Instructor 3
Name	Ibrahim ³	Adel	Omar
Qualification	PhD in applied linguistics	PhD in linguistics	PhD in applied linguistics
Age	50 years	42 years	37 years
Nationality	Syrian	American and Jordanian	Yemeni
EFL teaching experience	20 years	15 years	9 years
Length of Blackboard experience	3 years	2 years	2 years
The frequency of using discussion forums	Usually	Usually	Usually
Number of blended courses taught at the time of the study	1 course	3 courses	3 courses

Prior to the commencement of the research project, the researcher surveyed the instructors and their English courses in order to find out the extent of their EFL online teaching experience (see [Appendix I](#)). This survey aimed to ensure that the instructors

³ Pseudonyms are used to protect participants.

who participated in the study had good online teaching experience in terms of teaching English blended courses and using the Blackboard system and the online discussion forums. All instructors who participated in the present study had taught blended courses before and they were familiar with the use of the Blackboard and the forums. After the completion of the phases of online exchanges in the present study, the researcher requested e-learning specialists to get a copy of the online exchanges of the participants and to provide access to them online as archives on the Blackboard system.

3.7.3.3. Providing Topics and Guidelines

The researcher provided instructors with proposed topics via their emails. They were then asked to choose the most suitable topics to encourage students to interact and practise their English language in the discussion forums. Although students did not play a role in choosing the topics the majority of them (104 students, 80 %) found them to be interesting and to be of a good variety according to the responses in their questionnaires. Participation in the discussion forums was included in the overall assessment of their blended learning course. In line with CMC studies (e.g., Kol & Schcolnik, 2008), students were given an extra five marks by their instructors according to a grading rubric to encourage them in their participation (see [Appendix C](#)). The assessment was not based on the students' writing but rather it was based on their participation in the forums. The grading criteria for participation were developed by the researcher and instructors. The students were aware that they would be given five marks extra for their participation at the end of the study.

It was deemed important to develop some guidelines for the participants (see [Appendix K](#)). Pawan et al. (2003) in their study attributed participants' low participation level in their discussion forums to the absence of guiding instructions for online interactions. The guidelines in the current study aimed to ascertain that students and instructors understood the research project and their participation. Arabic translation of the guidelines was also provided to the students in case that they had difficulty understanding them in the English.

3.7.3.4. Online Exchange Phases

After the researcher ensured that students and instructors understood the nature of their participation, instructors initiated the first phase of the online exchanges (i.e., *student-student*) by posting and announcing the first topic on their online discussion forums. Then, students commenced their interactions in student-student online exchanges. Instructors did not interact with their students in this exchange phase. The role of the instructors was as a topic initiator only (e.g., Akayoğlu & Altun, 2009) and students were aware of this. However, students were not aware that their instructors were lurking and reading their posts. Every week no more than two topics were posted and discussed by students to help them participate comfortably and contribute to the topics. Seven topics were discussed by students and their online exchanges lasted for five weeks (from the beginning to the middle of the semester). Because the interactions were asynchronous, there were no time restrictions for participation and the forums were open over the course of this online exchange phase. However, students did not go back and discuss the former topics although they were allowed to do so.

The second phase of online exchanges (i.e., *instructor-student*) commenced after two weeks from the end of the student-student online exchanges. Students and instructors had a two week university public holiday according to the calendar of Saudi Arabia. In this second phase, instructors announced and posted the first topic on new online discussion forums and they interacted with their students online. Seven topics were discussed by students and their instructors for a period of five weeks (from the middle to the end of the semester). The trajectory of instructor-student online exchanges followed the same format as student-student ones.

3.7.3.5. Completing Questionnaires and Attending Interviews

After participants completed the two phases of online exchange, they completed the questionnaires and were requested to attend individual interviews with the researcher. Those students who participated in all stages of the study (i.e., online interactions, questionnaires, and interviews) were given small rewards (e.g., mini pocket English dictionaries, language testing materials, short stories, and novels) by the researcher as a

token of appreciation for their complete participation in the study project. Students were invited by the researcher to choose their own rewards based on their preferences before leaving the interview room. This kind of reward was meant to be useful for encouraging students to partake in future research projects in the site and enrich the context of EFL research. Also, instructors were requested to attend individual interviews with the researcher. Appreciation letters were given to the instructors from the Dean of the FLT to thank them for their participation before the researcher left the site.

3.7.4. Data Analysis

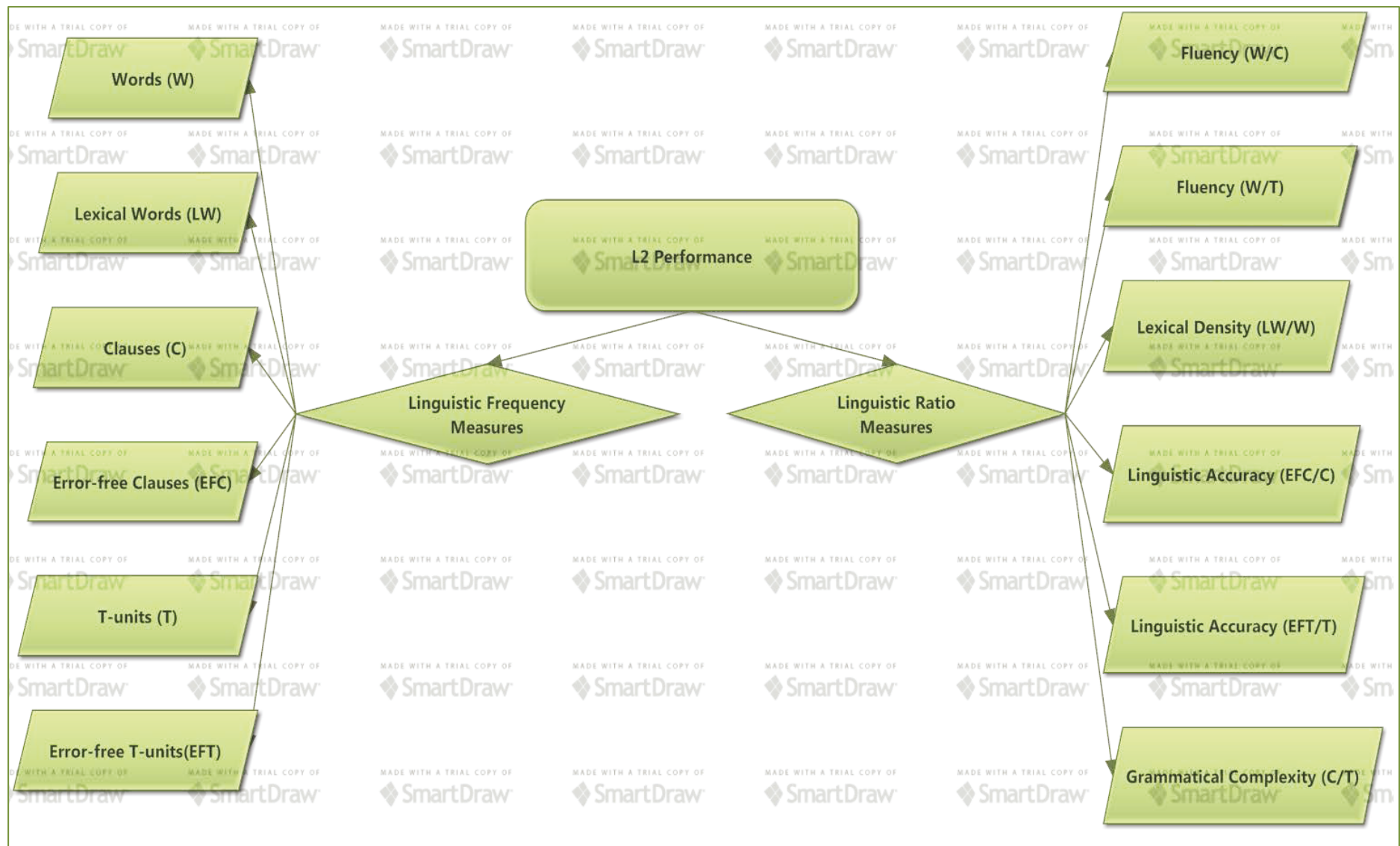
3.7.4.1. Analyzing Students' Online Transcripts

The transcripts of students' online interactions were analysed to examine students' L2 performance and the degree of their social presence. To analyse students' L2 performance, the present study determined and employed four linguistic indices following Wolfe-Quintero et al. (1998). These linguistic indices sought to measure students' fluency, lexical density, grammatical complexity, and linguistic accuracy. First, the text analysis method was applied to code students' linguistic units and then the frequencies and ratios of their linguistic units were analysed statistically using SPSS software version 20. A template of guidelines for coding students' linguistic units and measures was developed during the present study following various L2 studies, including Sotillo (2000), Storch (2005), and Polio (1997) (see [Appendix L](#)). In the present study, establishing coding guidelines was essential and deemed to be helpful in establishing useful criteria for reliability and validity of data analysis (Foster, Tonkyn, & Wigglesworth, 2000; Polio, 1997; Storch, 2005). It was hoped that these guidelines would help other researchers use these measures or replicate the current study without difficulty. Students' L2 performance was also analysed qualitatively by using narrative and descriptive methods.

To analyse students' social presence, the model of social presence in the framework of CoI (Garrison et al., 2000, 2001) was employed and the coding template for assessing social presence (Rourke et al., 2001) was also used (see [Appendix N](#)). Quantitative analysis of students' social presence was undertaken using SPSS software version 20

and qualitatively by using narrative and descriptive methods. The manner in which students' linguistic measures and social presence were analysed is described in detail in the following sections.

Chart 2: Analyzing Linguistic Measures of L2 Performance



3.7.4.2. Analyzing Lexical Density

In L2 writing literature, it is indicated that there has been one type of measure of lexical density employed (Wolfe-Quintero et al., 1998). That is, “a measure of the proportion of lexical words to total words” in the text has been used to measure students’ lexical density (Wolfe-Quintero et al., 1998, p. 112). However, it should be pointed out that the ratio of lexical words to clauses (LW/C) has also been used by L2 researchers to measure learners’ lexical density (e.g., Halliday, 1993; Kong, 2009). Halliday (1989, p. 76) defines lexical density as “a measure of the density of information in any passage of text, according to how tightly the lexical items (content words) have been packed into the grammatical structure” (cited in Kong, 2009, p. 34). The units of analysis used to measure lexical density in the present study were words (W) and lexical words (LW). Lexical density was measured by calculating the ratio of lexical words to overall words in the texts of students’ interactions (LW/W) (Engber, 1995; Williamson, 2014; Wolfe-Quintero et al., 1998). Lexical words in a text include: nouns, lexical verbs, adjectives and adverbs. The lexical words were counted using a manual tallying method.

3.7.4.3. Analyzing Grammatical Complexity

Grammatical complexity has been defined as “engag[ing] and experiment[ing] with a range of syntactic structures, moving beyond coordination to more complex structures which include subordination and embedding” (Storch, 2005, p. 158). Grammatical complexity was defined in the present study as the proportion of all clauses to the number of T-units in the text (Wolfe-Quintero et al., 1998). The units of analysis used to measure grammatical complexity in the present study were clauses (C) and T-units (T). The grammatical complexity of students was measured by calculating the ratio of clauses to overall T-units in the texts of students’ interactions (e.g., Armstrong, 2010; Bardovi-Harlig & Bofman, 1989; Ishikawa, 1995; Sotillo, 2000; Storch, 2005). This linguistic index was employed to measure how grammatically complex the texts of students’ interactions were based on the assumption that the more clauses the students produced per T-unit the more complex their T-units.

3.7.4.4. Analyzing Linguistic Accuracy

In the present study, linguistic accuracy was defined as “be[ing] free from errors while using language to communicate in either writing or speech” (Wolfe-Quintero et al., 1998, p. 33). The units of analysis used for examining linguistic accuracy were error-free T-units (EFT) and error-free clauses (EFC). Linguistic accuracy was measured by calculating two ratio measures, namely the ratio of error-free T-units to overall T-units (EFT/T) (e.g., Armstrong, 2010; Polio, 1997; Sotillo, 2000; Stockwell, 2010) and the ratio of error-free clauses to total clauses (EFC/C) (e.g., Ishikawa, 1995; Polio, 1997; Sotillo, 2000; Stockwell, 2010; Storch, 2005). These two accuracy measures were chosen because even though researchers have tended to use only one measure to examine students’ L2 errors, Wolfe-Quintero et al. (1998) suggested that comparing outcomes from two measures would give a more reliable reading of the linguistic accuracy of L2 learners. Secondly, the EFC/C measure was used in conjunction with the EFT/T measure (e.g., Wigglesworth & Storch, 2009) because EFT/T had received extensive criticism from L2 researchers. The T-unit overlooks the possibility of having multiple errors within itself; that is, a single T-unit with one error is treated as equivalent to a T-unit with multiple errors (Bardovi-Harlig & Bofman, 1989; Polio, 1997). However, it should be noted that the clause as a unit of analysis has also been criticized because it can hide the degree of inaccuracy present (e.g., Stockwell, 2010).

To assess students’ linguistic accuracy in the present study, a further investigation was deemed appropriate. In this investigation, students’ article errors were excluded from the data analysis when examining the results for linguistic accuracy. This exclusion was made because it was thought that the high frequency of article errors would affect the frequency numbers of students’ linguistic accuracy and raised questions about the trustworthiness of linguistic accuracy results. This linguistic suspicion was taken into account because, from EFL literature, it appears that Arab learners suffer excessively from article mistakes (e.g., Zughoul, 2002). The decision on what constitutes an error is defined and exemplified in the following section.

3.7.4.5. Defining Linguistic Errors

Defining what constitutes an error was important for measuring the linguistic accuracy of students' interactions (Polio, 1997; Storch, 2005; Wolfe-Quintero et al., 1998). It is well recognized that defining an error and determining correctness in L2 writing has often been difficult and problematic (Casanave, 1994; Polio, 1997; Wolfe-Quintero et al., 1998). Casanave (1994) admits that "[i]n a few cases it was difficult to determine whether the writer had made an error or not" (p. 200). The majority of studies of L2 writing do not discuss how errors were defined and determined (Polio, 1997), this was done in advance for the current study and guidelines were established for coding errors following several previous L2 studies (Polio, 1997; Sotillo, 2000; Storch, 2005) (see [Appendix L](#)).

Linguistic errors were defined in the present study as being *syntactical* (e.g., word omissions and repetitions), *morphological* (e.g., tense aspects and subject-verb agreement errors, verb formation errors such as verbs with third singular pronouns in simple present tense, and errors of singular and plural nouns), and *lexical* (e.g., errors of word choices and expressions). Errors of *articles*, *adjectives*, *adverbs*, *prepositions*, *misspellings* and *capitalizations* were all counted. Errors of *punctuation* were not assessed. Pragmatic errors were not included when examining students' linguistic accuracy. Some examples of students' linguistic errors and how they were coded are explicated in the following section.

3.7.4.6. Examples of Coding Linguistic Errors

The following are some examples from the transcripts of students' interactions in the discussion forums. The linguistic errors are coded and underlined.

1. Error of subject-verb agreement

[I disagree with you because the native speaker teachers is very important in some cases]—one error.

2. Aspect errors

[I think the University should be provide the textbooks to the students]—one error.

[I am agree with this statement]—one error.

3. Articles errors

[Al-Hilal is the best club in the Saudi Arabia]—one error.

[it will be a good for family to get some a fresh air]—two errors.

4. Errors of plurals and singulars

[because when you find informations]—one error.

[There are many reason for that]—one error.

5. Errors in adjectives/relative pronouns

[I think it is suitable for most of us especially whom go to their villages and have computers.]—one error.

6. Errors of capitalisation in proper nouns

[there are many...between britash and america words]—two errors (with additional spelling and morphological errors).

7. Errors of noun formation

[there is a different in the pronunciation]—one error (with an additional spelling error).

8. Omission and addition of grammatical elements

[There no compare between the internet and the blackbord]—two errors (with additional morphological and spelling errors).

9. Spelling errors

[I want really to go and visit any cauntry speaks English]—one error (with an additional syntactical error).

[because they cotain so much calories]—one error (with an additional morphological error).

10. Lexical errors

[My favorite Saudi team is AL-HILAL because my father, my brothers and I encourage it since the childhood]—one error (with an additional morphological error).

3.7.4.7. Defining Clauses

The clause unit has been defined variously by L2 researchers (Bardovi-Harlig & Bofman, 1989; Hunt, 1965; Polio, 1997). Hunt (1965) and Polio (1997) define it as a structure with a subject and a finite verb. However, in the present study the clause (C) was defined as either independent or dependent (e.g., Cooper, 1976; Storch, 2005). Following Storch (2005), the independent clause is a structure with a subject/omitted subject and a verb and it can stand on its own, whereas the dependent clause is a structure with a verb (finite or non-finite) and at least one additional grammatical element such as a subject, an object, a complement or an adverb.

Adverbial clauses and embedded clauses of adjective and nominal types, which are defined as subordinate clauses by Hunt (1965), were all coded as dependent clauses for the purposes of the analysis (e.g., Cooper, 1976). Adjective and nominal clauses are always embedded within independent or adverbial clauses whereas adverbial clauses are always appended to an independent clause on either side (Wolfe-Quintero et al., 1998).

It should be noted that defining the clause for the present study was not intended to assess what types of clauses students used, rather, to determine the clause as a unit of analysis to help measuring linguistic indices. This was done by counting the number of clauses which students produced in their L2 interactions regardless of the clausal type. The following examples show how clauses were coded and identified. Clauses are indicated by using two brackets—misspellings are retained from students' original interactions.

1. Independent clause

(we can find these characteristics in some new and contemporary dictionaries) —one clause.

2. Finite subordinate clause

((when we get the meaning of a word easily) we may forget it easily too)—two clauses.

(I think that (the government pays for our books.) —two clauses.

3. Non-finite clause

((to be a successful learner of English) try to read a lot) —two clauses.

Noun phrases which stand alone as separate sentences (e.g., *Yeah my friend.*) and greeting phrases (e.g., *hi everyone*, *hi buddy*, and *In the name of Allah*) were not counted as clauses because they do not meet the definition of clauses used in the analysis.

3.7.4.8. Defining T-units

The T-unit (T) has been the most commonly used unit of analysis for analysing learners' L2 discourse (Foster et al., 2000; Sotillo, 2000; Storch, 2005) although it has been criticized by Bardovi-Harlig (1992) with respect to measuring the grammatical complexity of L2 writing. In the present study, a T-unit was defined as "one main clause plus the subordinate clauses attached to or embedded within it" (Hunt, 1965, p. 49). The T-unit was determined as a unit of analysis in the present study because T-units "are easily identifiable (low-level inference categories) and provide an objective means of assessing sentence-level complexity in written texts" (Sotillo, 2000, p. 92). Schneider and Connor (1990) point out that T-units can differentiate between simple and compound sentences and can "provide a more valid basis of comparison among ESL essays of varying degrees of proficiency" (p. 415).

The following are some examples of T-units which were coded in the present study. The identified T-units in the following examples are indicated in square brackets.

1. T-unit of a main clause and two dependent clauses

[I think that the weekend is a break for people to get time for themselves and their families.]—one T-unit.

2. T-units of run-on sentences and comma splices

[the president paid millions and millions, the club is the house of stars,]—two T-units.

3. Sentence fragments

The only sentence fragments which were coded as T-units were those with no overt verb or copula (e.g., Storch, 2005).

[the purposes in Asser mall for children and womens.]—one T-unit.

4. Noun phrases and dependent clauses

Noun phrases and dependent clauses that stood alone as separate sentences were not coded as T-units (e.g., Sotillo, 2000) because they do not meet the definition of a T-unit which should have at least one independent clause. The following example is a noun phrase and the second is a dependent clause.

(YEAH MY FRIEND HATIM)

(By studying and revising what we have studied in lectures.)

5. A coordinated clause without a grammatical subject

A coordinated clause without a grammatical subject was coded as a separate T-unit (e.g., Polio, 1997; Sotillo, 2000; Storch, 2005).

[we can speak English very free and expose to Language more.]—two T-units.

6. Imperative sentences

Imperative sentences were coded as separate T-units (e.g., Schneider & Connor, 1990) in the present study because they can stand as independent clauses.

[go to one of the restaurant and order your meal,]—two T-units.

3.7.4.9. Defining Words and Lexical Words

Because students' L2 interactions were observed to have some contractions such as *isn't* and *we'll* and hyphenated words such as *well-established* and *E-learning*, they were coded and counted as separate words—that is, *we'll* was coded as two words, *we* and *will*. However, commonly used spoken words in online discussion forums like *wanna* and *gotta* were coded and counted as one word. Words were counted manually and also with the help of a word processor.

Lexical words, furthermore, were defined in the present study according to four words types, namely *nouns*, *lexical verbs*, *adjectives*, and *adverbs*. Other word types that were not considered to be lexical words were *function words* (e.g., determiners, pronouns, prepositions, conjunctions, numerals, and auxiliary verbs), and *emotional or auditory words* (e.g., *Ooops*, *Hmmm*, *Oooh ya*, *okay*). Lexical words were counted manually and are underlined in the following example.

Example 01

Saad⁴: Hmm, lets see..homeworks during the week ends .. I don't like the idea of homework :) at all..let alone doing it during the weekends, the only time where i can find some time to relax and watch movies with out being disturbed by school work ;p ...

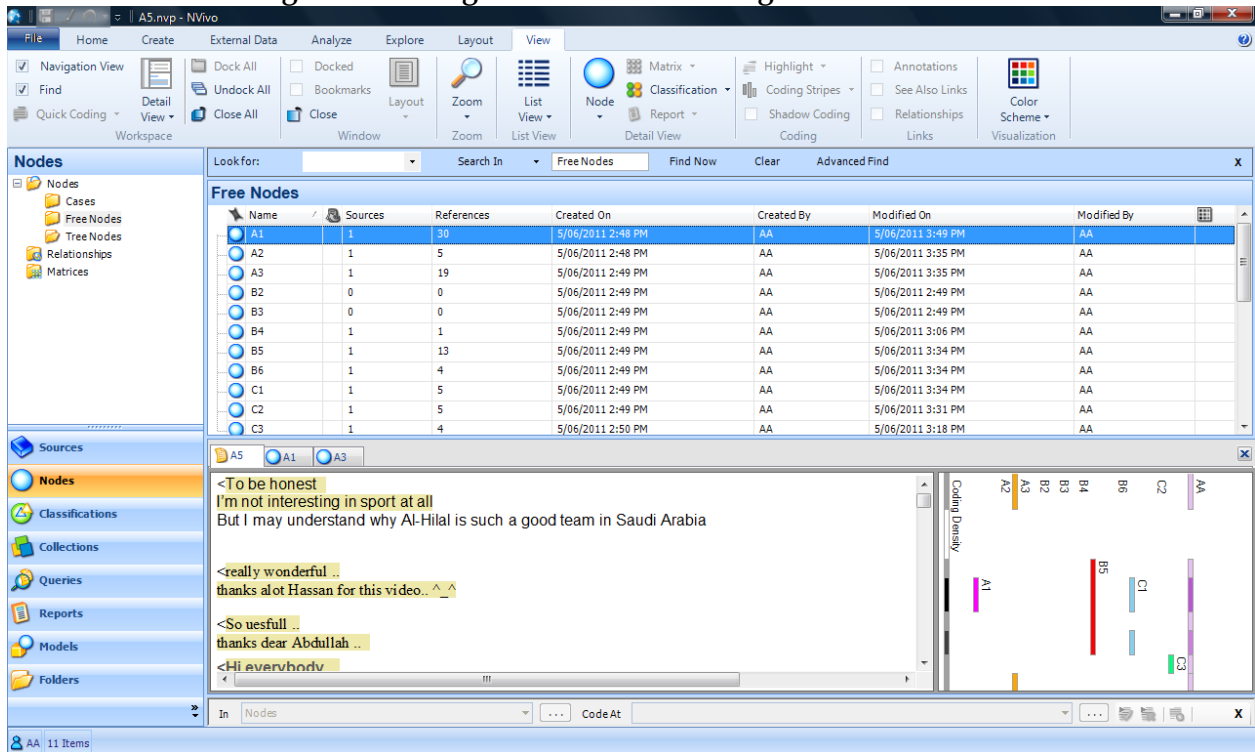
In Example 1, it can be observed that Saad's interaction has 44 words and 24 lexical words.

3.7.4.10. Analyzing Social Presence

Participants' social presence behaviours in the discussion forums were first coded using a coding template (Rourke et al.,2001) with the help of Nvivo software (see Figure 2) and then they were analysed quantitatively using SPSS software version 20. The qualitative analysis was performed using descriptive methods. More details about how social presence behaviours were analysed are presented in the following sections.

⁴ Pseudonyms are used to protect participants.

Figure 2: Coding Social Presence using Nvivo Software



3.7.4.11. Analyzing Emotional Expressions

Emotional expressions were defined as the expressions of *emotions*, *humour*, and *self-disclosures* according to the model of social presence (Garrison et al., 2000) in the present study. *Emotions* which were expressed by participants included conventional and unconventional expressions of emotions (e.g., using capitalisation, punctuation, and emoticons) as well as expressing lexical emotions such as *I feel so happy*. [Appendix M](#) shows some examples of students' emotional expressions. The use of humour is the second behaviour of the category of emotional expressions in the model of social presence. Expressing humour can contribute to a decrease in the social distance between participants and boost their learning process (Garrison et al., 2000). Humour included the behaviours of joking, teasing, and irony. Self-disclosure is the third behaviour of the emotional expression category and it was defined as the expression of sharing personal information, feelings or experiences that help participants build trust and seek support from other members in the discussion forums.

3.7.4.12. Analyzing Open Communication

Open communication behaviours were defined as social communications that were “reciprocal and respectful exchanges” (Garrison et al., 2000, p. 100) in the present study. They include two types of social behaviours, namely the behaviours of *mutual awareness* and *recognition of others’ contributions* in the discussion forums. [Appendix M](#) shows some examples of students’ open communication behaviours. The mutual awareness behaviours are “very much concerned with respectfully attending to the comments and contributions of others” (Garrison et al., 2000, p. 100). They included the behaviours of quoting from others’ messages, referring directly to the contents of other messages, and asking questions. The behaviours of recognition of others’ contributions are concerned with the development and sustenance of social exchange relationships among participants by complimenting others for their contributions and expressing their agreement with others according to the model of social presence.

3.7.4.13. Analyzing Group Cohesion

The third category of social presence was the category of *group cohesion* behaviours. Group cohesion behaviours in the present study were defined as “activities that build and sustain a sense of group commitment”, and are described as focused collaborative communication that “builds participation and empathy” (Garrison et al., 2000, p. 101). These activities include *referring to participants by their names*, *addressing the group discussion using inclusive pronouns*, and *saluting each other* according to the model of social presence. [Appendix M](#) presents some examples of students’ group cohesion behaviours.

3.7.4.14. Defining the Unit Analysis of Social Presence

The *speech segment* unit (Henri & Rigault, 1996) has been widely used as an analysis unit when coding participants’ social presence behaviours in the L2 context (e.g., Arnold & Ducate, 2006; Pawan et al., 2003). In the present study, the *speech segment* unit was determined as the unit of analysis for coding participants’ social presence in line with the above L2 studies. According to Henri and Rigault (1996), a speech segment unit is defined as “the smallest unit of delivery, linked to a single theme, directed at the same

interlocutor (singular, plural or indefinite), identified by a single type (linguistic), having a single function (in relation to the strategies)” (p. 62). It was hoped that it would be possible and useful to employ the speech segment as a unit of analysis and compare the results of social presence with other studies in the EFL field.

Table 7 provides a message which was posted by one of the students (Salem) when he interacted in a student-student online exchange. This message was coded by segmenting it into five speech segments, each with a separate theme and communicative function based on the definition by Henri and Rigault (1996).

Table 7: Speech Segments Unit—Coding Examples

Speech Segments		
1.	You got a point dear Abdullah.. Especially in pronunciation..	Acknowledging
2.	But I think the paper dictionaries make us - as students - used to the books I mean being in love with the Books .. And nothing more lovely than dictionaries	Expressing opinion
3.	It's not matter of "getting what you looking for quickly".. it's always a matter of .. how effective what you have got ..	Elaborating
4.	To make it clear.. If you just got a meaning of a word by using Electronic dictionaries.. How much do you think it will stuck in your mind.. ? two minutes .. three .. or maybe one hour but surely you will forget after all .. contrary to the word that you got it from paper dictionaries .. you may spend long time to find it yeah that's right .. and that what will make it UNFORGETABLE .. and remember .. Easy come, easy GO..	Clarifying
5.	thanks my friend ^_^	Complimenting

To deal with the different quantity of output in participants' interactions, the measure of *social presence density* as used by Rourke et al. (2001) was applied. It was calculated by dividing the sum of observed social presence behaviours by the total number of words in the interaction transcripts of the discussion forum and then multiplying them by 1,000 (e.g., Arnold & Ducate, 2006; Saude et al., 2012; Yodkamlue, 2008). This was done because "the raw number of instances of social presence, or the number of instances per message are both skewed by differences in the number of words per message or per conference" and thus this type of calculation can give a more precise interpretation and more meaningful comparisons of the measure of social presence across the transcript (Rourke et al., 2001, p. 13).

To code the analysis units of language performance and social presence, it should be pointed out that students were observed to engage in on-task exchanges in the current study with the exception of a few students (4 students, 8%) who initiated different topics (i.e., off-task exchanges) after they have finished discussing the forum topics. These off-task exchanges which were posted by students were not coded to control any factors which could affect the interpretation of the study results.

3.7.4.15. Establishing Inter-rater Reliability

Inter-rater reliabilities of coding analysis units of linguistic measures and social presence were established to help increase the reliability of coding entire data in the present study, in line with other L2 studies (e.g., Armstrong, 2010; Arnold & Ducate, 2006; Pawan et al., 2003; Polio, 1997; Sotillo, 2000; Storch, 2005). Two experienced experts in linguistics independently worked with the researcher and coded 31% of the students' data (e.g., Storch, 2005) according to the present study coding guidelines. One expert coded and counted words and lexical words and the other one coded and rated linguistic errors, T-units, error-free T-units, clauses, error-free clauses, social presence, and speech segments.

After finishing the task of the initial coding, the researcher discussed coding disagreements with the second coder and worked with him/her to reach a final agreement. The data coding efforts were examined statistically using a correlation and

accordingly the results of the initial and final coding inter-rater reliability efforts were found significant at $p < .001$.

Table 8: Inter-rater Reliability for Coding

Online Exchange Coding Analysis Units Linguistic Units	Student-Student		Instructor-Student	
	Initial	Final	Initial	Final
Words (W)	.98	1.000	.99	1.000
Lexical Words (LW)	.99	1.000	.99	1.000
Clauses (C)	.95	.99	.95	.98
Error-free Clauses (EFC)	.97	.98	.95	.95
T-units (T)	.94	.99	.92	.99
Error-free T-units (EFT)	.95	.96	.92	.97
Social Presence	.93	.96	.91	.97
Speech Segment	.90	.98	.95	.97

As can be seen in Table 8, the inter-rater reliability of coding shows that the researcher and the second coder had a coding agreement above 90%. Some of the disagreements which we observed during the task of data coding are reported below. For instance, Bader in Example 2 appeared to agree and then disagree when he interacted in the student-student online exchanges.

Example 02

Bader: I agree to some extent. I am against letting non-native speakers of English teach English especially to the first levels students where the found mental skills are learnt.

The discussion topic was *students in English program have to be taught by native and non-native speakers*, in this case we agreed that Bader was elaborating on his agreement and accordingly his online exchange in Example 2 has one speech segment.

In terms of coding linguistic errors, there were some cases where we disagreed over whether the first person pronoun of *I* written as *i* was a spelling mistake as well as if

when a word was missing one letter like in *football*, that constituted a spelling mistake. Other disagreements in the current study were found to be of multiple counting issues in terms of counting multiple clauses, T-units, or social presence behaviors. These disagreements were worked out through a discussion until we came to 100% agreement. It should be pointed out that the coding guidelines in the present study have helped to establish these high rates of coding agreement (e.g., Polio, 1997).

3.7.4.16. Difficult Cases in Coding Linguistic Units

Because there were some difficulties which were observed while coding the data, it was deemed worthwhile to report some of them here to help understand how the present study handled these difficulties (c.f., Foster et al., 2000).

To begin with, some topics were posted as Yes/No questions on the forums (e.g., *Do you like to eat fast food?* and *Do you agree or disagree?*) and they influenced a number of students not to write complete sentences when they gave their answers (e.g., *Yes.* and *Agree.*). However, it is plausible that students' L2 discourse in online discussion forum is not fully considered as written discourse but it can share some characteristics with spoken language and this is why students may have reduced their L2 output. Because of this, it was deemed important to code the responses as clauses and T-units (e.g., Bardovi-Harlig & Bofman, 1989) because they were considered to be parts of the context of students' interactions in the discussion forums.

In terms of coding T-units, the following case was seen as difficult to code in the study.

Example 03

Kareem: When you want to become a successful learner,
1- have a high motivation which will achieve
what you need of English language.
2- hard working to improve all skills you have.
3- don't worry about mistakes when you speak.
No one learn without mistakes you just speak.

In Example 3, Kareem started with a subordinating clause and continued completing his thought by listing some suggestions as items. Consequently, each of these items was considered as a separate T-unit because it had an independent clause along with other subordinating clauses.

In terms of coding linguistic errors, most students' prevalent errors in the present study were spelling, plurals, articles, and subject agreement. However, there were a few cases of linguistic errors that were not easy to code and interpret. For example, Saif in Example 4 posted his opinion about the topic (*agreeing or disagreeing with doing assignments and homework during the weekend*) and it was seen as difficult to code his interaction in terms of clauses, T-units, and linguistic errors.

Example 04

Saif: I disagree , because of the weekend you have a long or enough times to do every thing do you have such as assignaments, homeworks study and any work you most be done

However, the raters managed to code Saif's message and accordingly it has one T-unit of five attached clauses and nine linguistic errors (see coding below).

[I disagree (C1), because of the weekend you have a long or enough times (C2) to do every thing (C3) [which] do you have such as assignaments, homeworks study and any work (C4) [which] you most be done (C5)]

clause=(c), T-unit=[], and errors are underlined.

3.7.4.17. Analyzing the Transcripts of Instructors' Online Interactions

The transcripts of the three instructors' interactions and interviews were analysed to investigate how they displayed their roles and social presence when they interacted in instructor-student online exchanges. It was deemed useful to examine how the instructors interacted and projected their social presence because they were observed to differ from one another in terms of the manner of interaction, participation rate, and the degree of social presence. The interactions of instructors were coded according to the analytical template (see Table 4 in section 3.6.) and they were analysed qualitatively using descriptive and narrative methods. Likewise, the model of social presence using the framework of CoI (Garrison et al., 2000, 2001) was applied to qualitatively analyse the social presence of the instructors in the discussion forums. Table 9 presents some examples of coding the discourse functions of the instructors in the current study.

Table 9: Instructors' Interaction Discourse Functions—Coding Examples

Explanatory levels	Discourse Functions	Coding Examples
Interaction discourse function	Negotiation	If you are looking for published material, you have to pay for that to access it on the internet, but you can get it for free from a traditional library. What do you think?
	Feedback	Panda and Al-Goneim are not malls. A mall is a shopping center where you can find a lot of stores and areas where you can find restaurants and coffee shops like Aseer Mall.
	Opinion	I think one should go shopping once a week. In order not to waste your time, it is a very good idea to prepare a shopping list.
	Question	Is it time consuming? Do you think traditional ways of learning are better?
	Agreement	I agree with you. Al Andalus is a very good shopping center.
	Emotion	I hope you will get the chance to go abroad.
	Compliment	Good Mohammad. I appreciate your opinion.
	Suggestion	It is better to drink fresh fruit juice.

3.7.4.18. Analyzing Questionnaires

The student questionnaires were analysed quantitatively using SPSS software version 20 and qualitatively using narrative and descriptive methods. The qualitative analysis was first conducted on the Arabic version and extracts were translated into English. To make sure that the Arabic to English translated information of qualitative data was accurate, 30% of both English and Arabic versions were reviewed by a certified translator (Saudi professor in Linguistics).

3.7.4.19. Analyzing Interviews

The students' and instructors' interviews were analysed qualitatively using narrative and descriptive methods. Nvivo software version 9 was used for analysing participants' interviews. The qualitative analysis was first conducted on the Arabic version and extracts were translated into English. Likewise, 30% of Arabic to English translated information were reviewed by the same Arabic and English interpreter.

3.7.5. Excluding Some Participants from Data Analysis

Unfortunately, there were some cases, among 130 students, who did not participate in some stages of the present study. There were 31% of the students (N=40) who did not interact either in student-student online exchanges (N=11, 9%) or in instructor-student online exchanges (N=29, 22%). Another issue was that some students (N=41, 32%) did not participate in all of the discussion topics over the two phases of online exchanges because of time pressures and workload. Some students who did participate admitted that they were not able to participate sufficiently because they were studying several courses and they had other commitments (e.g., see Faisal's comment below).

The participation in the online discussion forum in this study was like a burden on your shoulder and I really participated just because I need to get the participation marks at the end of the study.

Instructors attributed the lack of students' participation to several reasons which revolved around the introduction of the discussion forum as a new social environment, time pressure of assignments and examinations, shortages of computer labs, lack of internet service, and parents' negative perceptions of internet usage. For example, instructor Ibrahim⁵ reported the following reasons:

I am only 60% happy about my students' participation in this study. I think students still face some difficulties because of some reasons. First of all, when we introduce a new method in language learning students may take some time to get used to it and utilise it effectively in their L2 learning. Other reasons may be because students usually have a study time pressure; that is, they are so busy with their study requirements especially with those tasks associated with the Blackboard system, there are not enough computer labs at the Faculty, there is no internet service at home, or may be because some parents do not encourage students to use internet at home. Moreover, some

⁵ Pseudonyms are used to protect participants.

students would like to interact face-to-face more than as online because of their poor computer and internet literacy.

It was deemed important to exclude students who did not interact in both student-student and instructor-student online exchanges because participation in both kinds of online exchanges was the main source of the data. Accordingly, only the data of students (N=49, 38 %), who participated in both phases of online exchanges, were analysed in the present study. That is, 49 students met the conditions of the research design because they interacted in student-student and instructor-student online exchanges, completed the questionnaires, and some of them (19 students, 39 %) attended individual interviews. The characteristics of the 49 students are presented in Table 10. The 49 students who participated in the present study generated 805 messages which made up a transcript of 27,385 words.

Table 10: Means of Students' Characteristics

<i>Characteristics</i>	<i>Information</i>
Age	22.5 Years Old
EFL Learning Exposure	9 Years
Blended Learning Experience	17 Months
EFL Proficiency	Lower-intermediate-modest English users
Using Computer and Internet	Often
Using Discussion Forums	Sometimes

Part IV: Findings

Chapter Four: Findings Relating to Students' L2 Performance

4.1. Quantitative Analysis Results

This section aims at reporting and discussing the results of students' L2 performance in terms of examining the frequency and ratio measures of students' online interactions quantitatively. The frequency and ratio measures were calculated and entered into SPSS software for statistical analysis. The results of this analysis are reported and discussed as follows.

4.1.1. Results of Linguistic Frequency Measures

The raw frequencies of students' linguistic units which they generated student-student and instructor-student online exchanges were calculated and presented in Table 11.

Table 11: Students' Linguistic Units—Raw Frequency Scores

Online Exchange	Student-Student	Instructor-Student	Total Corpus
N=49			
<i>Linguistic Unit</i>			
T-units	1,397	1,121	2,518 T-units
Clauses	2,246	1,879	4,125 clauses
Lexical Words	7,167	5,892	13,059 words
Words	14,741	12,644	27,385 words
Error-free T-units	727	623	1,350 T-units
Error-free Clauses	1,453	1,285	2,738 clauses

As can be seen in Table 11, when students interacted in student-student online exchanges, they had higher frequency scores of T-units, clauses, lexical words, words, error-free T-units, and error-free clauses than when they interacted in instructor-student online exchanges. The descriptive statistics in Table 12 and Figure 3 support the findings that students produced higher means of linguistic units in student-student interactions than in instructor-student interactions. Students appeared to take risks in producing

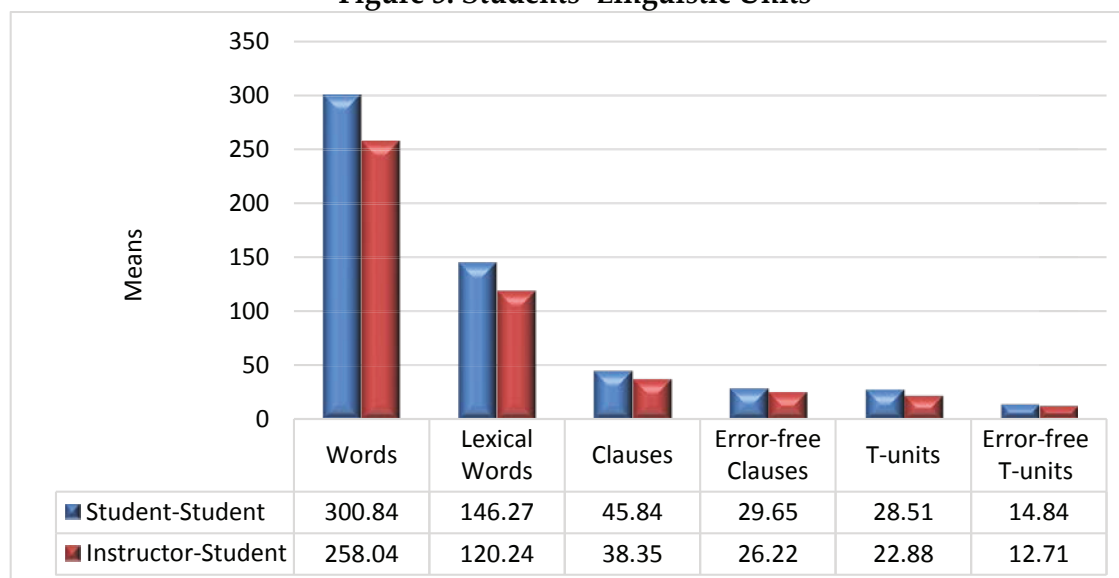
their language more frequently when their instructors were absent. It can be also attributed to the higher levels of students' social presence in student-student online exchanges (findings on social presence are reported in [chapter five](#)). Students might have been motivated to produce lexical items by the higher degree of social presence which they projected in their discussion forums.

Table 12: Students' Linguistic Units—Descriptive Analysis Results

Online Exchange	Student-Student		Instructor-Student	
N=49				
<i>Linguistic Unit</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
T-units (T)	28.5	21.4	22.9	15.9
Clauses (C)	45.8	33.2	38.4	27.4
Lexical Words (LW)	146.3	97.4	120.3	80.7
Words (W)	300.8	206.6	258.1	179.9
Error-free T-units (EFT)	14.9	13.9	12.7	11.4
Error-free Clauses (EFC)	29.7	24.8	26.2	20.9

M= mean; SD= standard deviation

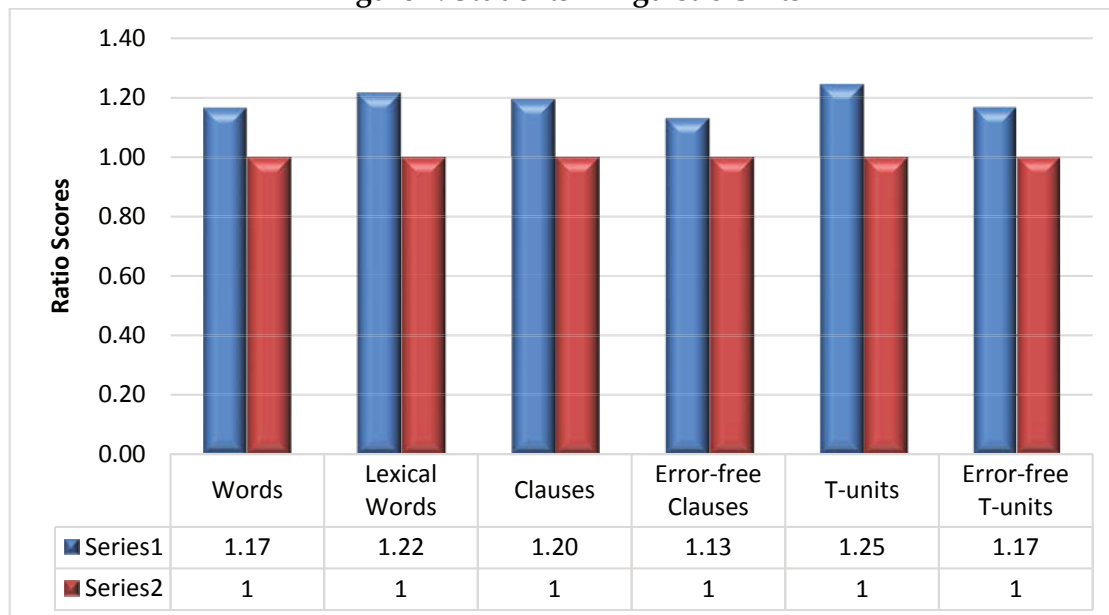
Figure 3: Students' Linguistic Units



Because of the large values of some units in Figure 3, the ratios of students' linguistic units were calculated and presented in a bar chart to give a more precise graphical picture in regard to students' L2 performance. As can be seen in Figure 4, the L2

performance of students was found to be higher in their T-units, clauses, and lexical words when they interacted in student-student than in instructor-student online exchanges.

Figure 4: Students' Linguistic Units



Given that students produced larger means of linguistic units in student-student than in instructor-student online exchanges, it was deemed important to examine whether there were significant differences in the students' mean frequency scores between the two phases of online interactions.

Table 13: Students' Linguistic Units—Inferential Analysis Results

N=49 <i>Linguistic Units</i>	<i>z</i>	<i>Eta</i> ²	<i>P</i>
T-units	-2.98*	.16	.003
Clauses	-2.71*	.13	.007
Lexical Words	-2.64*	.13	.008
Words	-2.16*	.09	.031
Error-free T-units	-1.40	.04	.161
Error-free Clauses	-.96	.02	.338

*Significant differences found

z= *z*-value; *Eta*²(*eta square*) =strength of association

Because students' linguistic units were not normally distributed (according to the results of Kolmogorov-Smirnova and Shapiro-Wilk tests), the Wilcoxon matched-pairs signed-ranks test was deemed appropriate and applied to the data. As can be seen in Table 13, the Wilcoxon test reveals that there are significant differences ($p < .05$) in students' linguistic units between the two types of online exchanges, namely in T-units, clauses, lexical words, and words. The eta-square scores are strong enough to indicate that students composed significantly larger ranges of T-units, clauses, lexical words, and words when they interacted in student-student than in instructor-student exchanges. Students produced more language output in their student-student than in their instructor-student exchanges. Conversely, there are no significant differences in the means of students' error-free T-units (EFT) and error-free clauses (EFC) between the two kinds of online exchanges. Students produced similar rates of EFT and EFC in student-student and instructor-student online exchanges.

Given that students' L2 performance was investigated using the frequency scores of linguistic units, it should be pointed out that looking at linguistic frequency measures for assessing students' L2 performance is not as good as looking at linguistic ratio measures (Wolfe-Quintero et al., 1998). In other words, in linguistic ratio measures, one type of linguistic unit is expressed as a percentage of another type of linguistic unit, unlike in linguistic frequency measures where a linguistic unit is only treated as a discrete score. Accordingly, the present study applied linguistic ratio measures to further investigate students' L2 performance in student-student and instructor-student online exchanges. The results of linguistic ratio measures analysis are reported and discussed in the following sections.

4.1.2. Results of Linguistic Ratio Measures

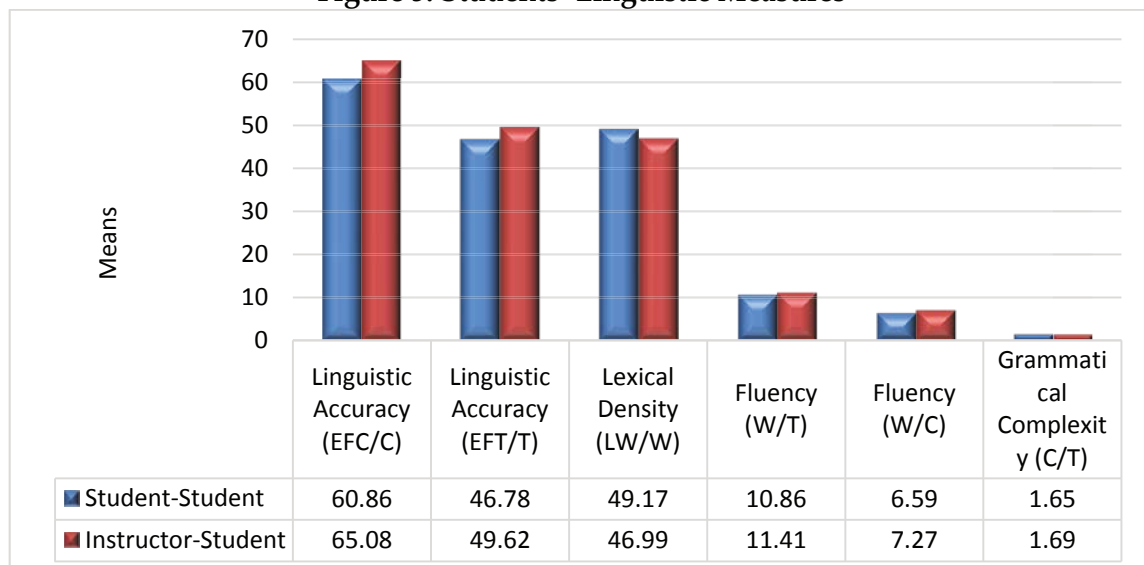
The linguistic ratio measures which were applied are fluency (W/T) and (W/C), lexical density (LW/W), (LW/C), and (LW/T), linguistic accuracy (EFT/T) and (EFC/C), and grammatical complexity (C/T). The scores obtained from these ratio measures were examined statistically.

Table 14: Students' Linguistic Measures—Descriptive Analysis Results

Online Exchange	Student-Student		Instructor-Student	
N=49				
<i>Linguistic Measure</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Fluency (W/T)	10.86	2.38	11.41	2.16
Fluency (W/C)	6.59	0.86	7.27	2.32
Lexical Density (LW/W)	49.17	4.42	46.99	3.19
Linguistic Accuracy (EFT/T)	46.78	22.29	49.62	23.91
Linguistic Accuracy (EFC/C)	60.86	20.68	65.08	21.9
Grammatical Complexity (C/T)	1.65	0.28	1.69	0.49
<i>M= mean; SD= standard deviation</i>				

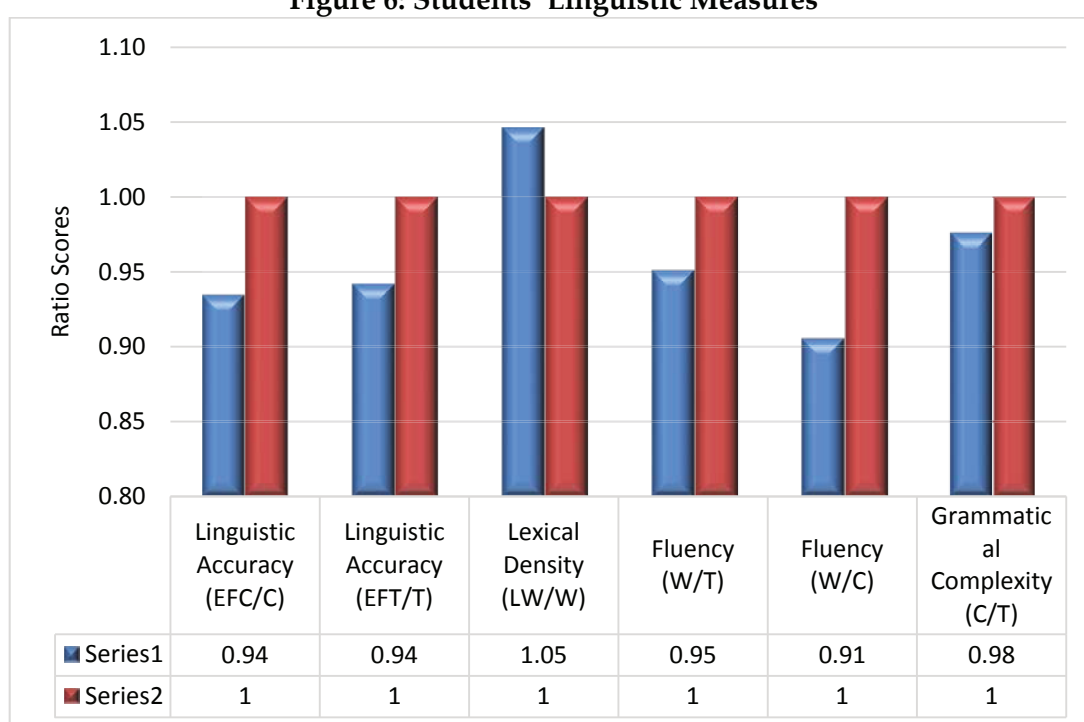
Table 14 and Figure 5 show the descriptive statistics of students' linguistic ratio measures and their L2 performance across the two kinds of online exchanges. It is worth mentioning that these ratio measures can be seen better than the frequency measures because the ratio values of *M* to *SD* are never higher than 0.5 and much lower in many cases as compared with the values in Table 12 which are close to 1. By and large, students' linguistic measures, except their lexical density, were found to be higher in instructor-student than in student-student online exchanges.

Figure 5: Students' Linguistic Measures



To help understand the presentation of students' linguistic measures in a more precise way, the ratios of the measures were calculated and presented in an additional bar chart because of the large values of some measures in Figure 5. As can be seen in Figure 6, students' performance was found to be higher in lexical density which means that students' interactions were lexically richer when they interacted in student-student than in instructor-student online exchanges. This performance was attributed earlier to the absence of the instructor and to the higher levels of students' social presence in student-student online exchanges.

Figure 6: Students' Linguistic Measures



As can be seen in Table 14, students had higher ratio mean of lexical density (49.17 versus 46.99) in their online interactions with their peers than instructors. This shows that students' interactions were lexically richer in student-student than in instructor-student online exchanges. Students took risks in producing larger numbers of lexical words when they interacted with their peers. Conversely, students had lower ratio means in their linguistic accuracy measures in student-student than in instructor-student online exchanges. This shows that students produced higher proportions of error-free T-units (49.62 versus 46.78) and error-free clauses (65.08 versus 60.86) in their instructor-student interactions than in their student-student interactions. Students paid

more attention to the linguistic accuracy of their interactions because the presence of the instructors encouraged them to put more effort into error noticing and correction.

In terms of fluency measures, it seemed that the differences are too small (W/T=11.41 versus 10.86 & W/C=7.27 versus 6.59) to be significant between student-student and instructor-student online exchanges. Furthermore, students had the same grammatical complexity (1.69 versus 1.65) when they interacted in the two types of online exchanges. The above results show that students maintained the same rates of fluency and grammatical complexity when they interacted in student-student and instructor-student online exchanges. The presence or absence of the instructors did not seem to influence students' fluency and grammatical complexity in the study.

However, to give a more precise picture of students' L2 performance, it was deemed useful to statistically examine whether there were significant differences in the means of students' linguistic ratio measures between the two kinds of online interaction. Inferential procedures were conducted. It should be noted that the decision to apply non-parametric tests was made because of the non-normal distributions which were found across some of the data of students' linguistic measures. The Kolmogorov-Smirnova and Shapiro-Wilk tests were used to examine the normality of data distributions in the present study.

Table 15: Students' Linguistic Measures—Inferential Analysis Results

N=49 <i>Linguistic Measure</i>	<i>M</i>	<i>SD</i>	<i>d</i>	<i>t</i>	<i>P</i>	<i>Eta</i> ²
Fluency (W/T)	10.86 11.41	2.38 2.16	48	-1.75	.086	.06
Lexical Density (LW/W)	49.17 46.99	4.42 3.19	48	3.37*	.001	.20
Linguistic Accuracy (EFT/T)	46.78 49.62	22.29 23.91	48	-1.2	.237	.03

*Significant differences found

M= mean; SD= standard deviation; d= degree of freedom; t= t-value

Table 15 shows the results of fluency (W/T), lexical density (LW/W), and linguistic accuracy (EFT/T) which were examined by using the parametric paired *t*-test. Other linguistic measures were examined by using the non-parametric Wilcoxon matched-pairs test because of the data non-normal distributions. The results of linguistic ratio measures analyses are presented in the following sections.

4.1.2.1. Fluency Analysis Results

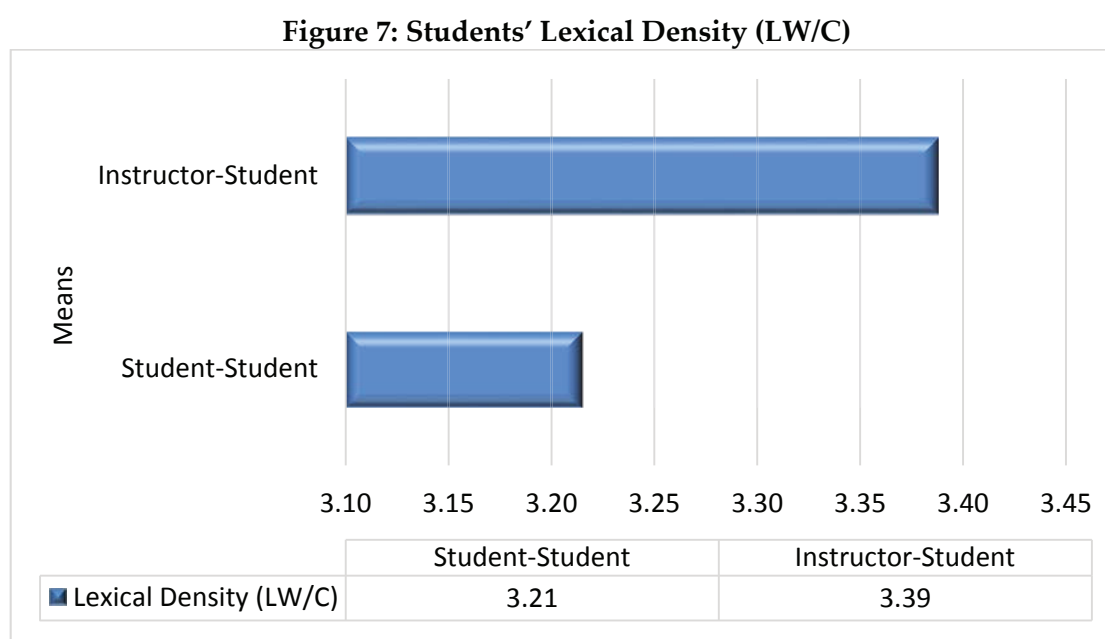
To start with, no significant differences were found in the students' fluency measures, W/T ($t=-1.75$; $p=.086$) and W/C ($z=-1.19$; $p=.23$) although the means are higher in instructor-student than in student-student online interactions. The results of these two measures confirm each other by indicating that there were no significant differences and students produced the same fluency rates in their online interactions when they interacted in the two sets of online exchanges. This confirmation gives more support for the efficacy of applying multi-ratio measures (i.e., W/T and W/C) in assessing students' language fluency in CMC. This finding shows that the presence or absence of the instructors did not seem to affect the rates of students' fluency when they interacted in the online discussion forums.

4.1.2.2. Lexical Density Analysis Results

As can be seen in Table 15, significant differences ($t=3.37$; $p=.001$) were found in students' lexical density measure with a large eta square ($=.20$). This shows that students' interactions were lexically denser in student-student than in instructor-student online exchanges. Students produced higher ratios (of lexical words to words) in their online interactions when they interacted with their peers than instructors. Because of the absence of the instructors, students might have taken risks in using lexical items in their online interactions. However, it should be pointed out that students were found to have higher levels of social presence in their student-student than in their instructor-student online exchanges. Students might have been motivated to produce lexical items frequently because they had higher levels of social presence in their student-student online exchanges. Importantly, it was found that there was a stronger positive significant correlation between the frequencies of students' social presence and lexical

words in student-student ($r=.811$; $p<.001$) than in instructor-student ($r=.758$; $p<.001$) online exchanges (Spearman's ρ was used because the data were not normally distributed). This correlation shows that students who projected higher degrees of social presence also produced higher rates of lexical words and this relationship was stronger in student-student than in instructor-student online exchanges.

To further help understand students' lexical density, additional ratio measures of lexical density were applied and analysed; namely, the ratio of lexical words to clauses (LW/C) (c.f., Halliday, 1993; Kong, 2009) and the ratio of lexical words to T-units (LW/T). As can be seen in Figure 7, students were found to have a relatively higher mean of lexical density (LW/C) in their instructor-student ($M=3.39$, $SD=1.07$) than in their student-student online interactions ($M=3.21$, $SD=.43$). Students had larger numbers of lexical words in their clauses when they interacted in instructor-student than in student-student online exchanges.



To examine whether this higher lexical density was significant, the Wilcoxon test was deemed appropriate and applied because the data were not normally distributed. The results showed that there were no significant differences ($z=.000$, $p=.99999$) in the students' lexical density (LW/C) between the two types of online exchanges. This indicates that students in the two types of online exchanges produced similar rates of

lexical words in their clauses. It was also deemed important to examine the lexical density of students' T-units (i.e., the ratio of LW/T) to further help understand students' lexical density in the current study. It was found that students had similar rates of lexical density in their T-units when they interacted in student-student ($M=5.32$, $SD=1.19$) and in instructor-student ($M=5.39$, $SD=1.07$) online exchanges. The paired t -test revealed that there were no significant differences ($t=-.487$, $p=.628$) in students' lexical density (LW/T) between the two types of online exchanges. The above findings do not support the finding of the measure of LW/W applied earlier. LW/W showed that there were significant differences in students' lexical density between the two types of online interactions but for LW/C and LW/T no significant differences were found. The reason for these mixed findings for lexical density is attributed to the coding definitions in the present study. Based on the definitions determined in the study, stand-alone noun phrases were not coded as clauses and stand-alone dependent clauses were not coded as T-units. That is, a number of lexical words, particularly *nouns*, *adjectives*, and *adverbs*, were not measured when LW/C and LW/T were applied to the students' data because they were not treated as elements of clauses and T-units. The measure of LW/W counts lexical words as the ratio of frequencies to overall number of words whereas the measures of LW/C and LW/T calculate lexical words as the ratio of frequencies in every single clause and T-unit respectively.

4.1.2.3. Linguistic Accuracy Analysis Results

In terms of linguistic accuracy measures, no significant differences were found in the students' means of EFT/T measure ($t=-1.2$; $p=.237$) although the mean score was higher in instructor-student than in student-student online interactions. However, when the measure of EFC/C was examined, the Wilcoxon test revealed that there are significant differences in the students' means ($z=-2.6$; $p=.009$) with a large eta square ($=.12$). Students produced a higher proportion of error-free clauses in instructor-student than in student-student online interactions. This indicates that students paid more attention to the linguistic accuracy of their interactions with their instructors than peers and this attention to accuracy can be attributed to the presence of the instructors.

Although the descriptive statistics demonstrated that the measures of students' linguistic accuracy are higher in instructor-student than in student-student online interactions, the results of EFT/T and EFC/C did not seem to confirm each other when they were put under scrutiny. It should be noted that the sample in EFT/T was normally distributed but in EFC/C it was not. However, the noteworthy reason for this paradox in the results of EFT/T and EFC/C is related to the coding definitions in the present study in terms of clauses and T-units. That is to say, there were large proportions of clauses which were not coded as clauses of the T-units (about 37.8% in student-student and 40.33% in instructor-student online exchanges). Instead, they were coded as stand-alone clauses (i.e., dependent clauses that were not associated with any T-units) according to the definitions of T-units and clauses determined in the study. Consequently, the numbers of error-free clauses is misleadingly large because many of these clauses are not part of error-free T-units. The EFT/T accuracy measure in the present study overlooked the errors associated with the clauses composed within the T-units (e.g., Bardovi-Harlig & Bofman, 1989; Polio, 1997; Storch, 2005). However, the present study has looked at both linguistic measures (i.e., EFT/T and EFC/C) and students were found to write more error-free clauses and T-units when they interacted in instructor-student than in student-student online exchanges.

4.1.2.4. Results of Article Errors Analysis

Article errors were excluded from students' data analysis in both student-student and instructor-student online interactions. The Wilcoxon test was reapplied to EFC/C measure to examine whether there were still significant differences after excluding article errors. Interestingly, the Wilcoxon test shows that the means of students' EFC/C ($M=65.68$ versus $M=62.08$) still hold significant differences ($z=-2.4$; $p=.017$) with a large eta square ($=.11$) after excluding article errors. This result gives more support for the earlier result of linguistic accuracy by indicating that students maintained higher linguistic accuracy in their instructor-student than in student-student online exchanges. Students' linguistic accuracy was not affected by the frequency of article errors. Students in fact did have other grammatical errors apart from article errors when they interacted

with their peers and instructors in the discussion forums. However, it was not intended to examine the types of linguistic errors which students committed in the two types of online exchange. Rather, the present study aimed at examining how linguistically accurate the students' L2 interactions were when they interacted in student-student and instructor-student online exchanges.

4.1.2.5. Grammatical Complexity Analysis Results

In terms of grammatical complexity measure, the Wilcoxon test revealed that there are no significant differences ($z=-.4$; $p=.69$) in the students' mean scores. Students' grammatical sophistication did not seem to differ when they interacted in student-student and instructor-student online exchanges. The presence or absence of the instructors did not appear to affect the rates of students' complexity when they interacted in their online discussion forums.

4.1.3. Analysis Results: Comparison of English Courses

It was deemed important to investigate group variation between the online discussion forums of students' English courses in terms of whether students had significant differences in their L2 performance. This investigation was conducted because students who participated were recruited from different English courses, namely Applied Linguistics I (i.e., level 6), History of English Language (i.e., level 7), and Applied Linguistics II (i.e., level 8). That is, their English proficiency might have affected their L2 performance in the two types of online exchanges. This group comparison analysis aimed to help investigate whether or not the differences in the students' L2 performance reported earlier in this chapter were due to the level of students' English language proficiency. For this investigation, the mean differences of students' linguistic ratio measures between the two sets of online interactions were calculated and examined statistically across the discussion forums of students' English courses. A one-way analysis of variance (ANOVA) was deemed appropriate and conducted for this investigation. No significant differences ($p>.05$) were found among the online discussion forums of students' English courses. Students from produced the same rates of fluency, lexical density, linguistic accuracy, and grammatical complexity across the different

forums of their English courses. This indicates that the level of English language did not affect students' L2 performance when they interacted online with their peers and instructors.

4.1.4. Summary of Quantitative Findings: Students' L2 performance

In the previous sections of this chapter, the present study found some significant differences in the means of the frequency scores of students' linguistic units. Students produced higher rates of words, lexical words, clauses, and T-units when they interacted in student-student than instructor-student online exchanges. Because of the absence of their instructors, students might have taken risks in producing their language more frequently than when their instructors were present. In terms of the linguistic measures of EFC and EFT, there were no significant differences found between student-student and instructor-student online exchanges. Students showed the same L2 accuracy although the means are larger in instructor-student than in student-student online exchanges. To help examine students' L2 performance sufficiently, the ratio linguistic measures were employed in the study.

When linguistic ratio measures were applied, significant differences were found in the means of the ratio scores of students' L2 performance between student-student and instructor-student online exchanges. The differences were found in the measures of lexical density, and linguistic accuracy of EFC/C. Students had higher rates of lexical density (LW/W) but lower rates of linguistic accuracy (EFC/C) in their student-student online interactions as compared with their instructor-student online interactions. The presence of the instructors was seen to encourage students to pay more attention to their L2 accuracy but, on the other hand, it limited the production of their lexical words. That is, students took risks in producing lexical words and they did not pay more attention to their linguistic errors when their instructors were absent. When instructors were present, students had lower rates of lexical words and linguistic errors because they avoided taking risks in producing lexical words and paid more attention to their linguistic mistakes. However, students had higher levels of social presence and a stronger significant correlation between the frequencies of their social presence and

lexical words and this can be seen as a reason why they had higher rates of lexical density (LW/W) in their student-student than in their instructor-student online exchanges.

In terms of other linguistic ratio measures employed, the present study did not find significant differences in the students' fluency and grammatical complexity between the two patterns of online exchanges although the means are relatively higher in instructor-student than in student-student online exchanges. The presence or absence of the instructor did not seem to affect students' fluency and grammatical complexity when they interacted in their online discussion forums. With regard to the results of group comparison analysis, ANOVA did not find significant differences in the students' linguistic ratio measures between the online discussion forums of students' English courses. Students had the same L2 performance in their online discussion forums and the level of their English language did not appear to affect the rates of their language performance.

4.2. Qualitative Analysis Results

The remaining part of this chapter presents qualitative analysis results to understand students' L2 performance when they interacted in student-student and instructor-student online exchanges. It aims at exploring students' online interactions and providing more support for understanding and interpreting the quantitative findings which were reported earlier in this chapter. Students' data obtained from online interactions, questionnaires, and interviews were analysed qualitatively and the results are reported and discussed in the following sections.

4.2.1. Lexical Density Analysis Results

The students' online interactions were statistically found to be more lexically dense in student-student than in instructor-student online exchanges. The transcript of students' online interactions shows that students produced more lexical items (nouns, lexical verbs, adjectives, and adverbs) in student-student than in instructor-student online exchanges. For example, Abdullah produced a higher ratio of lexical words in student-

student (52%) than in instructor-student (44.23%) online interactions. His lexical words and density were calculated as can be seen in Example 5—lexical words are underlined.

Example 05

Student-student Exchange Phase

Topic Students in English language programs have to be taught by both native and non-native speakers. Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Abdullah: I personally disagree with you, and agree with the statement. In my opinion, the best way to teach a language is to have native speaker teachers as well as non-native speaker teachers. Native speakers are more beneficial in certain aspects (e.g. speaking and pronunciation). However, non-native speakers know more about the process of "teaching" languages, because they learned the language (they didn't acquire it). They are more familiar with the problems and difficulties that can face students while learning. They also know better the psychology of the students and how to deal with students in a way that keeps them interested in the course. I'm not saying that native speakers don't have these features, but I believe that non-native speakers are more capable of facilitating learning languages.

[October 23, 2010 2:24 PM]

Instructor-student Exchange Phase

Topic To improve your English language, you should communicate it with local English people in Saudi private companies, banks, and hospitals. Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Abdullah: Well, I do agree with you that we must practice English as much as we can. But I just find it very difficult that I go searching for a native speaker in a hospital or any other place to start practicing English, not to mention that they are busy most of the time, and they usually live in compounds. Anyway, I prefer using the Internet to practice English.

[December 15, 2010 6:11 PM]

From the above example, Abdullah has higher number of lexical words (68 versus 30) and density (53.54% versus 44.11%) in student-student than in instructor-student online exchanges. This shows that Abdullah's online interactions were lexically richer when he interacted with his peers than with his instructor. According to students' interviews, the greater lexical richness of student-student online exchanges was attributed to factors such as consulting online resources and dictionaries, whereas the lower lexical richness of instructor-student online exchanges was attributed to the lack of the instructors' interactions. However, the fact that students had higher degrees of social presence and a stronger correlation between their social presence and lexical words in student-student than in instructor-student online exchanges is considered to be one of the factors which contributed to the lexical richness of student-student online interactions in the present study.

4.2.1.1. Consulting Lexical Resources

According to interview data, it was observed that students referred to print and online lexical resources more when they discussed topics in student-student than in instructor-student online interactions. This might have contributed to the increase of their lexical words in these interactions. For example, students, while interacting in student-student online phase, referred to online resources on the internet such as websites, search engines, and dictionaries to read more about the topics and study their vocabulary. Abdullah in his interview reported that he used to lexically familiarize himself with the discussion topics when he interacted in student-student online exchanges.

During my interactions in student-student online exchanges, I had to go to English websites, read more about the topic being discussed, and then write my postings in the online discussion forum.

Abdullah also mentioned that he referred to English dictionaries and Google search engine to learn new vocabulary during his student-student online exchanges.

When I interacted in student-student online exchanges I used to consult English print dictionaries and Google search engine to check the meaning of new vocabulary and their language usages.

From the above interview data, it can be observed that Abdullah's lexical density in student-student interactions benefited from consulting online resources and print

dictionaries. Another example which supports higher lexical richness in student-student online exchanges can be found in Abdul's online interactions. His lexical density was higher when he interacted in student-student (54.62%) than in instructor-student (42.79%) online exchanges. According to his interview, Abdul indicated that he used to express his thoughts in detail and incorporate new vocabulary during his student-student online exchanges.

When I interacted in student-student online exchanges, I used to express my thoughts as much as I can and sometimes I used to look for new vocabulary and expressions because I was willing to interact with my peers and convey my thoughts.

Abdul was willing to interact in student-student online exchanges and this might have contributed to the richness of his lexical words. That is, Abdul might have done his best to include a higher rate of lexical words in his student-student online interactions. Abdul also expressed that the discussion topics encouraged him to look for new lexical words during his student-student online exchanges.

The discussion topics in student-student online exchanges were interesting and they encouraged me to look for new vocabulary by referring to print dictionaries and internet materials.

On the basis of these qualitative observations, it can be deduced that there were several possible factors that contributed to the lexical richness of students' language in student-student online exchanges. First of all, students put more effort into topic vocabulary learning by reading English websites and incorporating new lexical items more in their student-student than in instructor-student online exchanges. Secondly, students benefited from consulting English print dictionaries and online resources to learn new vocabulary and associate them within their student-student online exchanges. Moreover, the topics of student-student online discussion might have influenced students to look for new vocabulary and lexical items and encouraged them to express their thoughts at length and in detail. The willingness to interact in student-student online exchanges should not be overlooked and it can be argued that the more willing to participate the more willing to produce during online interactions.

4.2.1.2. The Lack of Instructors' Interactions

Another factor, which might have affected the rates of students' lexical density in the present study, can be attributed to the lack of instructors' interactions during instructor-student online exchanges. Anwar in his interview below explained how the delay in his instructor-student online exchanges inhibited his interactions.

The main difference between my student-student and instructor-student online exchanges is that in student-student interactions, students interact with me rightaway or on the same day. But in instructor-student interactions, my instructor interacts with me after a week or two. So, the instructor takes longer time to interact with my discussions in the online discussion forum.

From Anwar's experience with instructor-student online exchanges, it can be deduced that students did not interact frequently with their instructors and enrich their online interactions with lexical words as much as they did when they interacted with their peers in student-student online exchanges.

4.2.2. Linguistic Accuracy Analysis Results

This section reports qualitative observations to help understand how and why students paid more attention to their linguistic accuracy in instructor-student than in student-student online exchanges.

4.2.2.1. The Presence of the Instructors

Students were found to take care of the linguistic accuracy of their interactions in instructor-student more than in student-student online exchanges. The presence of the instructors encouraged students to pay more attention to the linguistic accuracy of their exchanges. In Example 8 (a) and (b), Mohammed and Musfer did not care of their linguistic accuracy in their student-student online exchanges as they did in their instructor-student online exchanges. Example 8 (a) shows linguistic errors during their student-student online exchanges—the underlined words were coded as linguistic errors. It is interesting to note that Musfer was aware of his linguistic errors but he deliberately ignored correcting them. This can be observed in his closing sentence which he emphasized by using capital letters to show that he was aware of his linguistic errors. This indicates that Musfer was not so much concerned with his linguistic accuracy as with conveying his thoughts during student-student online exchanges.

Example 08
(a)

Student-student Exchange Phase

Topic Students in English language programs have to be taught by both native and non-native speakers. Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Mohammed: yas. I agree. because a teacher who native can make the student and pronounced the stress clearly Also can comunicated with people.

[October 23, 2010 8:23 PM]

Musfer: In my opinion I don't agree with non native speaker because if the student didn't hear pure language from native speaker he will not be able to communicate or master yhe language in perfect way.

And he will make many mastakes in speaking, writing, spelling and prounounciation.

THANK U

MAY BE U WILL FIND SOME GRAMMATICAL MISTAKES PLZ IGNORE IT.

[October 24, 2010 4:55 PM]

Students avoided correcting their linguistic errors perhaps because they had been focusing on content more than form or they did not want to get embarrassed in front of other interlocutors in the forums. It can be argued that because students were interacting with their peers (during the absence of their instructors) they might not have been too much concerned about correcting their language mistakes as long as they were able to convey their messages to each other, as focusing on language corrections might have interrupted the flow of their student-student online exchanges.

Conversely, in instructor-student online exchanges, Mohammed and Musfer were observed to take care of their linguistic accuracy more than when they interacted in

student-student online exchanges. Example 8 (b) shows lower rates of linguistic errors than Example 8 (a) does.

Example 08
(b)

Instructor-student Exchange Phase

Topic	Searching for knowledge using internet is better than using library. Do you agree or disagree with this statement? Please try to discuss why you agree or disagree!
Mohammed:	I agree with this statement because the internet is faster than the library to find information and <u>use</u> <u>a few</u> time with the same <u>benefet</u> from library.
	[December 13, 2010 11:02 AM]
Instructor Adel:	Should we close the traditional libraries and rely solely on the internet?
	[December 13, 2010 11:09 AM]
Musfer:	I think it depends on the time, if you have enough time you can go to the library <u>buyt</u> if you don't you have to use the internet.
	THANK U.....
	[December 15, 2010 9:12 PM]
Instructor Adel:	Are you saying that the internet and traditional libraries have the same features? Many would disagree with you.
	[December 22, 2010 2:29 PM]

This indicates that they were maintaining linguistic accuracy more when they interacted in instructor-student than in student-student online exchanges. This higher attention to linguistic accuracy resulted from the fact that instructors were interacting with their students in the online discussion forums. What Musfer reported in his questionnaire open-ended question supports this attention to linguistic accuracy during instructor-student online exchanges.

The presence of the instructor was important for me in the online discussion forum because it helps the student to avoid syntactical and spellings errors and it enables the student to think deeply.

The presence of the instructors encouraged students' attention to linguistic accuracy in their online discussion forums. Another important observation which can be noted in Example 8 (b) is that Mohammed and Musfer did not reply to their instructor's questions. They avoided answering them because they were concerned with their linguistic accuracy—perhaps they felt that they make mistakes when they take risks in answering them. This linguistic concern indicates that students might have done their best to minimize their linguistic errors by shortening their production to a length about which they felt confident in terms of accuracy and contenting themselves with one posting for each topic they discuss during their instructor-student online exchanges. This brevity of production by students in instructor-student online exchanges limited their language errors and accordingly it increased the rates of their linguistic accuracy in the present study as compared with their student-student online interactions.

Example 09

Instructor-student Exchange Phase

Topic What is your favourite shopping mall?
Talk about your favourite shopping mall and why do
you like it! Please feel free to discuss your
shopping mall!

Instructor My favourite shopping mall is Panda for food, and
Omar: Shubra for clothes. In Panda I can find all I want
in one place and in Shubra, varieties⁶ of clothes
are available for reasonable prices.

[November 30, 2010 5:33 PM]

Abdul: nice shoppings to marketing I agree with you but
there are other places which I more prefer them.

[December 1, 2010 12:56 AM]

Abdul: I prefer to shopping in AL-GHONAIM if I want to
buy food, fish, meat, vegeTable, eggs.
And I prever to shopping in AL-GOBAH if I
wanna to but clothes in general.
This is not mean that these places are the best,
there are others but pesonally I prefer these.
Thank you.

[December 1, 2010 12:53 AM]

⁶ inaccuracy by the instructor

Abdul: I prefer to shop in AL-GHONAIM if I want to buy food, fish, meat, vegeTable, eggs. And I prefer to shop in AL-GOBAH if I want to buy clothes in general. This doesn't mean that these places are the best, there are others but pesonally I prefer these. Thank you
judt fot some corrections

[December 4, 2010 10:38 PM]

Abdul's language performance in the instructor-student online exchange phase was found to reveal interesting observations and his case is discussed in detail below. To start with, Abdul's interactions were found to support the above findings that students' attention to linguistic accuracy was higher in instructor-student than in student-student online exchanges and students corrected their linguistic errors after noticing them. Abdul on several occasions noticed his grammatical and spelling mistakes and repaired them during his instructor-student online exchanges.

Example 9 shows how Abdul repaired his language errors after noticing them during instructor-student online exchanges—the underlined words were coded as errors. It can be observed that Abdul corrected some of his language errors and reposted his online interaction again three days later. He informed other interlocutors the reason why he reposted his online interaction (i.e., *just for some corrections*). From the date of his correction, it can be deduced that Abdul might have got corrective feedback from a more competent person such as his instructor. Some of his peers reported in their interviews that instructor Omar used to give them some language corrective feedback during their FtF class.

Although Abdul's interactions in Example 9 had still some language errors, his attention to linguistic accuracy seemed to increase and this can be attributed to the presence of the instructor in the discussion forum or to the language corrective feedback which was offered by the instructor during FtF class. According to his interview, Abdul reported that he was more careful about his linguistic accuracy when he interacted in instructor-student than in student-student online exchanges.

I was concerned with my linguistic accuracy when I interacted in student-student online exchanges but I was more concerned with language errors

and I paid more attention to the accuracy of my language when the instructor interacted with us in instructor-student online exchanges.

From Abdul's linguistic behaviour, it can be argued that students were more cautious about their language mistakes and they repaired them when they noticed them because of the presence of their instructors.

Example 10

Instructor-student Exchange Phase

Topic What are your opinions about drinking coffee and tea?

Do you like to drink coffee and tea and why? Why do you think drinking too much coffee and tea is not good for health? Please feel free to discuss this topic!

Jamal I think tea is useful because it increases my attention but if I drink its more will make my teeth yellow like smokers so I do not like a tea more .
Thank you

[January 1, 2011 9:46 AM]

Zaman I like coffee too much and it is my favorite drink but tea i don't like it and i know drinking coffee too much it is not good for my healthy and that will causes many trouble to my healthy but i used to drink it every morning

[January 1, 2011 10:08 AM]

Instructor Thanks to all fo⁷ you for initiating the
Omar: discussion.

[January 2, 2011 7:41 AM]

Abdul: I dislike them !!
First :When I look at somehting I always to at both side shining & darkness .

But , when I stared in coffee , I found that there is a big difference between its advantages & disadvantages (i.e. its dangers more than its benefits)

Second: I rarely have coffee , not because anything only I dislike having it.

⁷ inaccuracy by the instructor

Third : All of us know the advantages & disadvantages of having it .

So , I think the more you have , the more diseases you will suffer / face .

Too much coffee is dangerous ,may it causes many diseases , I advise the people whom drinking it so much to reduse as much as they can , and the people whom not drinking it to keep on what they do (to keep far away from) .

summary : it is not good for health.

Sorry for lating , my time is not under my control .

Nice to see you again.

[January 6, 2011 4:58 PM]

Abdul: I dislike them !! editing

First :When I look at somehting I always look at both sides shining & darkness .

[the remainder of the message above was reposted with the same errors and cut because of repetition]

[January 6, 2011 5:03 PM]

In Example 10, Abdul noticed that he did not write the main verb *to at* correctly in the main clause during his instructor-student online exchange. Although he reposted his online interaction after correcting the main verb, a few other errors were still retained in his online interaction—the linguistic errors are underlined. Abdul ignored correcting other linguistic errors in his interaction in Example 10 because he might not have noticed his language errors as his message was lengthy or he might have been focusing on conveying the meaning more than correcting the linguistic error.

What is interesting in Example 10 is that Abdul noticed his language error (i.e., *to at*) and corrected it (i.e., *look at*) after five minutes from his first posting. Similarly, Abdul in Example 11 modified his output by adding a subordinator *where* after he noticed that the clause in his online interaction could not stand as coherent with the context to convey the meaning.

Example 11

Instructor-student Exchange Phase

Topic To improve your English language, you should communicate it with local English people in Saudi private companies, banks, and hospitals.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Abdul: yes I totally agree.
These days we have only the university and some hospitals , we can practice the language .

[December 12, 2010 1:00 AM]

Abdul: yes I totally agree.
These days we have only the university and some hospitals where we can practice the language .

[December 12, 2010 1:02 AM]

Thus, Examples 9, 10, and 11 can show that Abdul's noticing of errors and attention to linguistic accuracy have been increased throughout his instructor-student online exchanges. This development resulted from the presence of the instructor in instructor-student online exchanges. Abdul's interview unveils his linguistic behaviour during his instructor-student online exchanges.

When the instructor interacts with us in the online discussion forum, we have a feeling that he is going to review what we write, and accordingly this encourages us to correct our mistakes and write accurate and complete sentences.

From Abdul's above interview data, it can be argued that the instructor (as the knowledge authority) can influence students to put more effort into producing accurate language during their online interactions in the discussion forums. What Faisal reported in his interview also supports this argument. Faisal reported that he was more cautious

about making linguistic errors when he interacted in instructor-student than in student-student online exchanges.

When I interacted in instructor-student online exchanges I always used to check up my grammar and spelling and made sure that I wrote correctly.

Furthermore, Abdullah's story below gives more support for the finding that students strove to maintain linguistic accuracy in their instructor-student online interactions more than in their student-student online interactions.

When I interacted in instructor-student online exchanges I was paying more attention to my grammar, spelling, and punctuation than in student-student online exchanges. This is because I was aware that the instructor was going to read every post I wrote and was going to interact with my interactions. But in student-student online exchanges, I was not doing that; just writing quickly because I was interacting with my peers. So that I became more cautious about making linguistic mistakes in instructor-student online exchanges and I benefited linguistically from that.

As observed in Abdullah's story, the presence of the instructors encouraged students to pay more attention to the linguistic accuracy of their online interactions, thus they noticed their language errors and corrected them. However, when the instructors did not interact with them, students paid less attention to the linguistic accuracy of their language production. They noticed their language errors but they did not correct them.

4.2.2.2. The Instructors' Corrective Feedback

The instructors' corrective feedback seemed to influence students' linguistic accuracy in instructor-student online exchanges. Some instructors were found to offer their students corrective feedback when they saw their language mistakes during instructor-student online interactions. It was observed that instructors' corrective feedback was offered explicitly during online exchanges in the discussion forums and during FtF class.

In Example 12, instructor Omar provides Zaman with explicit feedback to correct a spelling error. Although Zaman made other errors—the underlined words coded as errors—instructor Omar only provided him with corrective feedback on his spelling of *Mall*. Instructor Omar may have been trying to save Zaman from possible embarrassment, which might have hindered him from participating in the discussion forum, by avoiding drawing his attention to correcting other linguistic errors which he produced. The instructor also suggests to Zaman that he should correct the error by

using a modal verb (i.e., *But I think you should correct*) as a strategy to soften the instruction. After receiving the corrective feedback from his instructor, Zaman, however, did not correct or repost his online interaction with the correction his instructor provided. This may be because of redundancy as the error Zaman made was a spelling one and he might have thought it was not important to repost the online interaction with the spelling correction.

Example 12

Instructor-student Exchange Phase

Topic What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it! Please feel free to discuss your shopping mall!

Instructor My favourite shopping mall is Panda for food, and
Omar: Shubra for clothes. In Panda I can find all I want
 in one place and in Shubra, varieties of clothes
 are available for reasonable prices.

[November 30, 2010 5:33 PM]

Zaman: when i was buy something i go to ASir mole because
 there you can found every things you want and also
 a like the mole which i see many people in it

[December 8, 2010 1:36 AM]

Zaman: i agree with you ,but i think panda is expensive
 in some thing you can found the same thing in
 small market which is sheep also

[December 8, 2010 1:39 AM]

Instructor Ok Zaman. But I think you should correct the
Omar: spelling of the word (Mall).

[December 8, 2010 12:52 PM]

However, it should be pointed out that this explicit corrective feedback by instructor Omar was the only instance of such feedback in the online discussion forums. Other instructors were not found to provide their students with explicit corrective feedback during their instructor-student online exchanges. Nevertheless, it was noted that some instructors provided their students with language corrective feedback during FtF class. Instructor Omar was one of them and he used to provide some grammatical corrective

feedback on his students' linguistic errors during their FtF class sessions. For instance, Talal, one of instructor Omar's students, indicated in his interview that he benefited from the linguistic corrections which the instructor provided during his FtF class.

I feel that my language was improved when I interacted in instructor-student online exchanges. I used to make some grammatical and spelling mistakes during my online interactions such as 'I am agree' but the instructor drew my attention to these mistakes in the face-to-face classroom. So, I benefited linguistically from the language corrections which the instructor provided during instructor-student online exchanges.

As noted in Talal's story, it can be deduced that students made some linguistic mistakes but they did not receive any language corrective feedback during their student-student online exchanges. However, when they interacted in instructor-student online exchanges, they used to have language corrective feedback on their linguistic errors because their instructors interacted with them. Anwar reported in his interview that instructor Ibrahim used to provide him with some corrective feedback about his linguistic errors in instructor-student online exchanges.

The instructor provided me with some language corrections for my grammar and spelling errors which I made during my instructor-student online exchanges.

It should be pointed out that instructor Ibrahim provided his students with language corrective feedback by sending them emails and talking to them in the FtF class (instructor Ibrahim's feedback is discussed in section [6.4.1](#)). Therefore, receiving explicit corrective feedback from the instructors, whether on the forums, via email, or during FtF class, might have encouraged students to pay more attention to their linguistic accuracy in instructor-student online exchanges. Because of this corrective feedback students put more effort into their linguistic accuracy and their linguistic accuracy was increased during their instructor-student online exchanges.

4.2.3. Summary of Qualitative Findings: Students' L2 Performance

To sum up, the qualitative findings were found to be congruent with the quantitative findings presented earlier in this chapter. Students produced more lexical items in student-student than in instructor-student online exchanges. Students' lexical learning in terms of consulting online and print dictionaries, and searching the internet for

vocabulary might have contributed to the increase of the rates of lexical items in student-student online exchanges. On the other side, the lack of the instructors' engagement with their students might have also limited the amount of students' lexical items in instructor-student online exchanges. Because of this lack, students did not participate in instructor-student as frequently as they did in student-student online exchanges and accordingly this might have lowered the production of their lexical density in instructor-student online exchanges.

In terms of the results for linguistic accuracy, students were qualitatively observed to pay more attention to their linguistic accuracy in instructor-student than in student-student online exchanges. The presence of the instructors was found to influence students to pay more attention to the linguistic accuracy of their online interactions by encouraging them to notice and correct their linguistic errors. On the other hand, although students noticed their linguistic errors during student-student online exchanges they did not correct them. It can be argued that because of the absence of the instructors, students were not as concerned with linguistic accuracy as when their instructors were present during their online interactions. Furthermore, it was observed that students' attention to language errors and language correction seemed to increase when students received corrective feedback from their instructors.

Chapter Five: Findings Relating to Students' Social Presence

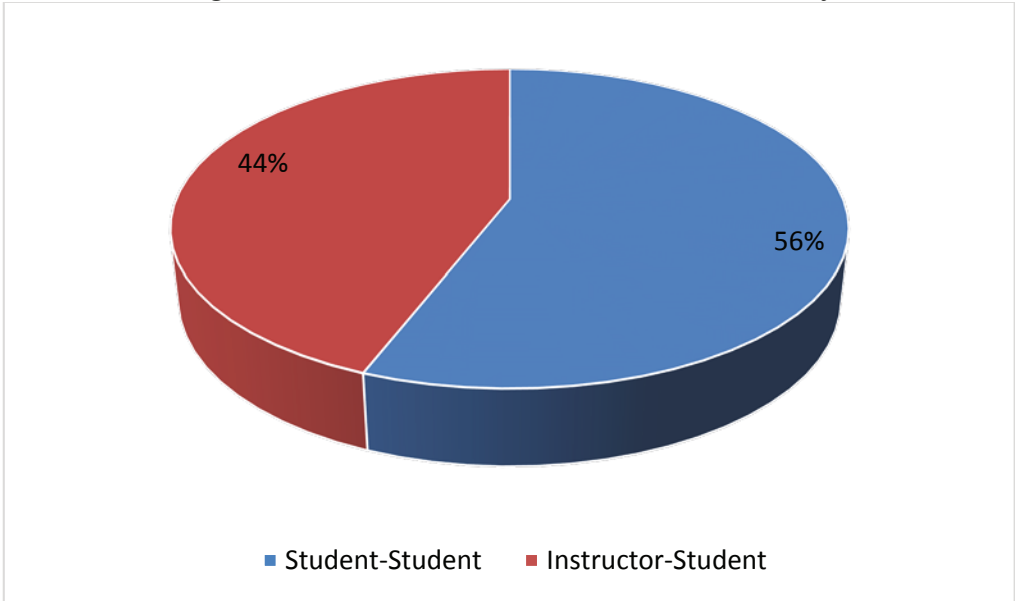
5.1. Quantitative Analysis Results

This section aims at reporting the quantitative results regarding to students' social presence when they interacted in student-student and instructor-student online exchanges. The frequency scores of students' social presence behaviours and density were calculated and entered into SPSS software for statistical analyses. The results of these statistical analyses are reported and discussed in the following sections.

5.1.1. Social Presence Analysis Results

After calculating the density of students' social presence per 1,000 words (see section [3.7.4.14.](#)), the scores of students' social presence behaviours were examined statistically for differences between student-student and instructor-student online exchanges. It was found that the mean score of students' overall social presence density was higher in student-student than in instructor-student online exchanges as presented in Table 16 and Figure 8. Because of the absence of the instructors, students might have felt less shy to project their social presence more frequently when they interacted in student-student than in instructor-student online exchanges.

Figure 8: Students' Total Social Presence Density



The present study examined whether there were significant differences in the degrees of students' social presence between student-student and instructor-student online exchanges. The Wilcoxon test was deemed appropriate and applied because the data were not normally distributed (according to the results of Kolmogorov-Smirnova and Shapiro-Wilk tests).

Table 16: Students' Total Social Presence—Inferential Analysis Results

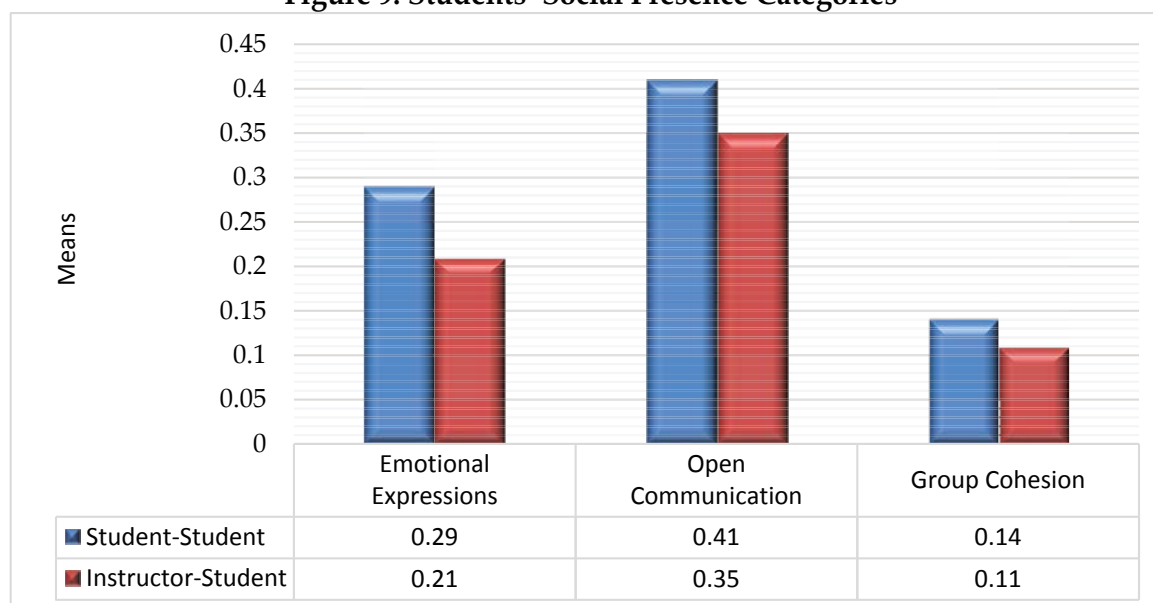
N=49 <i>Online Exchange</i>	<i>M</i>	<i>SD</i>	<i>z</i>	<i>P</i>	<i>Eta</i> ²
Student-Student	.8486	.59647	-2.422*	.015	.11
Instructor-Student	.6741	.42238			

* $p < .05$ (2-tailed)

M= mean; *SD*= standard deviation; *z*= *z* test value; *Eta*²(eta square) =strength of association.

As can be seen in Table 16, there were significant differences ($z=-2.42$; $p=.015$) in the mean scores of students' overall social presence with a large eta square ($=.11$) between the two kinds of online exchanges. This shows that students significantly displayed higher degrees of social presence when they interacted in student-student than in instructor-student online exchanges. The means of the categories of students' social presence density were examined for student-student and instructor-student online exchanges.

Figure 9: Students' Social Presence Categories



As Figure 9 shows, students had higher means of social presence density in the three categories of social presence when they interacted in student-student than in instructor-student online exchanges. This shows that students displayed higher rates of emotional expression, open communication, and group cohesion behaviours in student-student than in instructor-student online exchanges. The likely reason that students had lower rates in the categories of their social presence in instructor-student online exchanges is because of the presence of the instructors. Students may have been shy to display their social presence behaviours frequently when they interacted in instructor-student online exchanges. They might have regarded the presence of their instructors in the forums as the same as in the FtF class and this accordingly prevented them from expressing their social presence in instructor-student online exchanges. However, it should be pointed out that instructors were not Saudi and students might have been sensitive to other cultural backgrounds and as a result they preferred to avoid projecting their social presence frequently with their instructors.

Table 17: Students' Social Presence Categories—Inferential Analysis Results

N=49					
<i>Social Presence Categories</i>	<i>M</i>	<i>SD</i>	<i>z</i>	<i>P</i>	<i>Eta</i> ²
Emotional Expressions					
Student-Student	.2945	.26731	-2.217*	.027	.09
Instructor-Student	.2143	.21021			
Open Communications					
Student-Student	.4129	.34516	-.733	.463	.01
Instructor-Student	.3547	.22758			
Group Cohesion					
Student-Student	.1441	.17051	-1.630	.103	.05
Instructor-Student	.1067	.13320			
* <i>p</i> <.05 (2-tailed)					
<i>M= mean; SD= standard deviation; z= z test value; Eta ²(eta square) =strength of association.</i>					

To examine whether there were significant differences in the means of the categories of students' social presence between the two sets of online interactions, the Wilcoxon test was employed because the data were not normally distributed (according to the results of Kolmogorov-Smirnova and Shapiro-Wilk tests) and the test results are presented in Table 17. As can be seen in Table 17, the present study found that there were significant differences only in the means of students' emotional expressions ($z=-2.22$; $p=.027$) with a medium eta square ($=.09$) between the two patterns of online exchanges. This shows that students displayed emotional expressions more frequently when they interacted in student-student than in instructor-student online exchanges. The absence of the instructors in student-student online exchanges influenced students to feel confident about expressing their emotional expression frequently with their peers in the forums.

To further help understand students' social presence across the two patterns of online interactions, the present study investigated the differences in frequencies of the subcategories of students' social presence between student-student and instructor-student online exchanges.

5.1.2. Results of Social Presence Subcategories

By and large, the means of students' twelve social presence subcategories were found to be higher in student-student than in instructor-student online interactions as can be shown in Table 18. Students displayed higher degrees of social presence when they interacted with their peers than instructors. However, to examine whether the means of students' 12 social presence behaviours were significantly different, the Wilcoxon test was applied because the data were not normally distributed (according to the results of Kolmogorov-Smirnova and Shapiro-Wilk tests). It was found that there were significant differences in four behaviours of students' social presence between student-student and instructor-student online interactions. These significant differences were found in the behaviours of emotions ($z=-3.17$; $p=.002$), humour ($z=-1.98$; $p=.047$), compliments ($z=-2.04$; $p=.042$), and salutations ($z=-2.37$; $p=.023$).

Table 18: Students' Social Presence Density – Descriptive Analysis Results

Online Exchange	Student-Student		Instructor-Student	
N=49				
<i>Social Presence</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1) Emotions*	.1057	.17430	.0502	.10606
2) Humour*	.0084	.02648	.0016	.00800
3) Self-disclosure	.1814	.14891	.1629	.12351
4) Continuing a thread	.2527	.19375	.2180	.15796
5) Quoting from others	.0031	.01262	.0053	.03183
6) Referring to others	.0053	.02399	.0008	.00571
7) Asking questions	.0129	.02630	.0076	.02479
8) Complimenting others*	.0531	.09326	.0296	.05649
9) Expressing agreement	.0878	.08254	.0959	.06031
10) Vocatives	.0206	.06199	.0096	.02738
11) Using inclusive pronouns	.0965	.12951	.0871	.10210
12) Salutations*	.0278	.05554	.0108	.03616
Social presence output density per 1,000 words calculation				
*Significant at $p < .05$ (2-tailed) using Wilcoxon matched-pairs signed-ranks test				

Students displayed higher rates of emotions, humour, compliments, and salutations when they interacted in student-student than in instructor-student online exchanges. These results indicate that students' social presence density in student-student online exchanges was predominantly characterized by expressions of emotions, humour, compliments, and salutations as compared with the density of students' social presence in instructor-student online exchanges. The presence or absence of the instructors in the discussion forums affected the degrees of students' social presence. However, two other reasons should be noted in the present study because they might have contributed to the lower degrees of students' social presence in instructor-student online exchanges. Instructors projected low degrees of social presence when they interacted with their students and this might have caused students to project lower degrees of social presence

in the discussion forums (instructors' social presence is discussed in [chapter six](#)). Students interacted with non-Saudi instructors and this may inhibited them from projecting their social presence frequently because they may have been sensitive to other cultural backgrounds during their online exchanges. This was noted in the present study when Hamdan reported in his interview this confession.

I am sure and I bet to say that if the instructors in this online discussion were of Saudi background, the discussion would have been more comfortable because of the same cultural background than if the instructors were non-Saudi.

It can be suggested that Hamdan was sensitive to other cultural backgrounds when he interacted in with his instructor and this may have influenced the degree of his social presence in instructor-student online interaction.

5.1.3. Analysis Results: Comparison of English Courses

Because students participated from different English courses in terms of their study levels of English language, it was deemed important to examine whether or not the level of English language affected the degrees of students' social presence. A further statistical analysis was conducted to examine whether there were significant differences in the students' social presence across the English courses. The mean differences of students' social presence behaviours were calculated and examined statistically. Because the means were not normally distributed, the Kruskal-Wallis rank test was deemed appropriate and applied to the data.

It was found that there were no significant differences ($p>.05$) in the means of students' social presence behaviours between the discussion forums of students' English courses. Students in their English courses' forums maintained the same degrees of social presence. This indicates that the level of students' English language did not affect the degrees of students' social presence in their online discussion forums.

5.2. Summary of Quantitative Findings: Social Presence

To sum up, some significant differences were found for the students' social presence in the present study. Students statistically projected higher degrees of social presence in student-student than in instructor-student online exchanges. Among the social presence

categories, the category of emotional expression was found to have significant differences between the two conditions of online exchanges. Students displayed higher rates of emotional expressions in their student-student than in their instructor-student online exchanges. The higher degree of students' social presence during student-student online interactions was significantly reflected in the behaviours of expressing emotions, using humour, giving compliments, and engaging in salutations. The presence and absence of the instructors as well as the degrees of their social presence seemed to influence the degrees of students' social presence in the discussion forums.

5.3. Qualitative Analysis Results

This section presents qualitative results in order to understand how students projected higher degrees of social presence when they interacted in student-student than in instructor-student online exchanges. The students' transcripts, questionnaires, and interviews were analysed qualitatively. It should be pointed out that the students' textual features associated with their online interactions (e.g., font types and sizes, colours, upper and lower cases, editing styles...etc) were reported in the results presentation because they were seen as useful for understanding how students projected their social presence.

5.3.1. Results of Expression of Emotions

The present study found that students expressed significantly higher rates of emotions when they interacted in student-student than in instructor-student online exchanges. In Example 13, students during projected their social presence by explicitly expressing their emotions via conspicuous capitalizations, laughing, and emoticon symbols. Abdullah teased his peers when he said that Al Nasser is a poor team and ironically suggested for the team to change its name. *Al Nasser* team corresponds to the word *winner* in English but this team seemed to lose many tournaments over the past years. Naser also made an emphasis in his interaction by highlighting the text to display his emotion.

Example 13

Student-student Exchange Phase

Topic What is your favourite Saudi football team?

Talk about your favourite Saudi team and why do you like it! Please feel free to discuss your favourite Saudi team!

Abdullah: Al-Nasser :(
What a poor team:(That club absolutely indicates
the opposite of what its name means.

[October 12, 2010 6:59 PM]

Ramzy: I BELIEVE THAT THERE WOULD BE NO POORER TEAM MORE THAN AL-NASSER :\$, so that why I DO PRAY AND ASK ALLAH 2 be with them :(.
 10

[October 12, 2010 7:05 PM]

Naser: Hhh
hhhhhhhhhhhhh I agree with you
Al Nasr is supposed to be cancelled from the league because this team fails in every match.
Team Al-Nasser can not be defeated Team AL-Hilal because AL-Hilal is the Club of the Century in Asia

That said

[October 12, 2010 10:40 PM]

From the above example, it can be indicated that students were used to expressing their emotions frequently during their student-student online exchanges. To support this claim, Abdullah in his interview reported that he felt his peers' emotions when he interacted with them during his student-student online exchanges.

When I read my peers' interactions in student-student online exchanges I can feel their emotions from their writing styles to the extent that I can feel what they really feel as they look like they are speaking spontaneously.

From Abdulla's interview data, it can be observed that students exchanged noticeable rates of emotions during their student-student online interactions as Abdullah felt his peers' emotions. It can be argued that because of the absence of the instructors students did not feel shy to express their emotions frequently when they interacted with their peers.

Example 14

Student-student Exchange Phase

Topic What is your favourite Saudi football team?

Talk about your favourite Saudi team and why do you like it! Please feel free to discuss your favourite Saudi team!

Abdul: It is my pleasure to be here discussing with you. :DD

I favor Al-Nasser Club and appreciate the other clubs. Al-Nasser club is considered one of the most famous clubs here in KSA. There is no doubt that Al-Nasser is the first club in Asia which qualified for the first World Club Championship in Brazil in 2000 .

Also , there are many reasons behind my choice ,but being it the first club which qualified for the first World Club Championship in Asia frankly this is enough to me.

welcome again . (happy)

[October 19, 2010 2:26 PM]

Hatem: well I`m not sure if this time is o.k to say that my favorit team is al-hilal but any way, when al-nasser club is mentioned I have to com and fight>>just kidding

[October 23, 2010 6:47 PM]

Abdul: YEAH MY FRIEND HATIM .
 YOU ARE WONDERFULL .
 I AGREE WITH YOU .
 ALNASSER IS THE BEST ONE .
 HUHUHU

[October 24, 2010 12:17 AM]

As can be seen in Example 14, Abdul displayed his emotions in several ways. Abdul expressed his happiness three times in one posting, as indicated by underlined emotions above. Abdul used capitalizations, emoticon symbols, and different colour in his interaction and this might show that he felt free to express his emotions in student-student online interactions. Hatem teased Abdul by saying that he has to come and fight when people talk about Al Nasser league. In the above exchange with Hatem, Abdul

expressed more of his emotions by speaking loudly and laughing with him. From these observations, it can be concluded that students were happy to exchange their emotions frequently with each other when they interacted in their student-student online interactions. The absence of the instructors might have encouraged students to feel that way and frequently express their emotions in the discussion forums.

Conversely, when students interacted in their instructor-student online exchanges, they expressed lower rates of emotions than when they interacted in their instructor-student online exchanges. Example 15 shows that students hardly expressed emotions when they interacted in their instructor-student online exchanges.

Example 15

Instructor-student Exchange Phase

Topic What do you think about learning English using the internet and the Blackboard of King Khalid University?

Do you like learning English by using internet or the Blackboard system and why? Please try to support your discussion!

Jalal: **i like learing by using internet and blackboard,because it is very useful.**

[December 29, 2010 12:47 AM]

Instructor How are they different from the classroom
Adel: lectures?

[December 31, 2010 4:04 PM]

Abdullah: Yes, I agree. I think it's fun to use the internet to learn languages. It changes the daily routine we have in the university.

[December 29, 2010 2:38 PM]

Instructor Do you think in the future there will be no
Adel: classroom lectures?

[December 31, 2010 4:07 PM]

Abdullah: I don't think so. I think classroom lectures will remain forever.

[January 1, 2011 8:27 PM]

As can be found in Example 15, students during their instructor-student online interactions kept exchanging their ideas about the topic but they did not seem to express emotions like smiles, laughing, or happiness as compared with their student-student online interactions. Instructor Omar in his interview reported that he could see his students rarely expressed their emotions when they interacted in instructor-student online exchanges.

I hardly observed that my students expressed emotions when they interacted in instructor-student online exchanges.

Because of the presence of the instructor in the discussion forums students might have taken their instructor-student interactions seriously and avoided expressing emotions frequently. They might have regarded their instructors' online interactions as the same as their FtF interactions and accordingly this limited the degrees of their social presence.

Unlike when Abdullah exchanged posts with his peers in Example 13, he was not observed to express his emotions frequently when he exchanged with his instructor in Example 15. To support this finding, Abdullah reported his experience with the instructor in his interview.

I used to express emotions more when I interacted in my student-student online exchanges than in my instructor-student online exchanges because there were no psychological barriers between the students and their peers.

What Abdullah reported indicates that the presence of the instructor hindered students from expressing their emotions frequently when they interacted in instructor-student online exchanges. Therefore, this inhibition caused students to lower the degrees of their social presence in instructor-student online exchanges.

Example 16 also shows that students did not frequently exchange their emotions when they interacted in their instructor-student online exchanges. As can be seen in Example 16, students took their interactions seriously and avoided expressing emotions when the instructor interacted with them.

Example 16

Instructor-student Exchange Phase

Topic What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it! Please feel free to discuss your shopping mall!

Ameer: Actually, there are many perfect malls, but my favorite center is Al Uthaeem center , because whatever I want is available and the prices is very suitable for me , as well.

[November 30, 2010 1:13 PM]

Instructor Do not you think that AL-Guneim is much better
Ibrahim: than Utheam?

[November 30, 2010 2:17 PM]

Ameer: In fact , I never visit AL Guneam

[December 1, 2010 1:06 AM]

Instructor Try it.
Ibrahim:

[December 1, 2010 7:54 AM]

Ameer: Ok, I will visit it , God willing
Thanks Doctor

[December 4, 2010 12:58 AM]

Naser: you are right AL- Athaim has discount prices and the building in inside is organized in good forms.

[December 4, 2010 10:43 AM]

Majed: I agree with you Mr. Ameer

[December 12, 2010 1:53 PM]

Likewise, Example 17 shows that students did not seem to express their emotions when they interacted with their instructor in the discussion forums. Students in Example 17 were observed to provide their opinions and express their agreements but they were not found to express their emotions when they interacted with their instructor in instructor-student online exchanges.

Example 17

Instructor-student Exchange Phase

Topic What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it! Please feel free to discuss your shopping mall!

Anwar: My favorite center for shopping is Panda center because there is a discount for all things each month, also I can find what I want easily , and it has appropriate price.

[November 30, 2010 6:23 PM]

Ameer: **Mr. Awaadh , Do not you think that Panda is very expensive?**

[December 1, 2010 1:13 AM]

Instructor I do agree with you. I like Panda>
Ibrahim:

[December 1, 2010 7:53 AM]

Instructor where do yoo go shopping?
Ibrahim:

[December 1, 2010 7:55 AM]

Anwar: I think Panda is not expensive , but some of products are expensive because high quality.

[December 1, 2010 5:31 PM]

Naser: I agree with you also there is AL-Gnaim center it has good prices and I find what I want easily .

[December 3, 2010 11:29 PM]

Although students used some editing features such as different font colours and styles in their online interactions this indicates that students may have been using such features to support the expression of their emotions. Students in student-student exchanges were also observed to use some editing features when they interacted in the forums. Example 18 shows how students used these editing features when they expressed their emotions in their student-student online exchanges.

Example 18

Student-student Exchange Phase

Topic Many students think that doing assignments and homework during the weekend should be avoided.

Do you like to study during the weekend and why?
Please try to support your discussion if you agree or disagree with this statement!

Faisal: I think that assignments on weekends must to be avoided because WEEKEND IS SUPPOSED TO BE TIME FOR REST AFTER HARD WORKING ALONG THE WEEK.

[October 25, 2010 7:14 PM]

Ahmed: Fre e space
The assignment in weekend actually give the students real communication with their study . but the student needs to free space in his week , free space to do whatever he want without thinking about his study , his works and what he has to do .
for himself ... !
I disagree (^_*)

[October 29, 2010 7:42 PM]

From example 18, it can be clear that students meant to associate editing features in their texts to express their emotions when they interacted with their peers in student-student online exchanges. Ahmed used emoticons and different colours, and he bolded and underlined some of his words and phrases to express his emotions when he discussed the topic in his student-student online exchanges. Faisal, similarly, used the upper case letters and italic style, and he bolded some of his text phrases to convey his emotions about the topic which was discussed in the forum. This way of exchange among students supports that they used to express their emotions more frequently in their student-student than in their instructor-student online exchanges and these frequent emotions contributed to the higher degree of their social presence in the present study.

With respect to how students perceived student-student online exchanges in terms of the expression of emotions, Naser in his questionnaire told his experience about how he felt when he interacted in the two conditions of online exchanges.

The interactions in student-student online exchanges were full of enjoyment and laughter and I argued with my peers in an informal way. Conversely, after the instructor interacted with us, the interactions in instructor-student online exchanges became full of formality and seriousness.

Naser's interaction experience above indicates that students interacted more emotionally in their student-student than in their instructor-student online exchanges. This suggests that the presence of the instructors influenced students to perceive their instructor-student interactions as formal and avoid expressing emotions frequently in the discussion forums. Another likely reason which can be noted is that instructors in the current study were rarely found to express their emotions when they interacted with their students as Examples 15, 16, and 17 indicated. Overall, students were found to display higher rates of emotions when they interacted in student-student than in instructor-student online exchanges. The means by which emotions were expressed in student-student online exchanges were mostly explicit conspicuous capitalizations, laughing, and emoticons. However, in instructor-student online exchanges, students were found to express lower rates of emotions when they interacted with their instructors. Students might have perceived online interactions with their instructors as similar to their FtF interactions because instructors may have displayed their role in online interaction very much as their role in FtF interaction. That is, instructors in the online interactions were found mostly directing questions to their students and they were rarely found to give their opinions to their students and express emotions with them in the forums. On the basis of the findings above, it can be argued that the presence of the instructors, the interaction role the instructors played, or the students' perceptions of the instructor might have hindered students from expressing their emotions and projecting their social presence in instructor-student online exchanges.

5.3.2. Use of Humor Analysis Results

Students were statistically found to have higher rates of humour in their student-student than in their instructor-student online interactions. Students' humour was found to be teasing and ironic behaviours. Students produced instances of teasing and ironic behaviours more frequently when they interacted in student-student than in instructor-student online exchanges.

Example 19 shows how Aziz and Abdullah projected their social presence using humour by teasing each other during their student-student online exchanges.

Example 19

Student-student Exchange Phase

Topic What are your opinions about eating fast food?

Do you like to eat fast food and why? Why do you think eating too much fast food is not good for health? Please feel free to discuss this topic!

Aziz: Even though fast food is not the healthiest food in the world , its hard to completely eliminate this kind food from my diet .. i know its not concenterd as a nutritious healthy food so i try to eat it once or twice a week .. and i try as much as possible to add some nutritious ingredients to the meal .

[October 19, 2010 9:45 AM]

Abdullah: Well, fast food is always delicious, and I don't know why :D Maybe because I don't eat fast food unless I'm starving, and at that point EVERYTHING seems eaTable:)
I know it will be harmful for me if I keep eating it, but I have it only once or twice a week.

[October 19, 2010 3:30 PM]

Aziz: LOL ;-) .. are subway sandwiches considered as fast food ??? Just wondering !
(I'm sorry dude if i gave you extra homework by replaying to your post ;p)

[October 19, 2010 9:03 PM]

Abdullah: I don't really know, even though I feel healthy when I eat there. I fell it's much healthier than other fast food places.
*you have no idea how sorry u will be :) :)

[October 19, 2010 10:44 PM]

As can be observed in Example 19, Aziz laughed loudly when he read what Abdullah wrote about junk food and he asked him about Subway sandwiches. Ironically, Aziz enclosed an apology between two brackets pretending that he gave Abdullah a hard time to answer this question. After his reply, likewise, Abdullah teased Aziz by challenging him that he is capable of answering any questions he posts in the discussion

forum. These online interactions indicate that students used teasing and ironies when they interacted with their peers in student-student online exchanges. Students' humour in their student-student online exchanges contributed to the higher degree of their social presence in the study.

Example 20

Student-student Exchange Phase

- Topic Students in English language programs have to be taught by both native and non-native speakers.
- Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!
- Anwar: I disagree with that, because the native speakers of a language generally and English language especially will follow right way to teach students , because they are native speakers of the language , so they know their language more than others , also student will be able to achieve the important skills fluently
- [October 23, 2010 8:33 AM]
- Ramzy: I **Definitely** agree with ya :(, however, I think non-native speakers are less beneficial in practicing the English language.
- [October 23, 2010 8:56 PM]
- Abdullah: I personally disagree with you, and agree with the statement. In my opinion, the best way to teach a language is to have native speaker teachers as well as non-native speaker teachers. Native speakers are more beneficial in certain aspects (e.g. speaking and pronunciation). However, non-native speakers know more about the process of "teaching" languages, because they learned the language (they didn't acquire it). They are more familiar with the problems and difficulties that can face students while learning. They also know better the psychology of the students and how to deal with students in a way that keeps them interested in the course. I'm not saying that native speakers don't have these features, but I believe that non-native speakers are more capable of facilitating learning languages.
- [October 23, 2010 2:24 PM]
- Naser: I strongly agree with you . Thank you mr . Abdullah

[October 23, 2010 11:40 PM]

Salem: Yeah my dear, that's in case of English any other
intact language
not in our Multi-Trapped-Twisted Lingual approach
of English .. ^_^

[October 25, 2010 2:25 PM]

Example 20 above also supports the fact that students exchanged higher rates of humour when they interacted with their peers than instructors. Salem, when he was talking about the situation of teaching and learning English language in the Saudi context, humorously described it as a *Multi-Trapped-Twisted Lingual approach*. The smile which he enclosed with his interaction also shows that he was exchanging humorously when he interacted with his peers.

On the basis of previous findings, it can be argued that students used humour more frequently in their student-student than in their instructor-student online exchanges because of the absence of their instructors. This absence might have influenced the frequency of humour and caused students to feel more free to use humour during their student-student online exchanges. In instructor-student online exchanges, students were rarely found to exchange humour instances. Students found it difficult to express humour and might have thought that it was not appropriate to do that when their instructors were present in their discussion forums. In comparison to instructor-student online exchanges, Abdullah reported in his interview that he perceived student-student online exchanges as more informal and he expressed his emotions and humour more easily.

I found it easy to exchange my emotions and humour with during student-student online exchanges, but when the instructor interacted with us in instructor-student online exchanges, the online interactions became formal and I avoided joking and expressing emotions.

What Abdullah reported above gives more support for the fact that the presence of the instructors influenced students to avoid expressing emotions and humour. Conversely, students found it easier to express emotions and humour more frequently when their instructors were absent.

Example 21

Instructor-student Exchange Phase

Topic What are your opinions about drinking coffee and tea?

Do you like to drink coffee and tea and why? Why do you think drinking too much coffee and tea is not good for health? Please feel free to discuss this topic!

Abdullah: Coffee is a thing that I must have everyday. I'm not a big fan of tea, I don't hate it, I just don't like it very much.

[December 14, 2010 6:06 PM]

Aziz: YO! YO! Abadi .. what's up ?? ... yea me too .. tea is good but not as tasty as coffee .. I dunno but some how tea reminds me of the " shiban " quality time ;p ... you know with the fire and the kettle on it .. and their " Baloot " .. not my thing really :D ... how about you ?

[December 17, 2010 8:06 PM]

Instructor Aren't you concerned with health issues that
Adel: drinking coffee may cause?

[December 22, 2010 1:15 PM]

Aziz: *Hello Dr. Adel .. I don't know if I'm not supposed to say this .. but i kinda noticed that u are a big fan of coffee :D ... which is something i can relate to ... I mean the smell of the coffee beans is enough to start ur day with ... and weather its good or bad for your health .. I believe that every thing is bad for ur health when u over dose it ... and coffee or tea are no exception .. especially tea I've heard that tea can protect from cancers .. and maybe later on they will discover that coffee help the hair to grow back " hopefully " who knows ?! :P*

[December 17, 2010 8:01 PM]

Instructor You are right! I do enjoy a cup of coffee every
Adel: now and then, but I DO try to limit it to a few cups a day. About the hair thing, I really doubt it but good luck:)

[December 22, 2010 1:41 PM]

With respect to the instructor-student online exchanges, Aziz's interaction in Example 21 was interesting. He interacted with his peers and instructor in an informal way and he expressed emotions and humour with them. As can be shown in Example 21, not only was Aziz found to express emotions with his classmate Abdullah but he was also found to express emotions and humour with his instructor during instructor-student online exchanges. Aziz agreed with what Abdullah expressed about drinking tea and he humorously described *shiban* (older people in Saudi) when they play *Baloot* (playing cards). Likewise, Aziz described his instructor as *a big fan of coffee* and he humorously described the smell of the instructor's coffee. Aziz ended his interaction by joking with his instructor that the coffee one day might *help* bald people to get their hair back. Aziz's interactions above show that he exchanged emotionally and humorously in instructor-student online exchanges. However, Aziz indicated in his questionnaire that expressing emotions and humour in instructor-student online exchanges was not easy because of the nature of the relationship between the student and the instructor.

Because of the limited social relationship between the student and the instructor in FtF interaction, I did not find it easy to exchange emotionally with my instructor during instructor-student online exchanges.

This indicates that the social relationship between students and their instructors was limited in their FtF classrooms and this relationship might have made it difficult for students to express their emotions and humour when they interacted with their instructors in the discussion forums.

5.3.3. Compliments Analysis Results

In this study, it was found that students complimented and expressed appreciation more when they interacted in student-student than in instructor-student online exchanges. Students had higher rates of compliments and appreciation when they interacted with their peers than instructors. The following examples present qualitatively how students expressed compliments and appreciations when they interacted in the two conditions of online exchanges.

As can be seen in Example 22 (a), Salem and Abdullah during their student-student online exchanges provided their thoughts about the discussion topic. Although

Abdullah appeared to disagree with Salem's opinion he appreciated this opinion as it looks to him as *a convincing perspective*. This shows that Abdullah appreciated what his peers posted during student-student online exchanges although he did not totally agree with their opinions.

Example
22 (a)

Student-student Exchanges Phase

Topic Searching for the meanings of vocabulary in print
English dictionaries is not as good as in
electronic English dictionaries.

Do you agree or disagree with this statement?
Please try to discuss why you agree or disagree!

Salem: I'm with paper dictionary.. I think the paper
dictionary is more serviceable than electronic
dictionary
Because when look up for a word in a paper
dictionary
You must see more than what you are looking for..
So that you will be rich in vocabulary..
Not to mention that the magic of paper is more
effective on student than "The Digit"

[October 16, 2010 2:12 PM]

Abdullah: Even though you have a convincing
perspective, but I have to disagree with what you
said:). Electronic dictionaries are more useful,
especially for students of English.

We, as students of English, need to get
meanings, pronunciation of words, examples,
antonyms and synonyms faster than anybody else.
When we translate, for instance, we don't have
much time to keep searching for words' meanings.

When we want to get the pronunciation of a
specific word, electronic dictionaries are so much
better, especially those with human pronunciation
of words. So, I believe that electronic
dictionaries are more helpful than paper
dictionaries.

[October 16, 2010 2:48 PM]

Likewise, after the interactions between Salem and Abdullah in Example 22 (a), they started to exchange compliments with each other on the same topic. Salem in Example 22 (b) appreciated Abdullah for his point of view although that he still did not totally

agree with what Abdullah expressed in terms of the print and electronic dictionaries. Abdullah and Salem during their student-student online exchanges kept complimenting each other while they were giving different thoughts about the topic as can be seen in Example 22 (b). This indicates that students were expressing compliments and appreciations frequently in their student-student online exchanges. Students felt happy to share their thoughts and compliment each other when they interacted in student-student online exchanges and this can be attributed to the absence of the instructors.

Example
22 (b)

Student-student Exchanges Phase

Topic Searching for the meanings of vocabulary in print
English dictionaries is not as good as in
electronic English dictionaries.

Do you agree or disagree with this statement?
Please try to discuss why you agree or disagree!

Salem: **You got a point dear Abdullah..
Especially in pronunciation..
But I think the paper dictionaries make us - as
students - used to the books
I mean being in love with the Books .. And nothing
more lovely than dictionaries
It's not matter of "getting what you looking for
quickly"..
it's always a matter of .. how effective what you
have got ..
To make it clear..
If you just got a meaning of a word by using
Electronic dictionaries..
How much do you think it will stuck in your mind..
?
two minutes .. three .. or maybe one hour but
surely you will forget after all ..
contrary to the word that you got it from paper
dictionaries ..
you may spend long time to find it yeah that's
right .. and that what will make it UNFORGETABLE
..
and remember .. Easy come, easy GO..
thanks my friend ^_^**

[October 16, 2010 7:17 PM]

Abdullah: You're right. This is one advantage gained from
using paper dictionaries, but there is something
called "my personal dictionary" or "the user's
dictionary" and it's almost found in every

electronic dictionary. You can save words that you looked for and memorize them later.

I believe that technology, in general, facilitates learning languages.

Thanks Salem :)

[October 16, 2010 8:49 PM]

Salem: **well ... that's great feature dear**

but believe me .. Paper one is something different something (real)

I believe in technology as a second hand help .. it ,of course, will facilitates the whole learning process

Thanks Abdullah .. ^_^

[October 17, 2010 7:28 PM]

Ameer: I agree with you salem
Thanks

[October 18, 2010 1:13 PM]

Salem: Thanks my dear .. ^_^

[October 18, 2010 5:46 PM]

In addition to Abdullah's and Salem's online exchanges in Example 22 (b), it was further found that Ameer and Salem exchanged compliments with each other. Ameer agreed with what Salem said and appreciated his thought and Salem complimented Ameer for sharing them his thoughts. From Salem's and Abdullah's online interactions above, it can be seen that students expressed compliments and appreciations frequently during their student-student online exchanges even if they did not agree with what their peers posted in the discussion forums. It is interesting to observe that not only did students participate and express compliments during their student-student online exchanges but they also did their best to share their ideas with their peers and try to convince them that they have strong standpoints. It can be argued that because of the absence of the instructors in student-student online exchanges students felt less shy to share and argue for their ideas and exchange compliments frequently with other interlocutors. Therefore, expressing compliments and appreciation in student-student online exchanges encouraged students to interact and share their own thoughts in the online

discussion forums. It is also interesting to observe that students during their student-student online exchanges in Example 22 (a) and (b) applied different editing features such as font colour and style and punctuation. This shows that students have been also using these features to help them express their emotions and support the projection of their social presence as previously found in Example 14. On the basis of the above findings, it can be concluded that the frequency of compliments, appreciation and emotions which students used during their student-student online exchanges contributed to the higher degree of their social presence in the present study.

Example 23

Instructor-student Exchange Phase

Topic The University has to give good students in English language program some opportunities to travel to Europe or Australia for developing their English.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Naser: I think the University should be provide the textbooks to the students free because some students do not have enough money , some students live single in Abha so they pay to the flat who live them .

[December 25, 2010 1:28 PM]

Anwar: I think that university should provide students with books ,because some of them don't have enough money to buy books especially which are more expensive,where they are living alone and have a lot of other financial commitments such as their apartment's rent.

[December 25, 2010 3:05 PM]

Ameer: yeah, great response

[December 25, 2010 10:46 PM]

Ameer: In think that the University should buy the textbooks to the students OR it should increases the salary in order to enable them to buy these books

[December 25, 2010 10:43 PM]

Saif: I agree with this statement, because some students haven't enough money to buy some expensive books. English textbooks should be provided free of charge for all students during their study in the University. Because of university can buy and provide free books for students.

[December 26, 2010 12:38 AM]

On the other hand, it was found that students expressed compliments less frequently in instructor-student than in student-student online exchanges. Students were infrequently observed to express compliments and appreciation when they interacted in their instructor-student online exchanges. As has been argued earlier, this finding can be attributed to the instructors in terms of their presence and the roles they played when they interacted with their students in instructor-student online exchanges.

For example, although students exchanged their ideas with each other as can be seen in Example 23 above, Ameer was the only one who expressed his compliment (*great response*). This shows that students did not express compliments frequently when they interacted in their instructor-student online exchanges. Although the instructor did not participate in this topic (as shown in Example 23), the presence of the instructors may still have had an influence on the expressions of students' compliments. During instructor-student online exchanges, students may have been focusing on reading the posts of their instructors and answering their questions and this accordingly limited the rates of their compliments and lowered the degrees of their social presence.

More examples are reported below to support the finding that students were rarely found to express compliments when they interacted in their instructor-student online exchanges.

Example 24
(a)

Instructor-student Exchange Phase

Topic What do you think about learning English using the internet and the Blackboard of King Khalid University?

Do you like learning English by using internet or the Blackboard system and why? Please try to support your discussion!

Zaid: Blackboard is useful for students in the discussions, homework assignments and is also easy to use, but the only problem is the availability of the Internet.

[December 27, 2010 5:38 PM]

Instructor Adel: Are the student benefiting from the Blackboard the way they should? What can we do to make it better?

[December 27, 2010 11:28 PM]

Abdullah: Yes, I agree. I think it's fun to use the internet to learn languages. It changes the daily routine we have in the university.

[December 29, 2010 2:38 PM]

Instructor Adel: Do you think in the future there will be no classroom lectures?

[December 31, 2010 4:07 PM]

Abdullah: I don't think so. I think classroom lectures will remain forever.

[January 1, 2011 8:27 PM]

As can be seen in Example 24 (a) and (b), students were not found to express compliments or appreciation when they interacted in their instructor-student online exchanges. Students exchanged their opinions and expressed their agreements but they did not express compliments or show appreciation of what other interlocutors discussed in the forum.

Example 24
(b)

Instructor-student Exchange Phase

Topic What do you think about learning English using the internet and the Blackboard of King Khalid University?

Do you like learning English by using internet or the Blackboard system and why? Please try to support your discussion!

Hassan: **I think learning ,anything not only English, by using Internet is very useful and enjoyable at the same time. I really like it because when I use internet I didn't feel that I'm learning like when I use books or when I study at the class. I think**

internet and BB is very important for the students who can use internet.

[December 30, 2010 4:05 PM]

Instructor Adel: How can we make the BB system more interesting and more useful?

[January 1, 2011 11:37 AM]

Hussein *I think learning English by using Blackboard is best,because the student hears explanation the teacher and understands every thing hears from teacher.*

[December 31, 2010 10:24 PM]

Instructor Adel: Do you think Blackboard lessons are enough for the students and they can replace classroom lectures?

[January 1, 2011 11:39 AM]

Hassan: It is already useful but to be more interesting, it depends on the student himself. Some students didn't like using internet at all, it is hard to make it interesting for them.

[January 3, 2011 11:37 PM]

Students in Example 24 (a) and (b) were observed to focus on answering the questions of their instructor rather than on giving compliments to other interlocutors. They avoided expressing compliments and appreciation because of the presence of their instructor. The presence of the instructors influenced students to focus more on the exchanges of their instructors than on the exchanges of their peers. That is, students put more effort into answering the questions of their instructors and they did not exchange compliments with their peers or project other social presence behaviours. Another likely reason is that because the instructor in Example 24 did not compliment his students or provide them with any feedback this might have influenced them to avoid using compliments during their instructor-student online exchanges.

However, although instructor Omar was found to give compliments and express his appreciation when he interacted with his students in instructor-student online exchanges, students were not found to express compliments or show appreciation as can be shown in Example 25.

Example 25

Instructor-student Exchange Phase

Topic To improve your English language, you should communicate it with local English people in Saudi private companies, banks, and hospitals.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Zaman: yes i agree because if you don't use what you learn you can not developed your language

[December 8, 2010 1:43 AM]

Instructor Ok Zaman. Go ahead and try to practice your English wherever you go.

Omar:

[December 8, 2010 12:59 PM]

Jamal: we will develop our language if we communicate with the people who speak English in the hospital and other places . When I went to Assiri Hospital I feel very happy because I used my language and I got many words .

[December 8, 2010 5:56 PM]

Instructor A very positive attitude, Jamal. I hope other students have the same feelings like yours.

Omar:

[December 10, 2010 9:29 PM]

Fayez: **Best way to improve your English language is to communicate with native speakers and speak more and more.**

[December 9, 2010 2:11 AM]

Instructor Very good Fayez. What about non-native speakers like your teachers and other foreginers who speak English? Don't you think communicating with them in English helps?

Omar:

[December 10, 2010 9:31 PM]

Students in Example 25 may only have focused on sharing their ideas with their instructor and did not appear to exchange compliments with other interlocutors. It can be deduced that because of the presence of the instructors students may have preferred to be complimented by their instructors when they shared and posted their opinions in instructor-student online exchanges. On the basis of the above findings, students were

barely found to express compliments when they interacted with their instructors. The presence of the instructors hindered students from expressing compliments although some instructors did compliment their students during their instructor-student online exchanges. Students put more effort into sharing their ideas with their instructors and answering their questions so that they may receive compliments from them. Focusing more on the interactions of the instructors affected students to avoid interaction with other interlocutors and express compliments in the discussion forums. Furthermore, it was seen that instructors (with the exception of instructor Omar) almost never projected their social presence (i.e., emotions and compliments) when they interacted with their students. This lowered the rates of students' emotions and compliments and the degrees of their social presence in instructor-student online exchange. It can also be argued that because instructors did not project their social presence frequently when they interacted with their students, students did not project their social presence.

5.3.4. Salutations Analysis Results

It was found that using salutations was significantly higher in student-student than in instructor-student online exchanges. Students exchanged greetings and closures more frequently when they interacted with their peers than instructors. Students' salutations were examined qualitatively in the two conditions of online exchanges and the results are reported and discussed as follows.

As can be seen in Example 26 (a), students were found to exchange greetings (e.g., *Hi/Hello everybody*) and closures (e.g., *Thank you*) when they interacted in their student-student online exchanges. This exchange shows that students were projecting their social presence with their peers. Using greetings and closures during student-student online exchanges indicates that students maintained group cohesion. Marwan for example not only greeted his peers (*Hi everybody*) and closed his conversation (*Thank you*) but he also showed his peers that he shared an idea (*That is my opinion*) and was willing to read their own ideas. This can show that students were concerned with the solidarity of other members to share their ideas and contribute to the discussion during their student-student online exchanges. Students found it necessary to exchange

greetings and closures with other members so that they could help each other to sustain their group cohesion during student-student online exchanges.

Example 26

(a)

Student-student Exchange Phase

Topic Many students think that doing assignments and homework during the weekend should be avoided.

Do you like to study during the weekend and why?
Please try to support your discussion if you agree or disagree with this statement!

Marwan: Hi everybody ,

when I was in a school I cannot do anything related to studying during the weekend because the student needs to the rest , or what the benefits from the weekend . but now we are forced to do it during the weekend .

I think the assignments should be not during the weekend because it is the student's vacation and he has to take some rest as I told to begin his week very lively.

That is my opinion

Thank you

[October 26, 2010 6:45 PM]

Ramy: Hello everybody :

when i was studying in school I was really wait weekend eagerly becuse the weekend for me it consider the time of rest , playing and break . Also now I like the weekend and my homework or assignment i do it during the week not in weekend . becuse the weekend is the time to take break not to work .

THANK YOU .

[October 27, 2010 6:24 PM]

Likewise, students in Example 26 (b) were found to exchange salutations when they interacted in their student-student online exchanges by opening their interactions with a greeting like *Hello all* and *peace be upon you*. This indicates that students were concerned with the solidarity of their student-student online exchanges. Not only were students observed to exchange greetings but they also were found to express emotions such as

emoticons as seen in Example 26 (b). Aziz was also observed to use the inclusive pronoun *us* (*lets see*) when he exchanged with his peers. This also supports that students were concerned with their group cohesion when they interacted with their peers. The exchanges of students' group cohesion behaviours and salutation exchanges in particular contributed to the higher degree of their social presence in student-student online exchanges.

Example 26
(b)

Student-student Exchange Phase

Topic Many students think that doing assignments and homework during the weekend should be avoided.

Do you like to study during the weekend and why?
Please try to support your discussion if you agree or disagree with this statement!

Aziz: Hello all ,
 Hmm , lets see .. homeworks during the week ends
 .. I don't like the idea of homework :) at all ..
 let alone doing it during the weekends , the only
 time where i can find some time to relax and watch
 movies with out being disturbed by school work ;p
 ... However I know that i need every mark to get a
 high GPA so I try to do homework during the week
 days .. or at least at Fridays .. coz weekends
 are supposed to be fun and joyful so we can get a
 fresh start on Saturdays ...
 Don't you agree :-) ?

[October 29, 2010 7:52 PM]

Feras: peace be upon you
 well, I don't like doing homeworks during the
 weekend since I like to be free during the
 weekend.

[October 30, 2010 8:48 PM]

From Examples 26 (a) and (b), it can be argued that because of the absence of the instructors, students used salutations, especially informal greetings such as *hi* and *hello*, more frequently in student-student online than in instructor-student online exchanges. Example 27 shows that students used other greetings such as *good evening* and *how are you* in their student-student online exchanges. This gives more support to the claim that students were concerned with the solidarity of their peers. Naser's repetitious *i* in *hi* in

Example 27 indicates that he was greeting his peers in a more informal way and that he was expressing his emotions in student-student online exchanges. Naser felt less shy to display his social presence in this way. He used the blue font colour because it was the same colour of the league he supported and argued for. Using this font suggests that he was projecting his social presence with his peers.

Example 27

Student-student Exchange Phase

Topic What is your favourite Saudi football team?

Talk about your favourite Saudi team and why do you like it! Please feel free to discuss your favourite Saudi team!

Salem: To be honest
I'm not interesting in sport at all
But I may understand why Al-Hilal is such a good
team in Saudi Arabia

[October 12, 2010 7:16 PM]

Naser: Hi Good evening how are you you know what my favorite club in our country ?
My favoriet club is (The Asian Century Club)
what is it ?
It is AL-Hilal Club because it has a 6 of Asians
Champions cups .
Al-Hilal is the best club in the Saudi Arabia and
it is the best in Asia and Arab world

[October 12, 2010 10:54 PM]

Anwar: In fact, I agree with my friend Salem , I dont like any team , and Iam not intersting in sports..Thanks.

[October 13, 2010 6:14 AM]

Naser: hiiiiiiiiiiiiiiiiiiii
the next week on wednesday will be AL - HILAL VS
THOBAHAN ,
You will see the match and you can
see the qualified of AL-HILAL to the final of
Asian champions league

[October 13, 2010 6:56 PM]

However, when students interacted in their instructor-student online exchanges, they had lower rates of salutations than in their student-student online exchanges. The extent

to which students used salutations in their instructor-student online exchanges was analysed qualitatively. It was found that students rarely used salutations when they interacted in their instructor-student online exchanges. Contrary to what was found in student-student online exchanges, students were found to exchange greetings and closures infrequently when they interacted with their instructors. As can be seen in Examples 28 and 29, students were hardly observed to open their interactions with greetings and close them with closures when they interacted with their instructors. The infrequent greeting and closure exchanges resulted in the reduction of the degrees of students' social presence in instructor-student online exchanges.

Example 28

Instructor-student Exchange Phase

Topic The University has to give good students in English language program some opportunities to travel to Europe or Australia for developing their English.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Abdullah: Yes I agree. That would be amazing, it would also encourage students to put more effort into learning.

[December 29, 2010 1:09 PM]

Feras: Yes, I would like to travel to any country which its language is English such as united kingdom or America. I think that will help me to improve my English language better than if I had just study English in the university because I will be using and dealing by English language for many time in a day.

[December 30, 2010 3:27 PM]

Instructor What kind of problems do you expect to face
Adel: overseas?

[December 31, 2010 4:14 PM]

Aziz: I would love to travel to improve my English with the college .. I absolutely agree with the statement .. student will improve their english as well as having tremendous priceless experiences...

[December 30, 2010 3:59 PM]

Instructor Do you think our students might experience a
Adel: cultural shock in such programs overseas? If so,
what should we do about it?

[December 31, 2010 4:20 PM]

Students avoided using salutations frequently in instructor-student online exchanges because of the presence of their instructors. Another likely reason which can be argued in the present study is that students might have regarded exchanging greetings such as *hi*, *hello*, and *how are you* as not appropriate in their instructor-student online exchanges because it can imply that they are interacting informally with their instructors.

Example 29

Instructor-student Exchange Phase

Topic What are your opinions about drinking coffee and tea?

Do you like to drink coffee and tea and why? Why do you think drinking too much coffee and tea is not good for health? Please feel free to discuss this topic!

Anwar: In fact I like to drink tea and coffee sometimes but I like tea more than coffee because it contains antioxidants also tea has less caffeine than coffee. Tea may reduce your risk of heart attack and stroke. . Tea gives energy ,and I feel relax when I drink it. Finally we must take two cups of coffee or tea at most on a day because drinking too much causes a lot of problems such as exhaustion, fatigue and addiction..

[December 11, 2010 1:56 PM]

Ameer: Mr. Anwar , I advise you to drink green tea and coffe with saffron,
because they are very useful for your health, try it as soon as possible.

[December 11, 2010 6:43 PM]

Anwar: Thank you Mr. ameer for your advice ,and I will try

[December 11, 2010 7:52 PM]

Instructor I agree with you.
Ibrahim:

[December 12, 2010 8:43 AM]

Instructor I drink a cup of Turkish coffee every morning. I
Ibrahim: think drinking too much tea and coffee is harmful
to health. It is better to drink fresh fruit
juice.

[December 12, 2010 8:40 AM]

Anwar: I strongly agree with you

[December 12, 2010 12:03 PM]

Students did not use formal greetings such as *Dear* in their online exchanges. This can be attributed to the cultural language differences between Arabic and English. Students might not have yet learnt English pragmatics in terms of differentiating between formal and informal English greetings in their social interactions and this caused them to avoid using *hi* and *hello* when their instructors interacted with them. Moreover, using formal Arabic greetings (such as *peace be upon you*) were not found in instructor-student online exchanges. However, one observation (*peace be upon you*) was found in Feras's student-student online exchanges in Example 26 (b) above. This shows that Feras used his first language greeting but translated into English context to accommodate his English online interaction. This use of first language greeting can show that Feras was projecting his social presence in a more close way when he interacted with his peers. However, it can be suggested that students did not think it was appropriate to use Arabic greetings during their online interactions with their peers and instructors because they were using their English in the current study.

5.4. Summary of Qualitative Findings: Social Presence

To sum up, the results of qualitative data support the quantitative findings by showing that students had higher degrees of social presence when they interacted in student-student than in instructor-student online exchanges. Students expressed higher degrees of emotions, humour, compliments, and salutations with their peers than instructors. Conversely, students infrequently expressed emotions, humour, compliments, and salutations when they interacted in their instructor-student online exchanges. The absence and presence of the instructors influenced the degrees of students' social

presence. Students expressed lower rates of emotions in instructor-student online exchanges because they may have been shy about using them frequently when they interacted with their instructors. Students also avoided expressing humour, compliments, and salutations with their instructors and this can be attributed to the presence of the instructors or to the extent of their social presence. Students might have regarded expressing humour and greetings frequently as not appropriate as they may show less degree of respect when interacting with their instructors. The language and cultural differences between Arabic and English might have also prevented students from using English or Arabic greetings when they interacted with their instructors in the discussion forums.

Chapter Six: Findings Relating to Instructors' Interactions

This chapter reports the results of the transcript analysis of instructors' interactions in terms of how instructors interacted and projected their social presence. It also reports the results on how instructors influenced students' L2 performance and social presence. The results of instructor interviews were reported to further help understand how instructors played their roles when they interacted online with their students in the discussion forums.

6.1. Results of Instructors' Online Interactions

After coding the interactions of instructors (according to the coding template in section 3.6.), their interactions in instructor-student online exchanges were analysed quantitatively. As can be seen in Table 19, the frequencies of their discourse functions are presented and contrasted with each other to help understand how instructors displayed their interactions in instructor-student online exchanges.

Table 19: Instructors' Discourse Functions in the Forums—Frequency Scores				
Analysis Level	Discourse Functions in the Forum	Instructor Ibrahim	Instructor Adel	Instructor Omar
Linguistic	Negotiations	1	23	5
	Feedback	1	10	14
	Opinions	4	3	3
	Questions	5	36	5
	Agreements	2	1	3
	Emotions	1	2	2
	Compliments	0	2	24
	Suggestions	4	0	3
	Greetings	0	0	0
	Total	18	77	59

According to Tables 19 and 20, from the linguistic and participatory results, it was found that there were differences in the frequency scores of instructors' interactions in terms of discourse functions and rates of participation. This indicates that the three instructors interacted differently from one another and they played different roles when they

interacted with their students. It can be argued that because of the individual differences of the instructors in the present study, it is possible that they showed different roles.

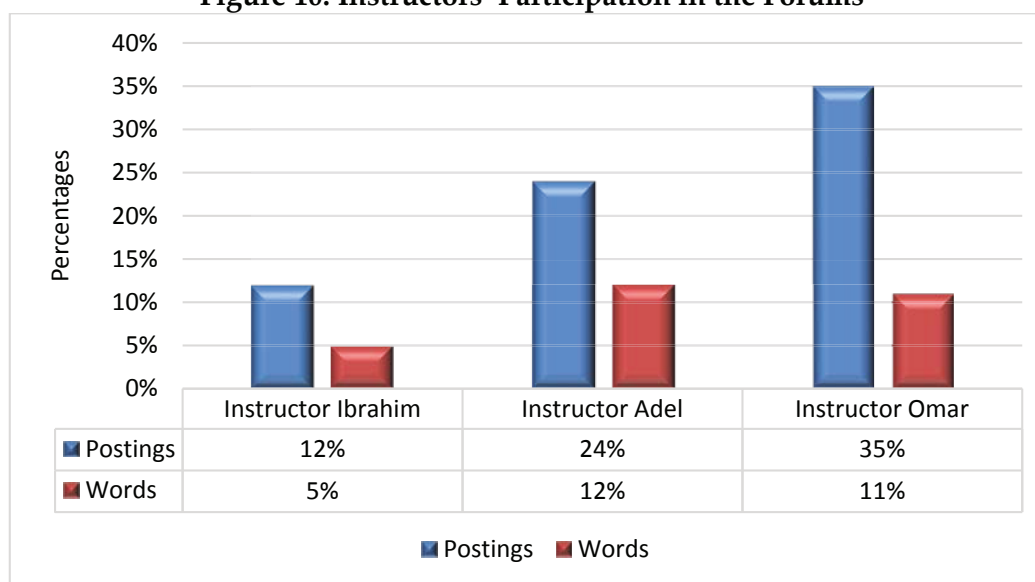
Table 20: Instructors' Participation in the Forums—Frequency Scores

Analysis Level	Online Interaction	Instructor Ibrahim	Instructor Adel	Instructor Omar
Participatory	Number of posts in the forum	10	54	24
	Number of words in the forum	120	840	382

Instructor Ibrahim held a high administrative position in the faculty and this may have affected his interactions as he participated with his students less frequently than other instructors.

A cross-comparison analysis between the three instructors was conducted and the rates of their discourse functions, participation, and social presence, in comparison with their students' rates, were contrasted by graphs.

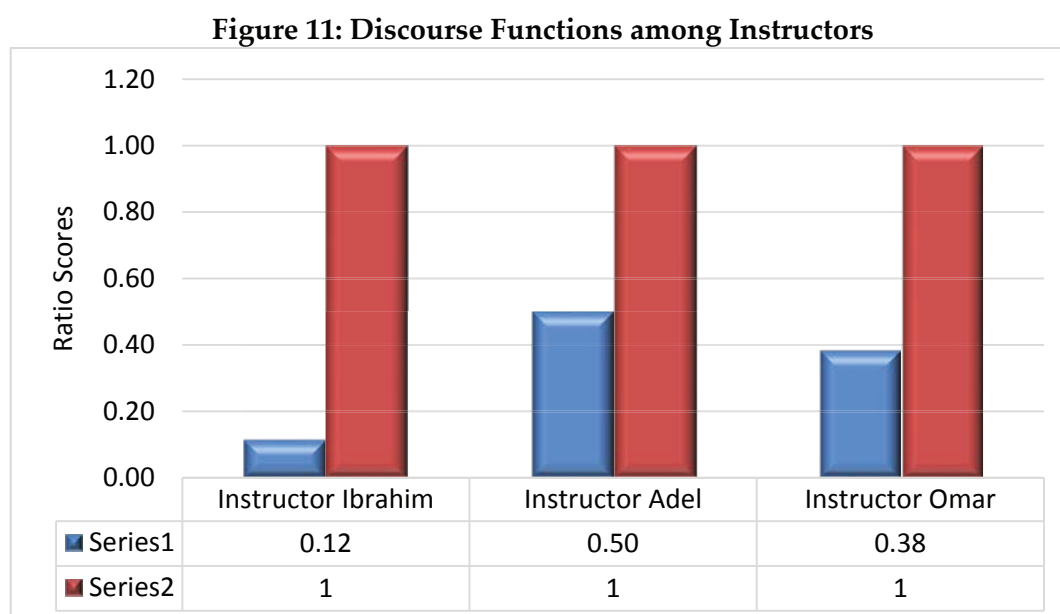
Figure 10: Instructors' Participation in the Forums



In terms of participation rates, instructors were found to produce different rates of postings and words when they interacted with their students. As can be seen in Figure 10, instructor Omar was found to have the highest participation rate of postings among other instructors. This indicates that he interacted with his students more frequently

than other instructors. Instructor Ibrahim, on the other hand, was found to have the lowest participation rates in terms of postings and words among instructors. This shows that he interacted with his students less frequently than other instructors. By looking at instructor Adel's participation rates, it can be observed that he seemed to have a higher rate of postings than instructor Ibrahim but a lower rate of postings than instructor Omar. Given that the three instructors produced different rates of participation, the present study further explored their interactions in terms of discourse functions and social presence to help understand their interactions and the roles they displayed when they interacted in instructor-student online exchanges.

As can be seen in Figure 11, instructor Adel was observed to have the highest ratio score of discourse functions among other instructors. This shows that he engaged in online interaction more than other instructors. Instructor Ibrahim, on the other hand, was observed to have the lowest ratio score of discourse functions among other instructors in the study. He interacted with his students less frequently than other instructors. Lastly, instructor Omar was found to have higher ratio score of discourse functions than instructor Ibrahim but he had lower ratio score than instructor Adel.



To examine social presence, instructors' social presence density was calculated as compared with the density of students' social presence in instructor-student online exchanges. As can be shown in Table 21, instructors projected different degrees of social

presence when they interacted with their students in instructor-student online exchanges; namely, instructor Ibrahim (4%), instructor Adel (31%), and instructor Omar (45%). The reasons why they projected different degrees of social presence may be because of their individual differences, their perceptions of interaction between the student and the expert, or may be because of other reasons such as having high load of teaching or school commitments or because of a culture factor. Instructor Omar had the largest density score of social presence among the instructors. He was the youngest instructor in the present study and this might have influenced the degree of his social presence in instructor-student online exchanges. That is, the age factor can play a major role in terms of determining the distance and shaping the social presence between the instructor and the student in social interactions.

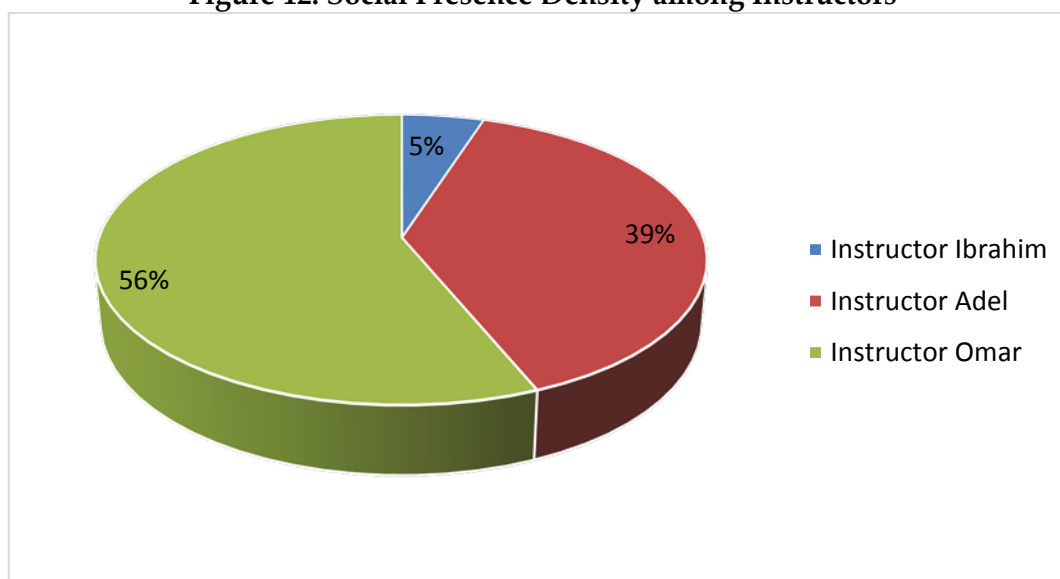
Table 21: Instructors' Social Presence Density in the Forums

Analysis Level	Social presence behaviours	Instructor Ibrahim	Instructor Adel	Instructor Omar
Social	Social presence density per 1, 000 words in the forum	9	133	93
	Percentage	4%	31%	45%

The ratios of instructors' social presence density in Table 21 were calculated and presented graphically to help understand how the three instructors displayed their social presence in instructor-student online exchanges. As can be seen in Figure 12, instructor Omar was found to project the highest density of social presence (56%) among instructors. Instructor Adel displayed a higher density of social presence than instructor Ibrahim but less than instructor Omar. Instructor Ibrahim, however, was found to have the lowest density of social presence in the present study. As explained earlier, instructor Ibrahim held a high position in the faculty and this may have hindered him from projecting his social presence. The difference of the age range between instructor Ibrahim and his students was larger (27.5 years) than the difference of the age range between instructor Ibrahim and his students (14.5 years). This small age difference

might have enabled instructor Omar to project social presence with his students more easily and frequently than other instructors.

Figure 12: Social Presence Density among Instructors

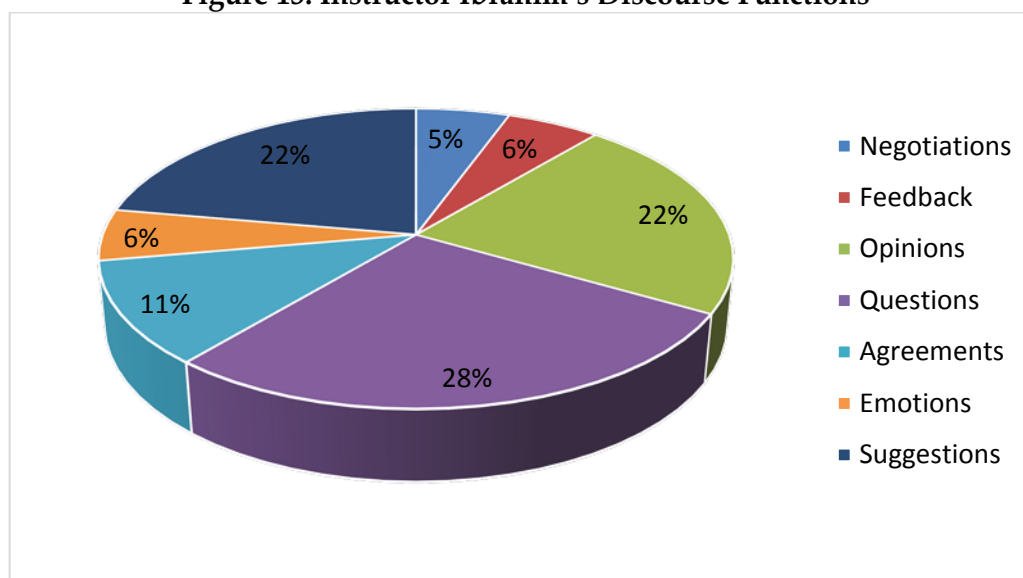


To better understand how instructors differed from one another in the present study, their interaction discourse functions and social presence density were investigated individually in the following sections.

6.1.1. Results of Instructor Ibrahim's Interactions

By looking at the discourse functions of instructor Ibrahim in Figure 13, it can be found that he mostly used to engage in directing questions, giving opinions, and providing suggestions when he interacted in instructor-student online exchanges. These functions show that he engaged in interactive exchanges with his students although he displayed a small rate of participation (12%). Instructor Ibrahim seemed to express a moderate rate of agreements and this indicates that he was projecting social presence by showing his recognition to his students' contributions during instructor-student online exchanges. Engaging in negotiations, giving feedback, and expressing emotions were found to be the least frequent discourse functions displayed by instructor Ibrahim. Importantly, instructor Ibrahim was not found to exchange greetings or compliments with his students. This can explain why he had smaller rates of participation than other instructors.

Figure 13: Instructor Ibrahim's Discourse Functions



Therefore, instructor Ibrahim, had the smallest rate of participation, the lowest rate of discourse functions, and the least degree of social presence as compared with other instructors. Because instructor Ibrahim's students were studying in the final year of their B.A. program, he might have avoided interaction with them frequently, so that they could benefit more from participation and interaction in their online discussion forum. The fact that instructor Ibrahim had a high administrative position might have also affected the way he participated and interacted with his students. However, with regard to students' L2 learning, the interactions of instructor Ibrahim were found to be helpful for students to develop their language by learning new grammatical features. A case of L2 learning was analysed and the results are reported in the following section.

6.1.1.1. Learning New Grammatical Features

In instructor-student online exchanges, Ameer was found to benefit from the instructor's interactions. Ameer was observed to learn a new discourse strategy (i.e., using polite questions) when instructor Ibrahim interacted with him and directed a polite question to his posting in the discussion forum as can be shown in Example 30. This interaction with the instructor helped Ameer to learn this L2 strategy which he did not seem to have acquired in his language system.

Example 30

Instructor-student Exchange Phase

Topic What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it! Please feel free to discuss your shopping mall!

Ameer: Actually, there are many perfect malls, but my favorite center is Al Uthaeem center, because whatever I want is available and the prices is very suitable for me, as well.

[November 30, 2010 1:13 PM]

Instructor
Ibrahim: Do not you think that AL-Guneim is much better than Utheam?

[November 30, 2010 2:17 PM]

Ameer: In fact , I never visit AL Guneam

[December 1, 2010 1:06 AM]

Instructor
Ibrahim: Try it.

[December 1, 2010 7:54 AM]

Anwar: My favorite center for shopping is Panda center because there is a discount for all things each month, also I can find what I want easily, and it has appropriate price.

[November 30, 2010 6:23 PM]

Ameer: Mr. Anwar, Do not you think that Panda is very expensive?

[December 1, 2010 1:13 AM]

Instructor
Ibrahim: I do agree with you. I like Panda>

[December 1, 2010 7:53 AM]

Anwar: I think Panda is not expensive, but some of products are expensive because high quality.

[December 1, 2010 5:31 PM]

Ameer: Ok, I will visit it , God willing
Thanks Doctor

[December 4, 2010 12:58 A]

Abdullah: Frankly speaking, I don't like shopping at all. Unless it's an electronics mall, like Extra. For my groceries, the grocery store down the street is enough for me.

[December 5, 2010 4:33 PM]

Ameer: Don,t you think that Extra is much expensive than the other malls?

[December 11, 2010 7:49 PM]

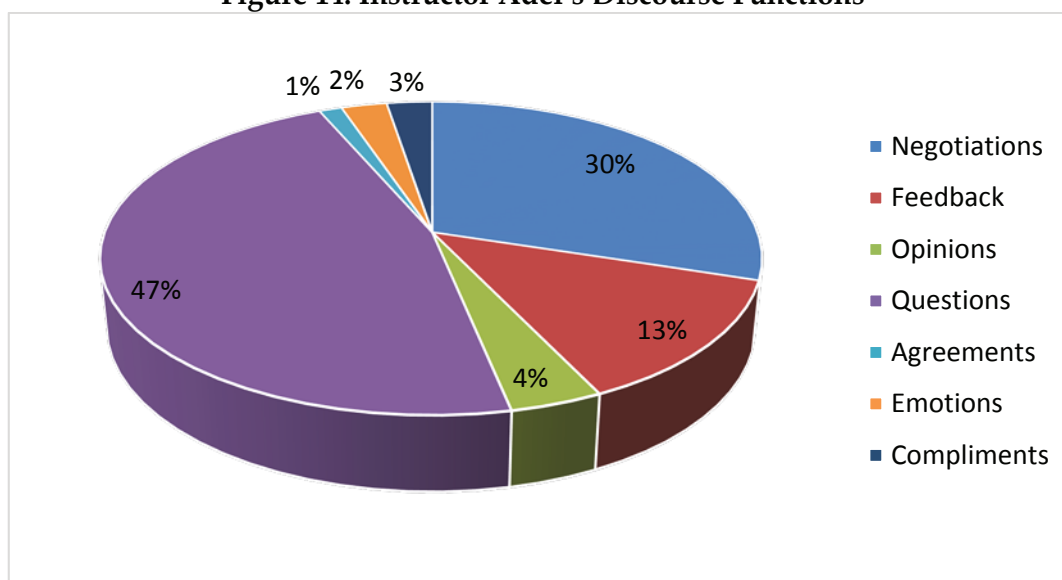
By looking at Ameer's interactions in Example 30, Ameer was found to direct the question form (*Do not you...?*), which he had just learnt, twice to Anwar and Abdullah in a polite way by using a suggestive verb (*think*) after he had acquired it from the interaction with his instructor. This indicates that Ameer was incidentally learning this form of question because he had not previously acquired in his Interlanguage system. Based on this finding, it can be noted that instructor Ibrahim scaffolded Ameer while he was discussing the topic and this scaffolding provided him with an opportunity for acquiring new knowledge during his instructor-student online exchanges.

From first and second questions, Ameer was observed to manipulate the question form which he acquired incidentally in different ways during his online interaction with the instructor. First, when he directed the polite question to his peer Anwar, he used the positive form of the adjective *expensive*. In his second question to his peer Abdullah, Ameer was found to use an attempted comparative form of the adjective expensive (*much expensive than*) although this comparative form still needs the adverb *more* to be grammatically correct. These manipulations show that Ameer was developing his language during his instructor-student online interactions. Thus, it can be argued that if Ameer had not been scaffolded by the instructor during his instructor-student online exchanges, he could not have learnt this discourse strategy. On the basis of Ameer's L2 learning, it can be pointed out that, from a sociocultural perspective, interaction with the expert in the discussion forums can be seen as helpful for students to acquire new knowledge and develop their target language.

6.1.2. Results of Instructor Adel's Interactions

By looking at the discourse functions of instructor Adel's interactions in Figure 14, his interactions were dominated by directing questions and engaging in negotiations when he interacted with students. Directing questions amounted to about 50 percent of his online interactions. Exchanging questions and negotiations frequently can indicate that instructor Adel had interactive participation with his students in the discussion forum. Instructor Adel had the largest rates of questions and negotiations among instructors. It can be noted that there is a relationship between the amount of instructor Adel's questions and his negotiations. That is, instructor Adel had a large number of negotiations because he directed a large number of questions to his students.

Figure 14: Instructor Adel's Discourse Functions



Although instructor Adel had the largest numbers of questions and negotiations among instructors, his participation rate with his students (24%) was lower than instructor Omar's (35%) but higher than instructor Ibrahim's (12%). This can indicate that he did not engage in other discourse functions as frequently as questions and negotiations. In terms of other discourse functions, instructor Adel's interactions in instructor-student online exchanges had a moderate rate of providing feedback and small rates of sharing opinions and showing social presence. However, instructor Adel was rarely found to express agreements with his students. He avoided expressing his agreements or disagreements may be because of the large number of students' opinions posted on the

discussion forum. Another likely reason is that showing agreements with some students and not showing agreements with other students can discourage students from participation or interaction in the discussion forum. Because showing agreement is regarded as one of the social presence behaviours, it can be argued that because instructor Adel hardly expressed agreement with his students this contributed to the lower proportion of his social presence density.

As can be seen in Figure 14, instructor Adel rarely displayed his social presence when he interacted with his students because expressing agreements, emotions, and compliments were found to be the least frequent discourse functions in his online interactions. Greetings and suggestions can be seen as social presence indicators but instructor Adel did not exchange them with his students in the forums. This may have contributed to his low degree of social presence. Because instructor Adel had a small density of social presence as compared with other discourse functions in his interactions, it can be argued that the perception of social interaction between the instructor and the student might have influenced instructor Adel to avoid projecting social presence frequently when he interacted with his students. In terms of avoiding using greetings with students in instructor-student online exchanges, from an Arabic cultural perspective, instructor Adel might have believed that students should greet him first because it is a cultural norm that the student (the younger) has to start greeting his instructor (the older) in social interactions from the Islamic tradition in Arab world.

Because instructor Adel had the largest number of discourse functions among instructors his interactions (particularly questions and negotiations) were found to be helpful for students' L2 learning because they triggered students to engage in L2 interaction and promote their language output in the discussion forum. How instructor Adel's interactions promoted students' L2 interactions is reported and discussed in the following section by examining Sami's L2 leaning case.

6.1.2.1. Promoting Engagement in L2 Interaction

During instructor-student online exchanges, Sami benefited from the interactions of his instructor. As can be seen in example 31 (a) and (b), instructor Adel's interactions were

found to trigger Sami to engage in productive L2 interactions. Instructor Adel interacted with his students and directed referential questions to their interactions in the online discussion forum and these questions encouraged students' engagement in L2 interaction and increased their L2 output. Engagement in interaction and producing language are seen as prime elements for language learning because students during L2 interaction can use their language and they can benefit from their language output to notice their linguistic problems and work on repairing them.

Example 31

(a)

Instructor-student Exchange Phase

Topic The University has to give good students in English language program some opportunities to travel to Europe or Australia for developing their English.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Omran: I am totally agree with the statement, and support the idea of giving the good students of The English Program, whom English is good, an opportunity to travel to a native English country, so the students will get the chance of being exposed to English intensively, and receive it naturally as it is used by its native speakers.

[December 30, 2010 10:29 PM]

Instructor Do you think that our students are fully ware⁸ of
Adel: the cultural differences they will experience overseas? How can this be a negative factor that might affect their stay overseas?

[December 31, 2010 4:52 PM]

Sami: Certainly , traveling to any country whose official language is English and the people are native speakers of English is the best way to develop your language and accent , so I agreed with this statement .. * _ ^

[December 31, 2010 12:52 AM]

Instructor Why can't they do this here?
Adel:

⁸ inaccuracy by the instructor

[December 31, 2010 4:54 PM]

Sami: [quoting the instructor's question]
There may be a kind of lack of responsibility and reliance on others .. But when the student finds himself alone he begins to work and feel a sense of responsibility ..

[January 1, 2011 1:15 AM]

Sami: [quoting the instructor's question to Omran]
There is no longer something secret because of the existence of the Internet, so I think that students have a full awareness of what they will face from different cultures and are back for their customs and cultures ..
When the full awareness of is present, there are no affects on our students

[January 1, 2011 1:10 AM]

Omran: They are not fully aware of the cultural differences, but, at the same time, they are not fully unaware of such differences, as the students watch movies, series, read stories that are produce from the native English countries, and also they access the websites that also give a good background about their culture.
Also, I believe that there must be some lectures to teach the students about the major differences, and the students shouldn't` travel as individuals, they should travel in groups.

[January 6, 2011 4:21 PM]

As can be seen in Example 31 (a), after Sami and Omran shared their opinions about the topic of travelling abroad to develop English language, instructor Adel interacted with them and directed several referential questions. This scaffolding from the instructor was found to influence students to interact with their instructor and produce their language. What seems to be important is Sami's engagement in L2 interaction with the instructor. It was found that Sami's interactions were frequent and lengthy and this can be attributed to the scaffolding of the instructor.

Sami did not only interacted and produced language when his instructor interacted with him, but also engaged with the instructor and produced language even when the instructor directed questions to other students. As can be seen in example 31 (a), Sami interacted with instructor Adel and answered the question which he directed to Omran

on cultural differences when travelling overseas. This indicates that the level of Sami's engagement was high in instructor-student online exchanges because of the scaffolding of the instructor. Sami felt confident to interact with the instructor as the knowledge authority and practise his English knowledge with him accordingly. According to his questionnaire, Sami had positive attitudes towards instructor-student online interactions and he underscored the interactions of the instructor in the online discussion forum because they were seen as helpful for students to develop their language.

Example 31 (b) shows more evidence that Sami's L2 engagement was high when the instructor scaffolded students during their instructor-student online exchanges. The expert's scaffolding influenced Sami to feel confident in engaging in interactive exchanges when interacting in instructor-student online exchanges.

Example 31
(b)

Instructor-student Exchange Phase

Topic: The University has to give good students in English language program some opportunities to travel to Europe or Australia for developing their English.

Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!

Instructor Adel: Do you think all students can benefit from such programs? How can this be problematic for some students?

[December 31, 2010 4:39 PM]

Sami: [quoting the instructor's question]
Certainly , benefit will be very large , these programs are the best in the English language development ..
I do not think that these programs will be a problem for the students ..

[January 1, 2011 12:47 AM]

Instructor Adel: Can the cultural differences be a big problem to our students abroad? If so, how should we deal with this problem?

[December 31, 2010 4:42 PM]

Sami: [quoting the instructor's question]
There may be a kind of culture shock, and also a sense of alienation and distance from family and friends and the different customs and traditions, all of which cause problem to our students when they go to there, but these problem will disappear quickly ..
The best ways to overcome these problems is the use of Allah on it and try to mingle with members of the community and build friendships with them over time and this problem will go away.

[January 1, 2011 12:57 AM]

Instructor Some students couldn't stay overseas to study and
Adel: practice⁹ English. How can we prepare our students to live and study abroad?

[January 1, 2011 12:04 PM]

Sami: [quoting the instructor's question]
We must provide educational sessions for our students through the Ministry of Higher Education, and to give our students adequate information on the cultures that they will faced , so our students will have adequate information that will help them to live there and study

[January 1, 2011 8:55 PM]

On the basis of Sami's L2 engagement, it can be concluded that the interactions of instructors in instructor-student online exchanges and their scaffolding are helpful for students' engagement in online discussion forums because they promote L2 interaction and production. More importantly, referential questions which were directed by the instructor were important because they promoted students' engagement during L2 interaction and fostered their language production. Responding spontaneously to referential questions is an indicator of language learning (McNeil, 2012).

6.1.3. Results of Instructor Omar's Interactions

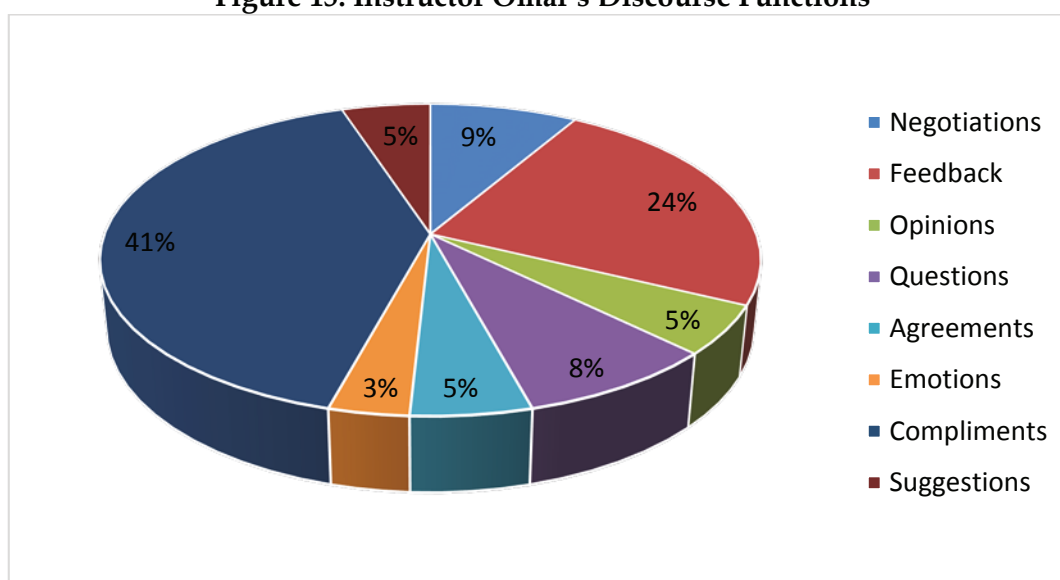
By looking at Figure 15, it can be observed that instructor Omar produced several types of discourse functions when he interacted with his students. Instructor Omar had the highest rate of participation (35%) with his students as compared to the other instructors. This rate of participation is reflected in using various discourse functions.

⁹ the instructor used American verb form because he used to teach in USA

As can be seen in Figure 15, the interactions of instructor Omar were dominated by expressing compliments. This indicates that he displayed a large degree of social presence by complimenting his students and showing recognition of their contributions. This may be because instructor Omar wanted his students to have confidence and use their language when they interacted in instructor-student online exchanges.

As compared with other instructors, instructor Omar had the highest degree of social presence density (56%) when he interacted in instructor-student online exchanges and this may be attributed to the fact that he was the youngest instructor in the present study.

Figure 15: Instructor Omar's Discourse Functions



The second predominant discourse function in instructor Omar's interactions was providing feedback. Instructor Omar had a larger rate of feedback (24%) with his students than instructors Ibrahim (6%) and Adel (13%). Instructor Omar might have found it important to provide his students with feedback, so that they could have support from their instructor in the forum. In terms of other discourse functions, as can be seen in Figure 15, instructor Omar had similar small percentages of using questions and negotiations as well as opinions, agreements, and suggestions when he interacted with his students. Instructor Omar did not engage frequently in these discourse functions because he was busy with the teaching load during the course of the current study and he had many courses and large numbers of students as found in his interview.

The only thing that I was not happy with is that I could not argue with my students a lot because I did not have enough time. I had several courses and large numbers of students in each course and this made it difficult for me to interact frequently with my students during instructor-student online exchanges.

Instructor Omar gave compliments and feedback more frequently than other discourse functions because he may have been concerned with providing students with confidence and the language support during their online exchanges.

On the basis of the findings above, instructor Omar's interactions and feedback were seen as helpful because they influenced students to learn new lexical forms incidentally and improve their linguistic accuracy. How the instructor's interaction and feedback influenced students to learn new lexical forms and improve linguistic accuracy is reported and discussed in the following section by looking at Abdul's L2 learning case.

6.1.3.1. Learning New Lexical Forms and Improving Linguistic Accuracy

Abdul's L2 learning case is unique for the present study because he described his interactions (both interpersonal and intrapersonal) when he interacted with the instructor. He was found to learn new lexical forms and improve his linguistic accuracy when he interacted with the instructor in instructor-student online exchanges.

As can be seen in Example nine below (it was presented earlier in section [4.2.2.1.](#)), it was found that Abdul realized that he had not yet learnt the correct verb form of *shop*—he had only used the word as a noun. The language output Abdul produced helped him to notice his language problem and work out to how solve this problem. Because of the feedback which the instructor provided students in the FtF classroom or via email, Abdul might have acquired the new lexical form and corrected his lexical error accordingly. Abdul in his interview reported how he realized that he had lexical errors in instructor-student online exchanges and underscored the importance of the instructor's interactions in helping him to develop his language accuracy.

Example 09

Instructor-student Exchange Phase

Topic

What is your favourite shopping mall?

Talk about your favourite shopping mall and why do you like it! Please feel free to discuss your shopping mall!

Instructor Omar: My favourite shopping mall is Panda for food, and Shubra for clothes. In Panda I can find all I want in one place and in Shubra, varieties of clothes are available for reasonable prices.

[November 30, 2010 5:33 PM]

Abdul: nice shoppings to marketing I agree with you but there are other places which I more prefer them.

[December 1, 2010 12:56 AM]

Abdul: I prefer to shopping in AL-GHONAIM if I want to buy food, fish, meat, vegetable, eggs. And I prever to shopping in AL-GOBAH if I wanna to but clothes in general. This is not mean that these places are the best, there are others but pesonally I prefer these. Thank you.

[December 1, 2010 12:53 AM]

Abdul: I prefer to shop in AL-GHONAIM if I want to buy food, fish, meat, vegetable, eggs. And I prefer to shop in AL-GOBAH if I want to buy clothes in general. This doesn't mean that these places are the best, there are others but pesonally I prefer these. Thank you
judt fot some corrections

[December 4, 2010 10:38 PM]

Interestingly, Abdul narrated how he learnt this lexical form and improved his linguistic accuracy when he interacted with the instructor in the forum.

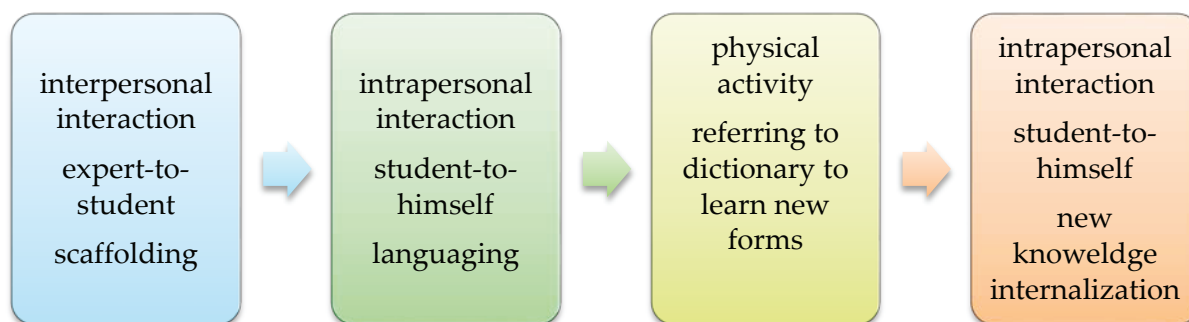
I benefited from the interactions of the instructor in instructor-student online exchanges because I learnt new lexical forms. When I saw the instructor used words in different places with different forms, I had to go to the dictionary and look for the forms and functions of these words. For example, one time I wondered why the instructor used a certain word in his interaction and surprisingly, I found that the word which he used can be used as a noun and a verb form. Before interaction with the instructor in instructor-student online exchanges, I regarded that word as a noun form only but it appeared that it can be used as a verb form too. So, when I saw this word I went back to the dictionary and checked it up and I exactly found that it can be used as a verb form as well.

From the interview excerpt above, it can be deduced that Abdul did not know that the word *shop* can be used as either a *noun* or a *verb* and his *Interlanguage* system did not yet

include this knowledge. Because Abdul was found to correct *to shopping* to *to shop* after interaction with his instructor, it can be argued that the instructor drawn Abdul's attention to his grammatical mistake by using the correct form during online interaction or he might have benefited from the corrective feedback which he received from the instructor after interaction in instructor-student online exchanges. Some of instructor Omar's students indicated that their instructor used to provide them with language corrective feedback during the FtF classroom pertaining to their language errors they had in instructor-student online exchanges. Thus, it can be concluded that the instructor (as the expert) drew Abdul's attention to realize his inaccuracies and influenced him to know the correct usage of some lexical forms when the instructor used them in different places during online exchanges with his students. This in fact prompted Abdul's higher mental (cognition) processes to think about these new lexical forms, look for their functions and meanings in English dictionaries, and accordingly improve his language accuracy.

Another interesting finding, from a sociocultural perspective, is the fact that Abdul was found to narrate his intrapersonal interaction (*I wondered why the instructor used a certain word*), which appeared to mediate his thinking (higher mental processes), when he was examining the new lexical forms which were used by the instructor in instructor-student online exchanges. It can be noted that Abdul was talking to himself by engaging in dialogue and wondering why the instructor used such lexical forms. Because Abdul was talking to himself and thinking to find out whether lexical forms can be written differently than the forms he already learnt in his *Interlanguage* system, it can be suggested that he was *languageing* the new lexical forms (Swain et al., 2011). Subsequently, this *languageing* seemed to influence Abdul to engage in a physical activity to learn the meanings and functions of these new lexical forms (by referring to an English dictionary). After referring to his English dictionary, Abdul seemed to internalize the new knowledge, improve his linguistic accuracy, and develop his *Interlanguage* system. Figure 16 describes the learning process of Abdul's new lexical forms during his interaction in instructor-student online exchanges.

Figure 16: The processes of Abdul's New Lexical Forms Learning



As can be seen in Figure 16, the interpersonal interaction which took place between Abdul and his instructor (i.e., scaffolding) influenced his intrapersonal interaction in the sense that he interacted with himself to solve a language complexity. The outcome of interpersonal and intrapersonal interactions which Abdul had was the fact that new knowledge was internalized after consulting English dictionary to learn the functions and meanings of new lexical forms. Accordingly, the above processes contributed to the development of his L2 accuracy.

What seemed important in Abdul's L2 learning case for the present study is the fact that he was *languaging* when he interacted with the instructor. It can be indicated that both inter/intra-actions which occurred in Abdul's situation functioned to mediate his cognition by controlling and organizing his thinking when he was faced with unknown lexical forms. These activities that were derived from interpersonal interaction (i.e., expert-to-student) as well as intrapersonal interaction (i.e., student-to-himself) provided Abdul good opportunities for developing his language.

From this learning case, it can be pointed out that Abdul developed a new linguistic aspect in his *Interlanguage* system when he interacted in instructor-student online exchanges, namely the accuracy of lexical forms in grammatical sentences. From a sociocultural standpoint, it can be pointed out that Abdul would not have been able to learn new lexical forms and improve his L2 accuracy without the assistance (scaffolding) of the instructor when he interacted in instructor-student online exchanges. This underscores the role of the instructor when L2 students interact in their online discussion forums.

6.2. Summary of Findings: Instructors' Online Interactions

To sum up, it can be observed that the three instructors in the present study produced different rates of discourse functions, participation, and social presence when they interacted with their students in the discussion forums. This indicates that they displayed different interaction roles with their students. This can be attributed to several reasons which include instructors' individual differences, their administrative and teaching load in the faculty, and the perception of social interaction between students and the instructor. Therefore, these factors might have influenced the ways the instructors interacted with their students in the present study. Instructors' interactions and scaffolding were found to help students acquire new grammatical and lexical aspects and promote their engagement in L2 interactions in their online discussion forums. Because instructors produced different rates of discourse functions, participation, and social presence, it was deemed important to examine whether these different rates significantly influenced students' L2 performance and the degrees of their social presence in their online discussion forums. This examination is discussed in the following section.

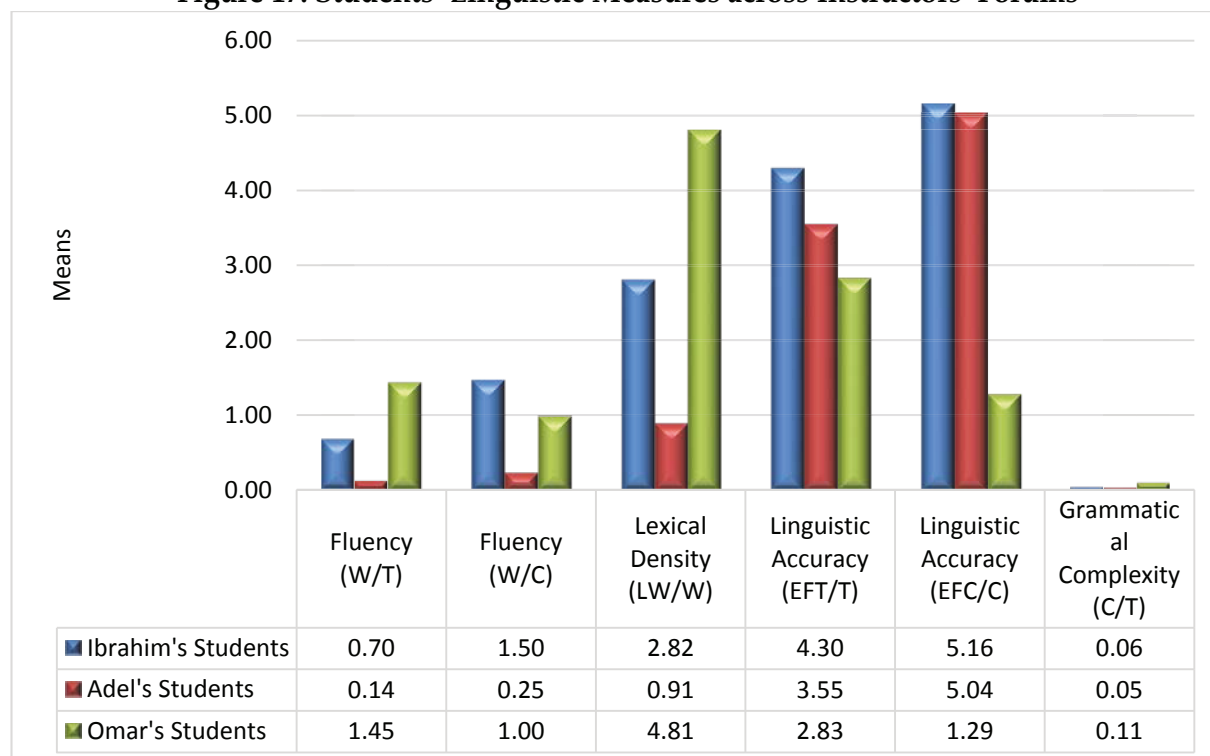
6.3. Analysis Results: Comparison of Online Discussion Forums

A further statistical analysis was conducted to investigate whether there were significant differences in students' L2 performance and social presence between the discussion forums of the three instructors. Because different students interacted with different EFL instructors, students' L2 performance and social presence might have been affected by the way the instructors interacted and the degrees of their social presence.

To examine students' L2 performance between the instructors' online discussion forums, the mean differences of students' linguistic measures between student-student and instructor-student were calculated. As can be seen in Figure 17, by and large, there seem to be differences in the students' means of lexical density (LW/W) and linguistic accuracy (EFC/C) between the instructors' discussion forums. However, in terms of other linguistic measures, students' mean differences did not seem to differ from one another as can be shown in Figure 17. From this cross-comparison analysis between

instructors' discussion forums, Omar's students seemed to have a larger mean difference for lexical density (LW/W) but a lower mean for linguistic accuracy (EFC/C) than other instructors' students. This indicates that the instructor's interaction may have had an influence on the performance of students. Inferential tests were applied in the present study to examine whether there were significant differences between the means of students' linguistic measures across instructors' forums.

Figure 17: Students' Linguistic Measures across Instructors' Forums

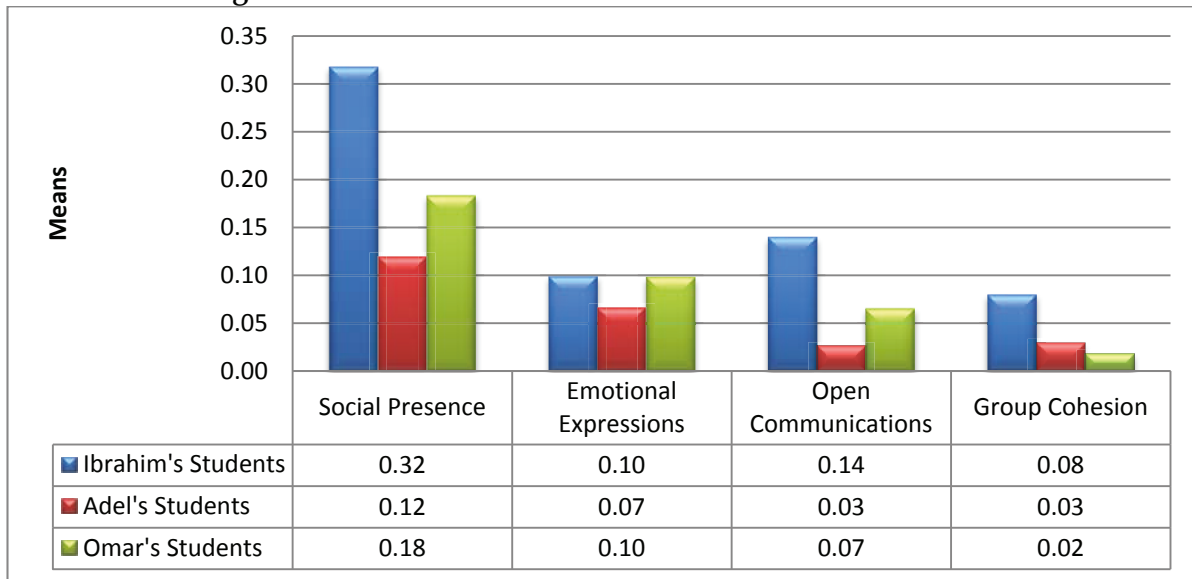


ANOVA was deemed appropriate to investigate fluency (W/T), lexical density (LW/W), and linguistic accuracy (EFT/T) because the data were normally distributed. ANOVA revealed that there were significant differences ($p < .05$) in the measure of lexical density (LW/W), but there were no significant differences ($p > .05$) in the measures of fluency (W/T) and linguistic accuracy (EFT/T). In terms of other linguistic measures, the Kruskal-Wallis rank test was deemed appropriate to examine fluency (W/C), linguistic accuracy (EFC/C), and grammatical complexity (C/T) because the data were not normally distributed. The results showed that there were no significant differences ($p > .05$) in the measures of W/C, EFC/C, and C/T.

Statistically, lexical density was found to be the only linguistic measure that had significant differences ($F(2, 46) = 3.4, p = .042$) with a large effect size ($\eta^2 = .13$). The post hoc test (i.e., Tukey) showed that Omar's students produced a significantly larger mean of lexical density ($M = 4.81, SD = 3.95$) than Adel's students ($M = .91, SD = 4.14$) at $p = .037$. However, the lexical density of Omar's students did not significantly differ ($p = .543$) from that of Ibrahim's students ($M = 2.82, SD = 5.1$). The findings show that Omar's students performed better in terms of their lexical density and this can be attributed to the role of the instructor during instructor-student online exchanges. That is to say, instructor Omar displayed the largest degrees of participation, social presence, feedback, and compliments among instructors and these frequent degrees seemed to influence the lexical density of his students in the present study. Importantly, the higher degree of instructor Omar's social presence influenced students to feel confident during interaction with the instructor and produce large rates of lexical density in their online exchanges.

To further understand how Omar's students maintained their lexical density, the relationship between their social presence and lexical density was examined. A relatively strong positive significant correlation ($r = .673, p = .023$) was found between the degrees of their social presence and the rates of their lexical density (Spearman's *rho* was used because the data were not normally distributed). Conversely, no significant correlations ($p > .05$) were found between the degrees of social presence and the rates of lexical density of Ibrahim's and Adel's students. Based on the correlation result of Omar's students, it can be indicated that students who projected higher degrees of social presence also produced higher rates of lexical density in their interactions with their instructor in their discussion forum. Therefore, the reason why instructor Omar's students had higher rates of lexical density in their interactions than other instructors' students is attributed to the higher degree of instructor Omar's social presence.

Figure 18: Students' Social Presence across Instructors' Forums



To investigate students' social presence, likewise, the mean differences of students' social presence between student-student and instructor-student online exchanges were calculated. As can be seen in Figure 18, Ibrahim's students seemed to have a higher degrees of social presence than Adel's and Omar's students. This shows that Ibrahim's students projected social presence more frequently than Adel's and Omar's students. Because instructor Ibrahim displayed small rates of participation and interaction with his students in the discussion forum, it can be argued that his students found a greater opportunity to project their social presence more frequently than Adel's and Omar's students. In terms of the categories of social presence, it can be observed that Ibrahim's students also had larger rates of open communication and group cohesion behaviours than Adel's and Omar's students as can be seen in Figure 18.

However, it was deemed important to find whether there were significant differences in the degrees of social presence between students among the instructors' online discussion forums. The Kruskal-Wallis rank test was deemed appropriate to examine the students' social presence and the categories of their social presence because the data were not normally distributed. No significant differences ($p=.629$) were found in the means of students' social presence among the instructors' online discussion forums. Also, no significant differences ($p>0.5$) were found in the categories of students' social presence between instructors. This indicates that students projected similar degrees of

social presence and the different rates of instructors' interactions did not seem to influence their social presence when they interacted with their instructors in the forums. On the basis of the above findings, although instructors produced different interaction roles, it was found that only Omar's students had larger rates of lexical density. This is because of the higher rate of instructor Omar's social presence when he interacted with his students. Students' other measures of L2 performance and the degrees of their social presence did not seem to be affected by the different roles which instructors played. Because of the significant relatively strong correlation which was found between social presence and lexical density of Omar's students, it can be argued that the degree of social presence can influence students' lexical density when they interact in online discussion forum. Students can feel confident to exchange and interact with other interlocutors when they have higher degrees of social presence and this in turn can increase the lexical density of their interactions. Similarly, the instructors' higher degrees of social presence can also influence students' lexical density positively. That is, when instructors project higher degrees of social presence in the discussion forums, this can influence students to feel more confident during their interactions with their instructors than when their instructors display small degrees of social presence and in turn this higher confidence can increase students' lexical density.

Because students were statistically found to pay more attention to the linguistic accuracy of their interactions in instructor-student than in student-student online exchanges, it was deemed important to describe how students maintained their linguistic accuracy in the two phases of online exchanges. The instructors' interviews were also examined to help understand the behaviours of students' linguistic accuracy and gain more understanding from the experiences of the instructors when they interacted with their students.

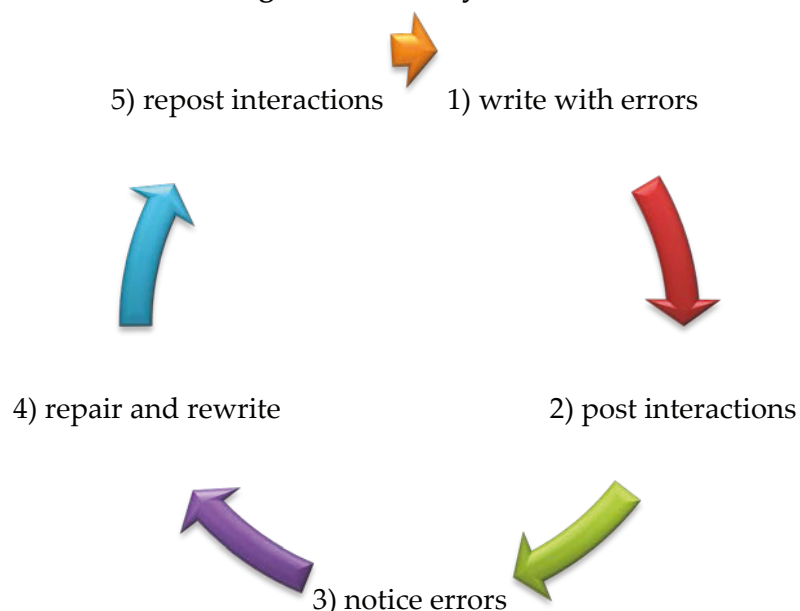
6.4. Results of Students' Linguistic Accuracy

Based on the results of students' L2 performance in chapter four, when instructors interacted with their students, students' interactions were found to be significantly more accurate than when instructors did not interact with them. Students produced higher

ratios of error-free T-units and error-free clauses when they interacted in instructor-student than student-student online exchanges. It can be noted that instructors were found to influence students' linguistic accuracy. That is, the presence of the instructor in the online discussion forum and the instructor's scaffolding were seen as helpful for students' linguistic accuracy. The former encouraged students to pay more attention to the accuracy of their interactions and the latter drew students' attention to their language errors and helped them improve their linguistic accuracy. Because of the absence of the instructors, the above learning opportunities were not found in student-student online exchanges and students maintained lower rates of linguistic accuracy.

The most compelling evidence concerning students' linguistic accuracy is that students were found to correct their linguistic errors when they interacted with their instructors. They engaged in self-repairs when they noticed their language errors. However, students were not found to correct their language errors although they were found to notice them.

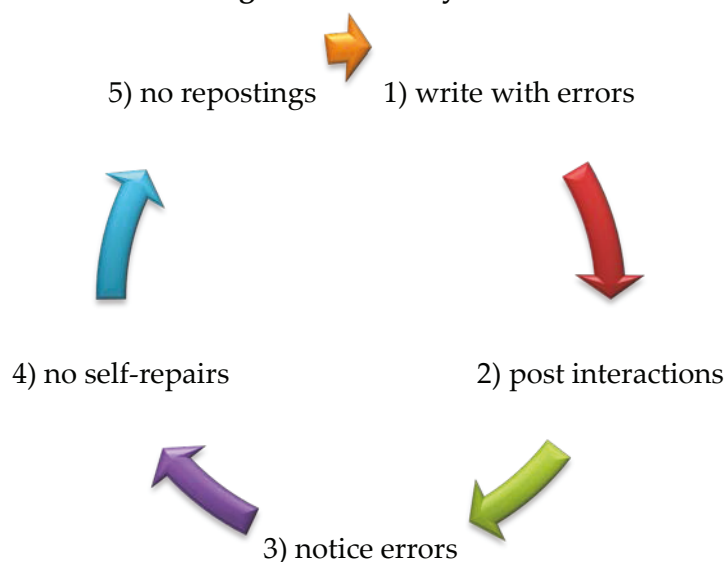
Figure 19: The Process of Linguistic Accuracy in Instructor-Student Online Exchanges



By looking at student-student and instructor-student interactions in their online discussion forums, two processes of linguistic accuracy were exhibited by students. In instructor-student online exchanges, students were observed to write their interactions

with language errors, post their interactions on the discussion forums, notice their errors, repair their errors and rewrite their interactions, and repost their interactions on the forums as can be seen in Figure 19. The five-step process of accuracy shows that students put more effort into maintaining linguistic accuracy in their discussion forums because of the presence of the instructors.

Figure 20: The Process of Linguistic Accuracy in Student-Student Online Exchanges



However, students were not found to complete this five-step process of accuracy when they interacted in student-student online exchanges. This indicates that students had different linguistic accuracy behaviour when they interacted with their peers as compared with their instructors in the forums. As can be seen in Figure 20, students were observed to write their interactions with language errors, post their interactions on the forum, and notice that they made errors. However, students were not found to repair their language errors which they had already noticed, rewrite or repost their interactions when they interacted with their peers in the forums. In this online exchange, students were found to generate a three-step process of accuracy as compared with the five-step process of accuracy in their instructor-student online exchanges. Because their instructors did not interact with them, students might have been concerned with the meaning more than with the accuracy of their interactions. Because of this, students

were not found to correct their language mistakes as they did in instructor-student online exchanges.

On the basis of the findings of linguistic accuracy in the present study, it can be concluded that the presence of the instructors in instructor-student online exchanges provided students greater opportunities to pay more attention to language errors and improve their linguistic accuracy than the absence of the instructors in student-student online exchanges. Students improved the linguistic accuracy of their interactions by engaging in a five-step process of accuracy development as compared with their three-step process of accuracy in student-student online exchanges. This accuracy development was found evident in the students' interviews. Abdullah, for instance, confessed that he was not overly concerned with his linguistic accuracy when the instructor was absent in student-student online exchanges as it was reported in chapter four. Abdul and Abdullah also confessed that when they interacted with their instructors they felt that their instructors was going to read and review their language so that this made them more cautious about making language mistakes in instructor-student online exchanges. It can be argued that having this perception (i.e., the presence of the expert) can influence students to put more effort into taking care of their errors and producing accurate language. To further understand students' linguistic accuracy in the present study, several observations were extracted from the interviews of the instructors and reported in the following sections.

6.4.1. Results of Instructor Ibrahim's Interview

To start with, instructor Ibrahim noted his students putting more effort into their linguistic accuracy when they interacted in instructor-student than in student-student online exchanges.

I noted that my students' language output improved when they interacted in instructor-student online exchanges. They produced correct grammatical sentences. I noticed that they sometimes post complex grammatical sentences.

Because instructors were lurking during student-student online exchanges, judging the mastery of their students' language particularly in terms of linguistic accuracy might

have been possible. Therefore, when instructors interacted with their students in instructor-student online exchanges they were able to note that students' language improved because they paid more attention to the accuracy of their interactions. However, students were found to make some language errors and instructor Ibrahim described how he reacted when he saw their language mistakes in instructor-student online exchanges.

When I saw the grammatical errors of my students I used to give them language feedback by sending them emails or talking to them during the sessions of their FtF class.

It can be observed that instructor Ibrahim provided his students corrective feedback when he saw their grammatical errors and he used email and FtF class to communicate the language errors with his students. This is in line with what some students reported in their interviews as they used to receive some corrective feedback from their instructors during their FtF class pertaining to their L2 errors in instructor-student online exchanges (see section [4.2.2.2.](#) for some examples). Providing corrective feedback via email and during FtF class shows that instructor Ibrahim did not want to embarrass his students by explicitly drawing their attention to their language mistakes in front of other interlocutors in their online discussion forum.

Given that students were found to receive corrective feedback from their instructors during instructor-student online exchanges, it can be indicated that this feedback was seen as helpful because it influenced students to take care of their language accuracy. This feedback accordingly contributed to the increase of students' linguistic accuracy in instructor-student online exchanges. For example, Ibrahim reported that he used to give his students corrective feedback in their FtF class (bold style is his original English data).

I used to say **please pay attention to the mistakes you make, these are some grammatical errors that you have to be aware of because you are going to graduate soon and be English teachers.**

This indicates that the instructor discussed with his students their grammatical errors in the FtF class. Therefore, students' linguistic accuracy improved during instructor-student online exchanges. Not only did instructor Ibrahim provide his students with

language corrective feedback, but he also encouraged them to visit online resources and develop their language grammar.

I also encouraged my students to visit YouTube and benefit from available lessons and materials such as how to develop English grammar and use English tenses correctly.

These recommendations or suggestions which were given by the instructor might have influenced students to refer to English internet resources and benefit from English grammar lessons to improve their language accuracy. Based on these findings, it can be concluded that students' linguistic accuracy got better when they interacted in instructor-student than in student-student online exchanges because they benefited from the language corrective feedback of their instructor.

6.4.2. Results of Instructor Adel's Interview

What instructor Adel reported in his interview gives more support for the significant findings in the present study. He noted that students paid more attention to the linguistic accuracy of their interactions in instructor-student than in student-student online exchanges. In line with instructor Ibrahim, instructor Adel indicated that his students' linguistic accuracy improved in instructor-student online exchanges.

I noted that my students were more cautious about their grammatical errors when they interacted with me in instructor-student than in student-student online exchanges.

Because of the presence of the instructor as the knowledge expert, students put more effort into writing accurate exchanges. In terms of providing language corrective feedback, instructor Adel did not provide his students with any feedback.

I did not correct the errors of my students or provide corrective feedback to them when I saw their grammatical errors because I was more concerned with the content of their interaction than with their language errors. I neither provided them with language corrections in the FtF class nor sent them emails to draw their attention to their language errors.

Although students did not receive any language corrective feedback from their instructor this does not mean that they did not pay more attention to their language accuracy in instructor-student online exchanges. As found earlier, there were no significant differences in linguistic accuracy between the students of the three instructors. Importantly, the presence of the instructor was seen as a major factor which

influenced students to put more effort into maintaining linguistic accuracy. However, it can be argued that when the presence of the instructor is coupled with the provision of language corrective feedback linguistic accuracy can be promoted more than when there is no language corrective feedback.

With respect to students' language competence during online interactions, instructor Adel, according to his view as a linguist, observed two kinds of students (i.e., more and less competent) when he interacted with his students in the forum. The language competence of Adel's students is not defined by the quality of their linguistic accuracy. Rather, it is defined by their language proficiency which Adel has perceived as he is their course instructor. Instructor Adel described how his students interacted and maintained their linguistic accuracy.

The interactions of more competent students seemed to be longer and accurate to a higher degree than the interactions of less competent students which seemed to be shorter and suffer from grammatical errors.

It is evident that language competence can play a major role in shaping students' language performance and more competent students perform better than less competent students. However, instructor Adel explained how the presence of the instructor might have affected more competent students to pay more attention to their linguistic accuracy in comparison to less competent students when they interacted in the discussion forum.

I think this is because more competent students were more linguistically cautious about what they wanted to write when they interacted with the instructor than less competent students. When I read the interactions of more competent students I can see that they put more effort into editing their grammar and spelling before posting their interactions during instructor-student online exchanges.

From the above excerpt, it can be argued that more competent students were found to take care of their linguistic accuracy more than their counterparts because they put more effort into checking the accuracy of their language and editing their interactions when they interacted with the instructor. From this finding, it can be pointed out that editing and language check-up can be seen as helpful for linguistic accuracy during interactions in online discussion forums. Therefore, because significant differences were found in students' linguistic accuracy between the two types of online exchanges, it can be

indicated that students put more effort into checking the accuracy of their language and editing their interactions in instructor-student more than in student-student online exchanges. These significant differences were attributed to the presence of the instructors because it influenced students to correct their linguistic errors.

6.4.3. Results of Instructor Omar's Interview

Instructor Omar noted that his students paid more attention to their linguistic accuracy in instructor-student than in student-student online exchanges.

I noted that my students were more careful about their linguistic accuracy in instructor-student than in student-student online exchanges and I think this may be because that they were aware the instructor would interact with them in the online discussion forum.

What instructor Omar reported indicates that the presence of the instructor might have influenced students to be more cautious about making language errors. This underscores that the presence of the instructor can be seen as useful for the improvement of students' linguistic accuracy during their interactions in their online discussion forums.

In terms of language corrective feedback, instructor Omar was found to provide one of his students with an overt corrective feedback when making a spelling error (see Example 12 in section [4.2.2.2.](#)). It can be argued that this explicit feedback provided by instructor Omar might have influenced his students to be more cautious about making language errors. Although instructor Omar did not report that he provided his students with language corrective feedback when he participated in the interview, his students reported that they received language corrective feedback from him during their FtF class and via email (see Talal's excerpt in section [4.2.2.2.](#)). Faisal also reported that instructor Omar used to send him language correction feedback via his email.

I liked my instructor's comments on my posts and opinions. He used to send me feedback about my language grammar and vocabulary via my email.

This indicates that instructor Omar influenced his students by drawing their attention to their linguistic errors which they made when they interacted in instructor-student online exchanges.

Concerning using email communication, instructor Omar reported that he used email to communicate with his students during the course of the present study in this way.

I used email communications and so did my students. 40% of emails were sent as personal communications and 60% of them were sent as course communications. I sometimes used to send emails as a group communication when addressing or discussing the course content and I used to send email as a private communication if the issue was personal.

From the ways which instructor Omar used when using email communication with his students it can be deduced that he used to send his students corrective feedback as it has been reported by Faisal above. Therefore, it can be argued that language corrective feedback which students received on the forum, during the FtF class, and via email were seen as helpful because it might have influenced students to improve their linguistic accuracy in instructor-student online exchanges.

6.5. Summary of Findings: The Influence of the Instructors

To sum up, from the above results, it was found that there were significant differences in the students' lexical density when instructors' online discussion forums were put under scrutiny. This shows that the roles the instructors played affected students' lexical density. Specifically, Omar's students had higher rates of lexical density than their counterparts. This can be attributed to the higher degree of instructor Omar's social presence in instructor-student online exchanges. Omar's students felt more confident to interact and produce lexical words than other students because of the higher degree of the instructor's social presence. However, in terms of other linguistic measures and social presence, there were no significant differences between Ibrahim's, Adel's, and Omar's students. With the exception of lexical density, this indicates that Ibrahim's, Adel's, and Omar's students produced similar rates of fluency, linguistic accuracy, and grammatical complexity as well as similar degrees of social presence. Thus, the fact that instructors were found to produce different interaction roles did not seem to influence their students' L2 performance and social presence.

Concerning students' linguistic accuracy, it was found that students generated two different accuracy processes. When they interacted with their instructors, students generated a five-step accuracy process and this process was found helpful for students

to improve their linguistic accuracy and develop their L2 learning. Conversely, when they interacted with their peers, they generated a three-step accuracy process and this accuracy process was not found helpful for students to improve their linguistic accuracy and develop their L2 learning. By examining the instructors' interviews, it was found that instructors noted that their students paid more attention to their language errors and improved their linguistic accuracy when they interacted with them in instructor-student. The instructors attributed the development of their students' linguistic accuracy to their presence in the discussion forums. However, it was also noted that students received language corrective feedback from their instructors on the discussion forum, via email, and during the FtF classroom. This kind of feedback also increased students' attention to their language errors and promoted their linguistic accuracy in instructor-student online exchanges.

Chapter Seven: Findings Relating to Students' Perceptions

This chapter aims at investigating students' perceptions of student-student and instructor-student online exchanges. Students' perceptions, which were obtained from their questionnaires and interviews, were analysed quantitatively and qualitatively. The results are reported and discussed in the following sections.

7.1. Quantitative Analysis Results

7.1.1. Results of Students' Perceptions

In the present study, students' answers of close-ended questionnaire items were examined statistically to investigate students' perceptions of student-student and instructor-student online interactions. The responses of students' perception items were entered into SPSS software and tested statistically. The results of statistical tests are reported and discussed as follows.

7.1.1.1. Descriptive Statistics Results

Students' data are presented in Table 22 for contrasts to help understand their perceptions of their interactions in student-student and instructor-student online exchanges.

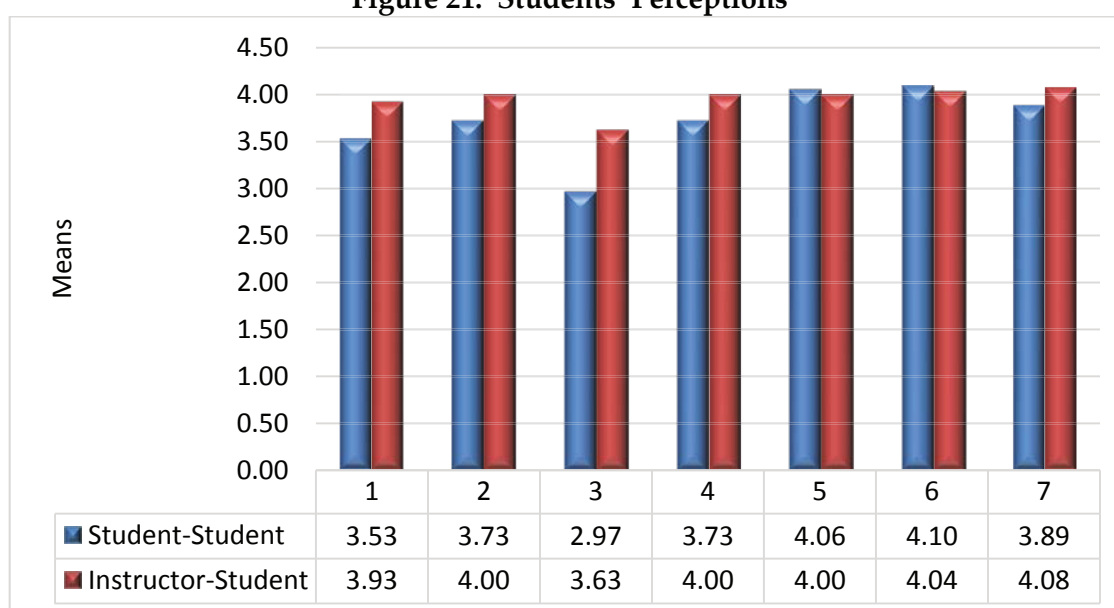
Table 22: Students' Perceptions—Descriptive Analysis Results

N=49 Students' Perceptions	Student-Student		Instructor-Student	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Online interactions were excellent with	3.53	.89	3.93	.98
2. I felt comfortable interacting with	3.73	.97	4.00	.97
3. I felt personally connected with	2.97	.80	3.63	.92
4. Online interactions were very important with	3.73	.83	4.00	.95
5. Online interactions gave me the confidence to participate and interact with	4.06	.89	4.00	.91
6. Online interactions gave me a sense of being a part of one social learning community with	4.10	.84	4.04	.95
7. Online interactions motivated me to engage in interaction in	3.89	1.00	4.08	.97

As can be seen in Table 22, by and large, the mean value of students' perceptions was found to be higher in instructor-student than in student-student online interactions. This shows that students liked the online interactions of instructor-student more than the online interactions of student-student. By looking at the first four perceptions in Figure 21, it can be observed that students valued the interactions of instructor-student more than the interactions of student-student.

Students liked and valued interacting in instructor-student online exchanges more than in student-student online exchanges because they benefited from the interactions of their instructors. That is, instructors' interactions exchanges provided students with opportunities to learn new grammatical and lexical forms and develop their linguistic accuracy. In terms of perceptions in items five, six, and seven in Figure 21, students' perceptions did not seem to differ between student-student and instructor-student online exchanges. Students valued their feelings of confidence, social learning, and motivation in student-student at a similar level as in instructor-student online exchanges. This is because they may have regarded themselves and their peers and instructors as one learning community where it is expected that they should have the same degrees of feelings of confidence, social learning, and motivation when they interact with their peers or instructors to promote their language learning.

Figure 21: Students' Perceptions



Although most students valued the interactions of instructor-student more than the interactions of student-student, it was deemed important to examine whether there were significant differences in the students' perceptions between the two phases of online exchanges. To investigate this, inferential statistics were applied and the analysis results are reported and discussed in the following section.

7.1.1.2. Inferential Analysis Results

To examine whether the means of students' perceptions differed significantly between the two phases of online exchanges, a nonparametric Wilcoxon Signed Ranks test was deemed appropriate and selected because the data of students' perceptions were not found to be normally distributed—the Kolmogorov-Smirnova and Shapiro-Wilk tests were used for examining normality. The negative z-values which the test revealed in (Table 23) occurred because this non-parametric test examines the mean rank differences across the data, not the mean differences which the descriptive statistics show in Table 23 and Figure 21. Because of this, the Wilcoxon Signed Ranks test generates negative z-values when it examines the differences of mean rank.

Table 23: Students' Perceptions—Inferential Analysis Results		
N=49		
Students' Perceptions	Z	P
1. Online interactions were excellent	-2.17	.029
2. I felt comfortable interacting	-2.02	.043
3. I felt personally connected	-4.30	.000
4. Online interactions were very important	-2.04	.041
5. Online interactions gave me the confidence to participate and interact	-.52	.597
6. Online interactions gave me a sense of being a part of one social learning community	-.65	.513
7. Online interactions motivated me to engage in interaction	-1.48	.138

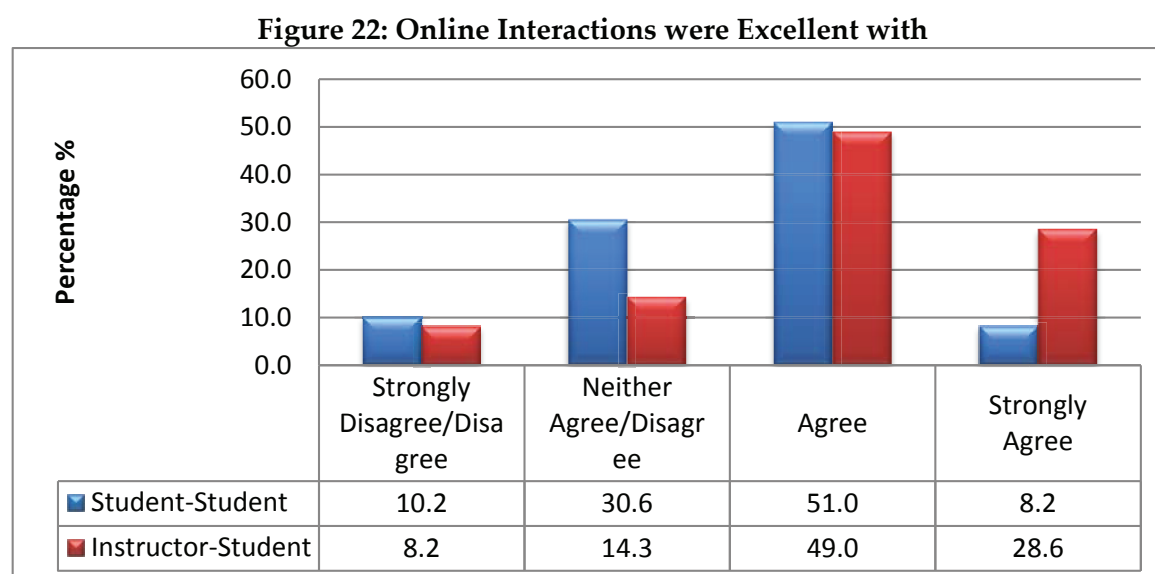
According to the test results in Table 23, significant differences were found in the means of students' perceptions between student-student and instructor-student online exchanges. These significant differences were found in the students' perceptions of *online interactions were excellent* ($p=.029$), *I felt comfortable interacting* ($p=.043$), *I felt*

personally connected ($p=.000$), and *online interactions were very important* ($p=.041$) between the two conditions of online exchanges. These four perceptions show that students significantly perceived the interactions of their instructor-student more positively than the interactions of their student-student. This may be because students received more attention and support from their instructors when they interacted in instructor-student than in student-student online exchanges. Instructors helped students learn new grammatical and lexical forms and improve their linguistic accuracy when they scaffolded their interactions, complimented them, and provided them with corrective feedback. In terms of the last three perceptions (i.e., perception items five, six, and seven), no significant differences ($p>.05$) were found in the students' perceptions between the two phases of online exchanges. Students might have thought that feelings of confidence and social learning and being motivated were the same for their language learning in both student-student and instructor-student online interactions.

Given that several perceptions were found to be more positive towards the interactions of instructor-student than the interactions of student-student, it was deemed important for the present study to investigate students' perceptions in terms of the score distribution on the levels of their questionnaire's Likert scale. Because the Likert scale was built based on levels from one to five, the weight of perception scores from one level to another might give further explanations for understanding the results of students' perceptions. Because of the zero values and small percentages of the questionnaire levels of *Strongly Disagree* and *Disagree* across the students' perceptions, the two levels were combined together to help present the results adequately and understand them in a clearer way in comparison with other levels on the Likert scale. The percentages of students' perceptions, where significant differences were found, were explored and the analysis results are reported in figure presentations and discussed in the following sections. The exploration of the Likert data of students' perceptions addressed the large percentage categories which clearly show the extent to which students perceive their student-student and instructor-student online interactions.

7.1.2. Results of Perceptions' Distributions

7.1.2.1. Online Interactions were Excellent with

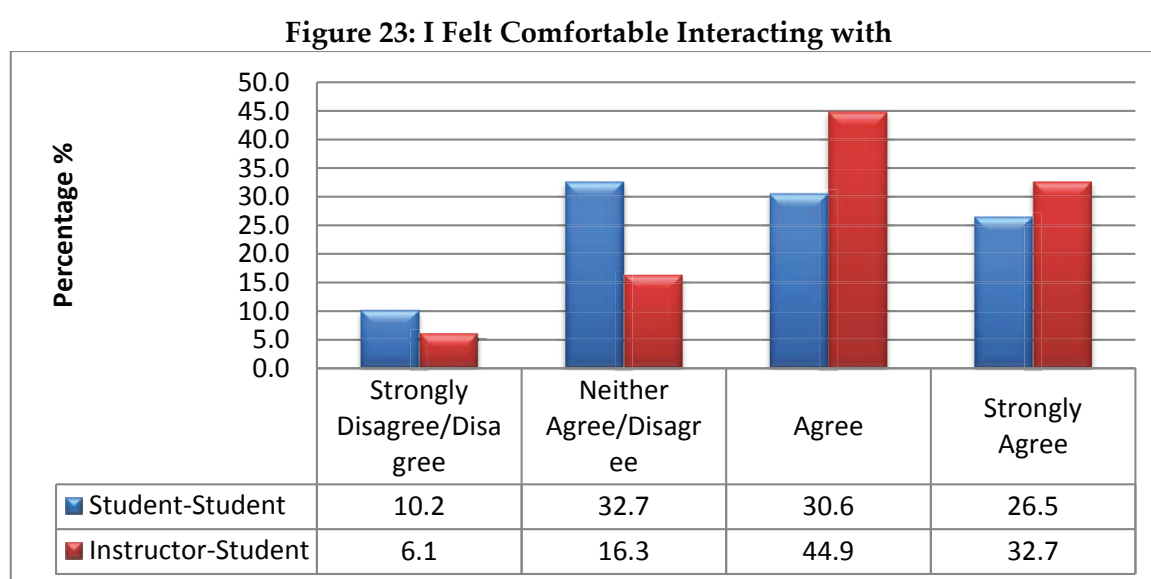


As can be seen in Figure 22, large numbers of students (49% agreed and 28.6% strongly agreed) valued the interactions in instructor-student online exchanges as being excellent compared with interactions in student-student online exchanges. Students had higher positive perception towards their instructor-student online interactions because they benefited from the interactions with their instructors. Students learnt new grammatical and lexical features and improved their linguistic accuracy when they interacted with their instructors and because of this they perceived their instructor-student online interactions as more excellent than student-student online interactions. It can be observed that 30.6% of students neither agreed nor disagreed although 51% of the students agreed (and 8.2% strongly agree) that their student-student online interactions were excellent. This perception can indicate that students valued their student-student online interactions as less positive than their instructor-student online interactions. Perhaps, students did not benefit from their student-student online interactions as they benefited from their instructor-student online interactions and this is why they held more positive perception towards their instructor-student online interactions.

Another interpretation which can be made on the basis of this perception is that students might have regarded the presence of their instructors as useful for their interactions in

the discussion forums in comparison with the absence of their instructors. That is, the presence of the instructor (as the knowledge expert) in the forums can provide students with a supportive learning atmosphere where students can see their instructors share the floor with them, support their language learning, and take care of their learning problems. This might have influenced students to value their instructor-student interactions as better than their student-student interactions when they interacted in their online discussion forums.

7.1.2.2. I felt Comfortable Interacting with

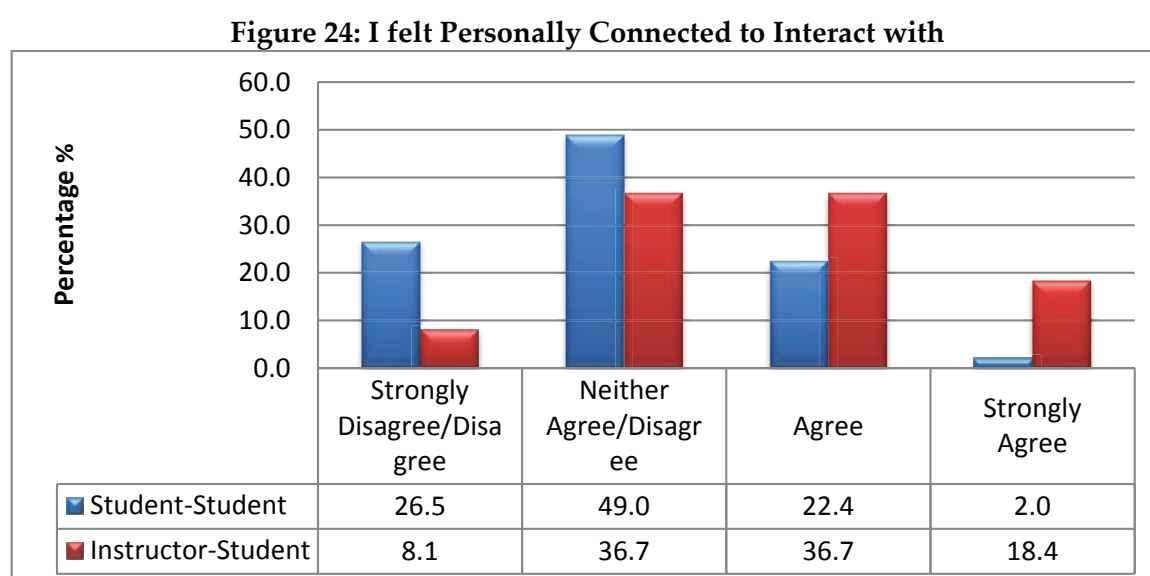


In terms of the second perception, substantial numbers of students (44.9% agreed and 32.7% strongly agreed) showed that they felt comfortable interacting in instructor-student online exchanges as can be seen in Figure 23. As compared with their perception of student-student online exchanges, students were seen to be more comfortable interacting in instructor-student online exchanges. Because of the presence of their instructors students might have felt more comfortable interacting in instructor-student online exchanges as their instructors provided them with language support and facilitate their learning in the discussion forums. It can be found that 32.7% of students neither agreed or disagreed that they felt comfortable interacting in student-student online exchanges. This percentage shows that students were unsure whether they felt comfortable interacting in student-student online exchanges. Although a few numbers

of students (strongly) disagreed that they felt comfortable interacting in student-student and instructor-student online exchanges, large numbers of students still held more positive perceptions about feeling comfortable interacting in instructor-student online exchanges.

This perception finding that large numbers of students felt comfortable interacting during instructor-student online exchanges may be because their instructors collaborated with them and were ready to provide them with any support pertaining to their interactions and language learning in the discussion forums.

7.1.2.3. I felt Personally Connected to Interact with



As can be seen in Figure 24, a large number of students (36.7% agreed and 18.4% strongly agreed) indicated that they felt personally connected with their instructors in instructor-student online exchanges and 26.5% of students (strongly) disagreed that they felt personally connected with their peers in student-student online exchanges. This shows that students had positive perceptions of feeling personally connected with their instructor more than with their peers. This personal connectedness can be attributed to the fact that students felt that they communicated socially with their instructors at a personal level during their instructor-student online exchanges. It should be pointed out that students did not appear to interact socially with their peers or instructors outside the confines of their language learning. Online interactions in the discussion forums

seemed to be the only social interactions which students engage in with other interlocutors in the present study. As compared with the FtF class, online exchanges were found to help students establish personal connectedness between them and their instructors. This personal connectedness enabled students to seek support from their instructors pertaining to their language learning and personal learning issues while they were interacting in instructor-student online exchanges. This was evident in the current study because several students were found to communicate with their instructors using email to discuss their language learning problems and seek advice on their personal learning matters. For instance, instructor Ibrahim in his interview reported that his students used to send him emails discussing their personal learning matters during their instructor-student online exchanges.

During the course of instructor-student online exchanges, sometimes some students used to email me to discuss their own personal learning problems. For example, one student sent me an email to explain his English language learning problems and he asked me for some help. He informed me that he is going to graduate and be an English teacher soon but he needs to develop some linguistic issues in his English language before graduation. So, I asked him to meet me and discuss his issues face-to-face. He did and I gave him some instructions and materials to help him develop his English language.

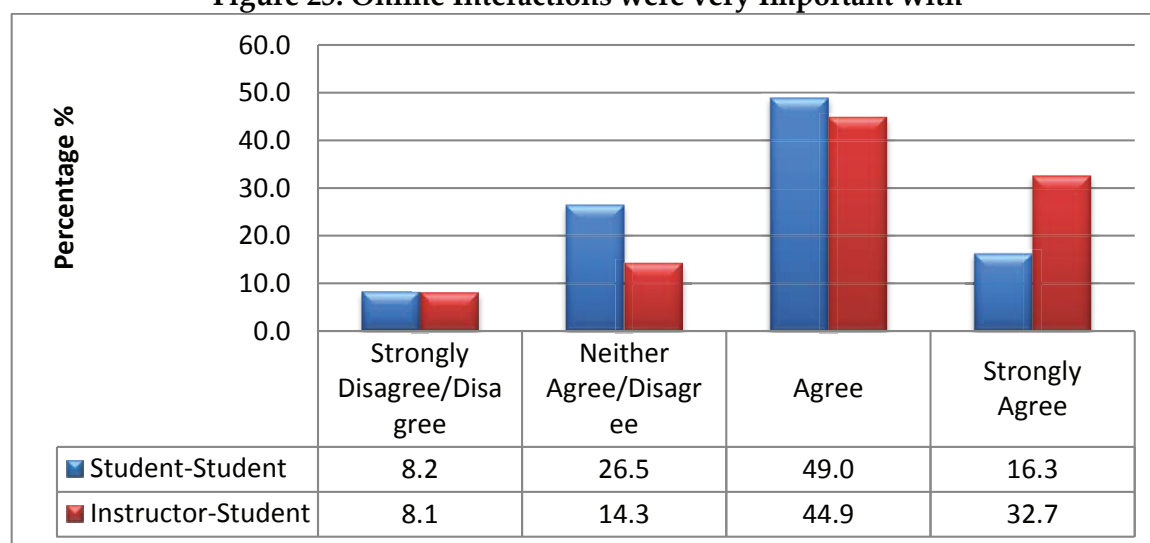
Therefore, it can be argued that instructor-student online exchanges helped students to build this personal connectedness between them and their instructors which is seen as useful because it can promote students' language learning in their online discussion forums and in their FtF classrooms. Figure 24 shows that 36.7% of students indicated that they neither agreed nor disagreed that they felt personally connected with their instructors in instructor-student online exchanges. Similarly, a considerable number of students (49.0%) neither agreed nor disagreed that they felt personally connected with their peers in student-student online exchanges. Students felt the same in terms of feeling personally connected with their instructors and peers in the two phases of online exchanges. However, another likely reason is that students might not have understood what was meant by feeling *personally connected* and accordingly they decided to be neutral when they were asked to provide their responses.

On the basis of the above perception finding, it can be noted that students in the present study showed higher levels of social presence but lower levels of feeling personal connectedness when they interacted with their peers than instructors. There are some reasons why personal connectedness of students did not correlate with their social presence when they interacted with their peers in student-student online exchanges. First, it should be pointed out that students' social presence was measured by looking at 12 indicators of different functions in the transcripts of their online exchanges and feeling personal connectedness can be seen as one element of the 12 social presence indicators. Therefore, it can be noted that students' social presence in student-student interactions was dominated by other social presence indicators apart from only feeling personal connectedness.

It can be argued that students rated feeling personal connectedness with their instructors more than with their peers because instructors played a supportive role in the learning process more than peers and this role can be seen when instructors helped students with solving their personal and learning problems. Thus, students felt more personal connectedness with their instructors than peers because of the role of the instructor as a supporter which their peers did not play during the course of online interactions in the present study. However, when examining the feeling of other's social presence in the discussion forums, it can be noted that students felt their peers' social presence (which was expressed in the 12 indicators) more than their instructors' social presence and this is simply because peers displayed larger degrees of social presence than the instructors in the discussion forums.

7.1.2.4. Online Interactions were very Important with

Figure 25: Online Interactions were very Important with



As can be shown in Figure 25, a large proportion of students (44.9% agreed and 32.7% strongly agreed) indicated that their instructor-student online interactions were important. This is because students benefited from the interactions of their instructors as they were found to help them improve their linguistic accuracy and learn new grammatical and lexical aspects. This underscores the importance of the presence of the instructor during students' online exchanges because it can help them pay more attention to their language errors and improve their linguistic accuracy. Although considerable numbers of students (49% agree and 16.3 strongly agree) indicated that student-student online interactions were important, 26.5% of students in student-student neither agreed nor disagreed with this perception. The proportion of neither agreed nor disagreed shows that students were unsure whether their student-student online interactions were important and this may be because of the fact that they were interacting with students (novices) not with instructors (experts).

Because instructors supported their students' L2 interactions to produce accurate language, students, therefore, held more positive perception of their instructor-student online interactions than of their student-student online interactions. To examine students' perceptions in terms of whether the interactions of their instructors were seen as helpful for their language learning during their instructor-student online exchanges,

further four perception responses were analysed and reported, as shown in figures in the following section.

7.1.3. Results of Students' Perceptions of Instructors' Interactions

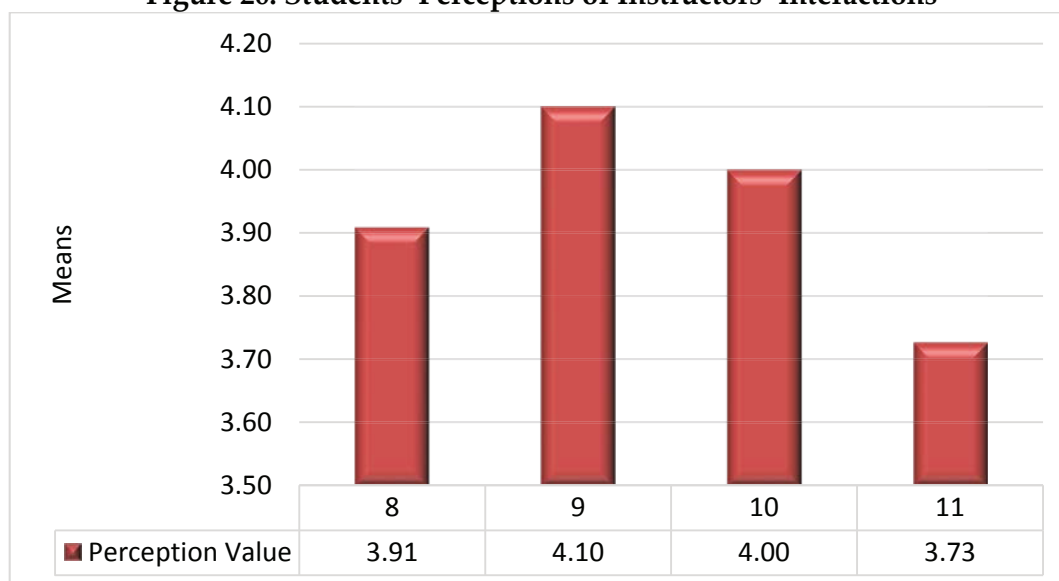
To gain an insight into students' perceptions of whether instructors' interactions were seen as useful for their language learning, students were asked to provide answers for four questionnaire perception items by using the Likert scale. These answers were examined statistically and the descriptive analysis results are reported in Table 24 and discussed as follows.

Table 24: Students' Perceptions of Instructors' Interactions—Descriptive Analysis Results

N=49 Students' Perceptions	<i>M</i>	<i>SD</i>
8. Online interactions of the instructor supported my interactions	3.91	.75
9. Online interactions of the instructor encouraged me to improve my English language	4.10	.94
10. Online interactions of the instructor encouraged me to compose correct grammatical sentences	4.00	.88
11. Online interactions of the instructor encouraged me to write correct spelling	3.73	1.07

According to Table 24, students had high means of perceptions about the statement that instructors' interactions were seen as beneficial for their language learning. This indicates that students valued their instructors as helpful and perceived their interactions as positive. This is because instructors supported their students' interactions and encouraged them to improve their English language, thereby helping them to write correct grammar and spellings.

Figure 26: Students' Perceptions of Instructors' Interactions

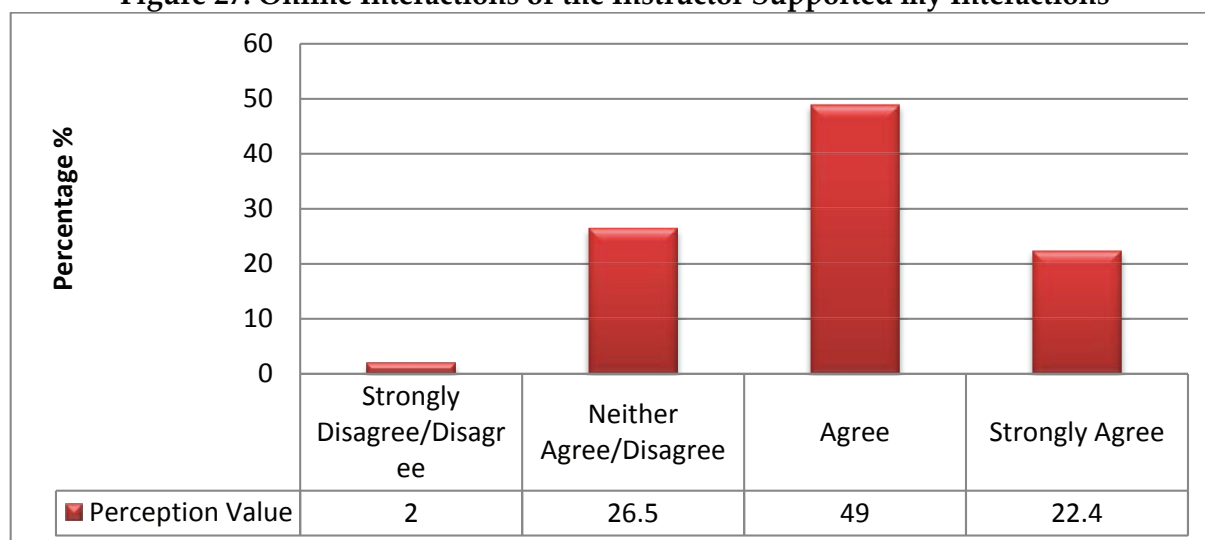


By looking at Figure 26, it can be observed that students have a higher mean in perception nine which indicates that the interactions of instructors encouraged students to improve their English language in comparison with other perception means. This perception result supports the findings of L2 performance in the present study. Students produced significantly more accurate language when they interacted in instructor-student than in student-student online exchanges. The presence of the instructors encouraged students to pay more attention to their language errors and scaffolding helped them to learn new grammatical and lexical features and improve their linguistic accuracy. Students' answers in perception items ten and eleven also supported other findings that instructors' interactions encouraged students to write correct grammatical sentences and use correct spellings when they interacted in instructor-student online exchanges.

The present study investigated the above perceptions in terms of scores' weight on the response levels identified in the Likert scale to further understand students' perceptions of instructors' interactions. The scales of *Strongly Disagree* and *Disagree* were also merged together because of zeroes and small score values to help present the results adequately.

7.1.3.1. Online Interactions of the Instructor Supported my Interactions

Figure 27: Online Interactions of the Instructor Supported my Interactions

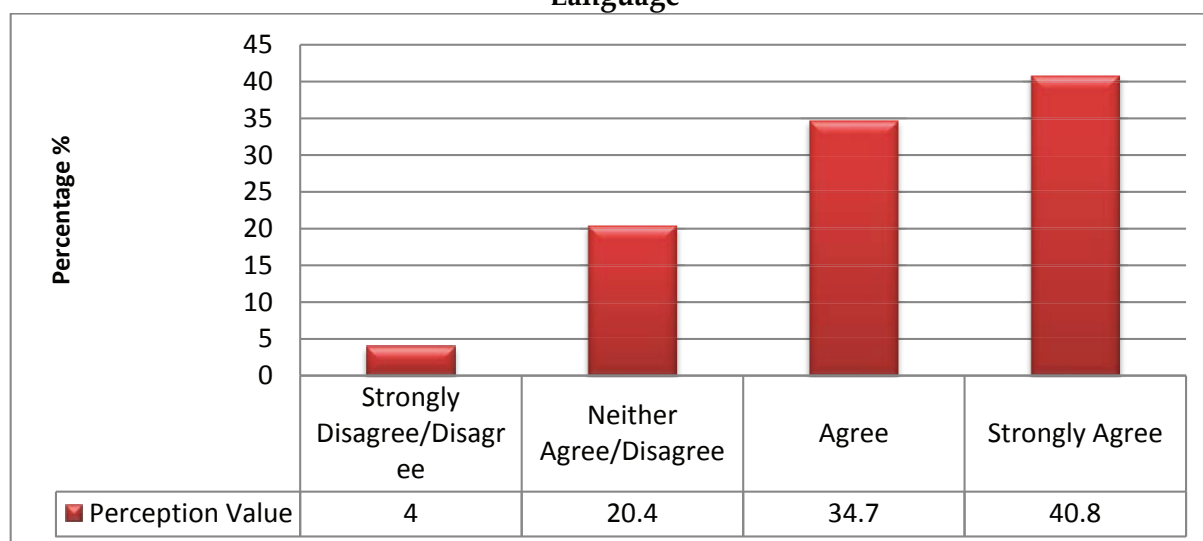


As can be seen in Figure 27, a substantial number of students (49% agreed and 22.4% strongly agreed) agreed that instructors' interactions supported their interactions in instructor-student online exchanges. This shows that students valued their instructors' interactions as positive for promoting their online interactions. That is because instructors guided the interaction in instructor-student online exchanges and their interactions were found to trigger students to engage in reflective interaction. For instance, referential questions which were directed by instructors helped students to engage in interaction frequently and produce their language.

However, 26.5% of students neither agreed nor disagreed that instructors' interactions supported their interactions in instructor-student online exchanges. This proportion of students shows that students were unsure whether instructors' interactions supported their online interactions and accordingly they may be chose to be neutral instead. The results of how instructors' interactions were seen as supportive is reported and discussed in the following section as well as in the qualitative part of this chapter.

7.1.3.2. Online Interactions of the Instructor Encouraged me to Improve my English Language

Figure 28: Online Interactions of the Instructor Encouraged me to Improve my English Language

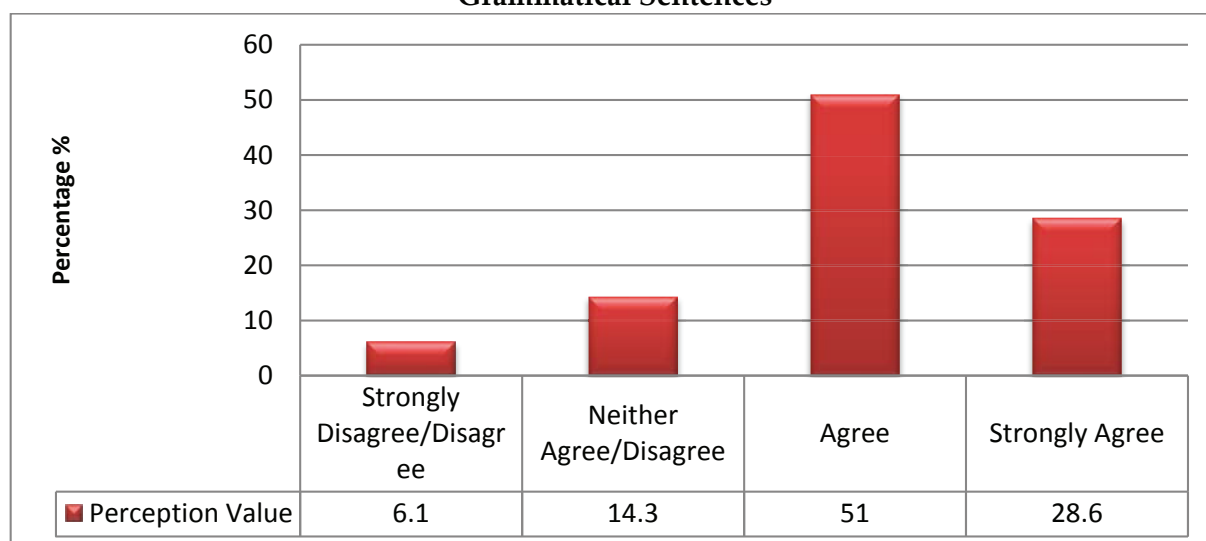


As can be seen in Figure 28, large number of students (34.7% agreed and 40.8% strongly agreed) believed that the interactions with their instructors encouraged them to improve their English language. This result supports the significant findings in the present study because students improved their linguistic accuracy when their instructors interacted with them in the discussion forums. Because of this, students perceived the interactions of their instructors as positive for their English language.

Nevertheless, 20.4% of students were found to be unsure of whether their instructors' interactions encouraged them to improve their English language when they interacted in instructor-student online exchanges. Perhaps it was difficult for those students to judge the improvement of their English language, especially if their language competence was low. The results of how the interactions of instructors were perceived by students as helpful for improving their English language is reported and discussed in the following sections.

7.1.3.3. Online Interactions of the Instructor Encouraged me to Compose Correct Grammatical Sentences

Figure 29: Online Interactions of Instructor Encouraged me to Compose Correct Grammatical Sentences

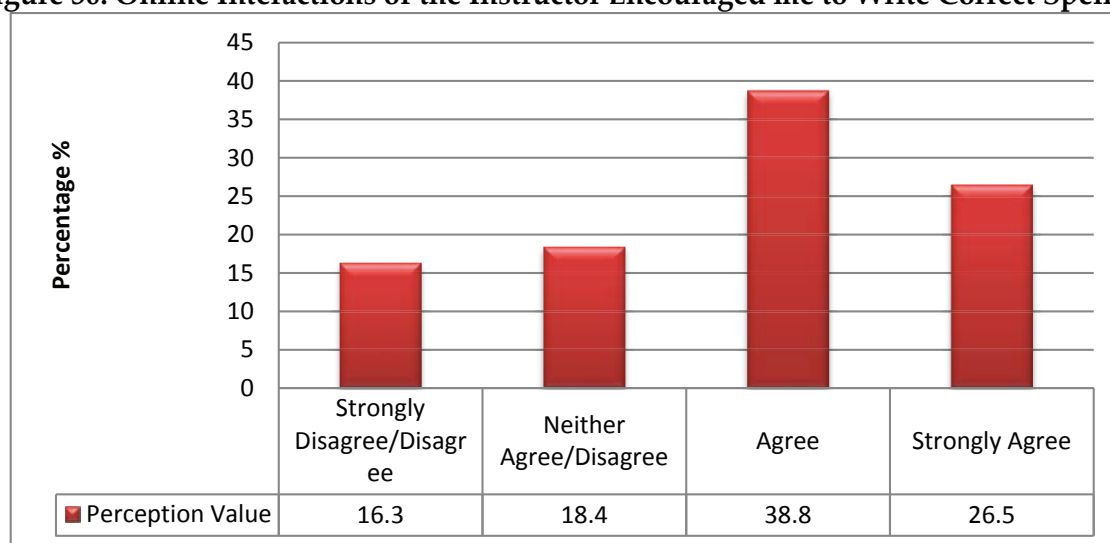


As can be seen in Figure 29, considerable numbers of students (51% agreed and 28.6% strongly agreed) believed that the interactions of their instructors encouraged them to compose correct grammatical sentences. This supports the significant findings because students paid significantly more attention to their linguistic accuracy by correcting their language errors when they interacted with their instructors in the forums.

Nonetheless, a small number of students (14.3%) neither agreed nor disagreed that their instructors' interactions encouraged them to compose correct grammatical sentences. This indicates that there were smaller numbers of students who were unsure whether the interactions of their instructors encouraged their grammatical accuracy in comparison with those students who were sure. This shows that most students valued the interactions of their instructors in instructor-student online exchanges as helpful for their grammatical accuracy.

7.1.3.4. Online Interactions of the Instructor Encouraged me to Write Correct Spelling

Figure 30: Online Interactions of the Instructor Encouraged me to Write Correct Spelling



In terms of spelling, Figure 30 shows that 38.8% of students agreed and 26.5% students strongly agreed that instructors' interactions encouraged them to use correct spelling when they interacted in instructor-student online exchanges. This was supported by the finding that students paid more attention to the linguistic accuracy of their interactions in instructor-student online exchanges. On the other hand, it can be observed that 16.3% of students disagreed and 18.4% of students did not agree or disagree that the interactions of their instructors encouraged them to write correct spelling in instructor-student online exchanges. The latter proportion of students indicates that some students were unsure whether their instructors' interactions encouraged them to write accurate spelling in instructor-student online exchanges.

7.2. Summary of Quantitative Findings: Students' Perceptions

To sum up, the results of quantitative analyses showed that students had greater means of positive perceptions towards the interactions of instructor-student than the interactions of student-student. Students significantly valued their instructor-student interactions as excellent, comfortable, and important as compared with their student-student online interactions. Students felt personally connected to their instructors more than peers to the extent that some students used emails to communicate their personal

language learning issues to their instructors. Students valued their instructors' interactions as helpful for their interactions and language learning. The interactions of their instructors encouraged students to develop their English language by improving the accuracy of their language grammar and spelling. To further understand students' perceptions in student-student and instructor-student online interactions, the students' questionnaires and interviews were analysed qualitatively. The results of qualitative analysis are reported and discussed in the following sections.

7.3. Qualitative Analysis Results

7.3.1. Instructor-Student Online Interactions were Important

First of all, from students' questionnaires, it was observed that 43 students (87.75%) indicated, by responding to the open-ended questions, that they valued their instructor-student as more important than their student-student online interactions. This substantial percentage shows that students perceived the online interactions of instructor-student more positively than student-student online interactions. This result supports the previous findings as instructors' interactions helped students improve their linguistic accuracy and develop their language. For instance, Musfer paid more attention to his linguistic accuracy when he interacted in instructor-student than in student-student online exchanges (see Example eight in section [4.2.2.1.](#)). Musfer indicated in his questionnaire that the interactions of his instructor were seen as important for improving his language when he interacted in instructor-student online exchanges.

I found that the interactions of instructor-student are more important than the interactions of student-student because they helped me to develop my grammatical accuracy and encouraged me to think deeply when I wrote in the online discussion forum.

This indicates that Musfer linguistically benefited from the interactions of instructor-student to develop his language. The presence of his instructor influenced him to pay more attention to the linguistic accuracy of his online interactions. He also indicated that the interactions of his instructor encouraged him to think carefully when he interacted in instructor-student online exchanges. Because instructors directed referential questions to their students, this influenced them to think carefully when they interacted

in instructor-student online exchanges. What was found in Saif's interview below supports Musfer's perception above by showing that the interactions of instructor-student were perceived as more important for developing grammatical accuracy than the interactions of student-student.

The interactions of instructor-student are more important than the interactions of student-student because they can help students to improve their English grammar and accuracy when they interact in the online discussion forums.

Hatem gives more support to what students indicated above by also perceiving instructor-student online interactions as more important than student-student online interactions because his linguistic accuracy and thought expression were improved when he interacted in instructor-student online exchanges.

The interactions of instructor-student were more important than the interactions of student-student because they helped me to correct my grammatical mistakes. The interactions of my instructor gave me a good opportunity to express my thoughts in front of a person who is an expert and has language expertise.

As stated earlier, because instructors interacted with their students, their presence, scaffolding, and corrective feedback helped students to pay more attention to their linguistic accuracy and develop their language. It can be deduced that the presence of instructors also helped students to express their thoughts because they regarded their instructors as the experts who can value their interactions, assess their learning, and provide them with language feedback and support. Naser in his questionnaire summarized how the interactions of his instructor were seen as important when he interacted in instructor-student online exchanges.

From my point of view, the instructor has a substantial role during online interactions in the discussion forum because he can help students to correct their grammatical and spelling errors. He also can help them develop their knowledge of culture, and this, in turn, can help students develop their English language effectively.

Naser perceived that the instructor played an important role in online interactions. Because instructors are regarded as the language experts, students can benefit from their language expertise such as learning language grammar and culture. Concerning learning cultures, when students, for instance, discussed the topic of travelling to English native speaking countries to develop their English language, instructors

interacted with their students and shared with them some cultural issues of learning English language which students may face in English countries (see Example 31 (a) and (b) in section [6.1.2.1](#)). Instructors in discussing this topic were found to scaffold their students as they initiated questions and argued with them. This scaffolding helped students to interact, share their cultural knowledge, and accordingly learn some cultural background about learning English in English-speaking countries. Why instructors' online interactions were perceived as helpful for students' language learning is discussed as follows.

7.3.2. Instructor-Student Online Interactions were Useful for L2 Learning

In terms of perceiving the interactions of instructors as useful for language learning, Ameer was found to feel excited because the interactions of his instructor encouraged him to take care of his linguistic accuracy in the discussion forum.

The interactions of my instructor made me felt excited because they helped me to pay more attention to language mistakes and write good sentences in instructor-student online exchanges. They encouraged me to write precisely and contribute to the discussion in the online forum.

This confirms what was found in the present study when Ameer's case was investigated earlier. He was found to interact with his instructor, learn new grammatical features, and accordingly improve his English grammar (see Example 30 in section [6.1.1.1](#)). Therefore, the role of his instructor was seen as useful because he scaffolded his interactions and helped him to gain new grammatical knowledge and develop his language. Ameer also mentioned that he liked two interesting things when he interacted in instructor-student online exchanges.

The interesting things I liked when my instructor interacted with me in instructor-student online exchanges were when he asked me and when I responded to his questions.

The role which the instructor played eventually helped Ameer to acquire new language knowledge and develop his language as it was observed in Example 30.

Likewise, it was found that Saeed perceived the online interactions of his instructor as beneficial for his interactions because they encouraged him to gain confidence in instructor-student online interactions.

The online interactions of my instructor provided me with confidence to interact in instructor-student online exchanges.

This shows that the presence of the instructor as the expert influenced Saeed to have confidence and interact accordingly in instructor-student online exchanges. However, the present study did not find significant differences in the perception of students' confidence between student-student and instructor-student online exchanges.

Mansoor reported how he perceived the online interactions of his instructor when he interacted in instructor-student online exchanges.

When my instructor started to interact with my postings, I really felt excited and energetic and that was the most interesting thing for me during instructor-student online exchanges in this study.

The interactions of instructors showed that instructors valued their students' interactions and this in turn influenced students to feel excited. On the basis of the above findings, it can be argued that interacting with students by showing recognition of what they exchange and appreciation of their contributions make them feel excited and this in turn can increase their confidence to participate and interact with other interlocutors in online discussion forums.

7.3.3. I Felt Comfortable Interacting in Instructor-Student Online Interactions

By examining students' questionnaire responses to open-ended questions, it can be found that 36 students (73.46%) indicated that they felt comfortable interacting in instructor-student online exchanges. This considerable number gives more support for the quantitative findings in the present study. It was also found that a larger number of students reported in their questionnaire's open-ended responses that they liked to interact in instructor-student (20 students, 41%) more than in student-student (17 students, 35%) online exchanges because of several reasons which students noted—the other students (12 students, 24%) liked to interact in the two phases of online exchanges equally. These reasons which students noted are reported and discussed in the following sections.

7.3.3.1. Instructor-Student Online Interactions were Reflective

The first reason why students liked to interact in instructor-student more than in student-student online exchanges is that students perceived the interactions of their instructors as more reflective (i.e., responding and contributing to posts) than the interactions of their peers. This can be attributed to the presence of the instructors. That is, because instructors directed questions and argued with their students, this triggered their students to interact with their instructors and contribute to the reflectivity of instructor-student online interactions. For example, Zaman explained how his peers interacted in student-student and instructor-student online exchanges.

I noted that my peers interacted and did their best when they interacted with their instructor in instructor-student more than with they interacted without their instructor in student-student online exchanges.

Naser supports this by reporting that he felt more serious when interacting in instructor-student online exchanges than in student-student online exchanges because of the presence of his instructor.

Because of the presence of my instructor I felt more serious to interact in instructor-student than in student-student online exchanges.

Mohammed also reported that he liked to interact in instructor-student more than in student-student online exchanges because of his instructor's interactions.

I liked to interact in instructor-student online exchanges more than in student-student online exchanges because of two reasons; my instructor used to interact with my online interactions and this encouraged me to reflect on his thoughts.

As reported above, it can be noted that some students liked the interactions of instructor-student more than the interactions of student-student because student-student interactions did not seem to be reflective and students did not show the same seriousness in their student-student interactions as compared with their instructor-student online interactions. On the basis of this finding, it can be argued that the presence of instructors can encourage students to be serious during their online interactions and the subsequent interactions by instructors can encourage them to be reflective.

7.3.3.2. Instructor-Student Online Interactions were Useful for Thinking and Language Exposure

The second reason is that instructors' interactions were perceived by students as useful because they encouraged them to think more about what they wrote and exposed them to the target language. For example, Ibraheem reported that he benefited from the interactions of his instructor because they encouraged him to think.

I liked to interact in instructor-student more than in student-student online exchanges because the interactions of my instructor encouraged me to think more about what I was going to write in the online discussion forum.

Similarly, Amaar perceived the interactions of his instructor as useful because it exposed him to the English language.

I liked to interact in instructor-student more than in student-student online exchanges because the interactions of my instructor exposed me to the English language.

Students perceived the interactions of their instructors positively because they found them useful for their thinking and language exposure. Because instructors as the experts interacted with their students, their referential questions encouraged students to think more when they answered them and their language output exposed them to the English language.

7.3.3.3. Instructor-Student Online Interactions were Helpful for Grammatical and Spelling Accuracy

The third reason is that the interactions of instructors were perceived by students as helpful because they encouraged them to correct their grammatical and spelling errors. This was the most noted reason in the present study in terms of why several students liked to interact more in instructor-student than in student-student online exchanges. Saeed, for instance, indicated that he liked to interact in instructor-student more than in student-student online exchanges because he believed that he benefited from the online interactions of his instructor to improve his grammatical accuracy.

I liked to interact in instructor-student more than in student-student online exchanges because my instructor encouraged me to correct my grammatical mistakes when I interacted in the online discussion forum.

Fahad supports what Saeed believed by indicating that his instructor corrected students' linguistic errors when they interacted in instructor-student online exchanges.

I observed that my instructor was concerned with correcting students' grammatical and spelling errors in instructor-student online exchanges and I really liked that.

Therefore, students liked to interact in instructor-student more than in student-student online exchanges because instructors encouraged them to develop their grammatical and spelling accuracy.

Abdul's L2 learning case was seen as important because he learnt new lexical forms and improved his linguistic accuracy when he interacted with his instructor (see Example 9 in sections [4.2.2.1](#) & [6.1.3.1](#)). Abdul perceived the online interactions of instructor-student as more helpful than the online interactions of student-student online exchanges. Abdul indicated in his questionnaire that the interactions of the instructor can have a positive influence on students' language.

The interactions of the instructor can influence students to develop their language in terms of using correct grammar and spelling when they interact in the online discussion forum.

Likewise, Talal valued the online interactions of his instructor as helpful for the development of his grammatical and spelling accuracy.

I felt that my language developed after I interacted with my instructor in instructor-student online exchanges. The online interactions of my instructor helped me to correct my grammatical and spelling mistakes.

Some students in the present study were found to perceive the online interactions of their instructor-student as more useful than the online interaction of student-student online exchanges because their grammatical and spelling accuracy benefited from the online interactions of their instructors. The presence of instructors encouraged students to pay more attention to their language errors and their interactions helped them to improve their linguistic accuracy.

7.3.3.4. Instructor-Student Online Interactions were Useful for Strengthening the Relationship between Student and the Instructor

Another interesting reason why students preferred to interact in instructor-student more than in student-student online exchanges is because instructors' online interactions were perceived as useful in terms of lessening interaction barriers between students and their instructors. Sultan, for instance, reflected on the online interactions

of instructor-student online exchanges and he underscored the role of the instructor as essential for fostering language interaction among students and instructors in the discussion forum.

The interactions of instructors are seen as helpful because they can break many barriers between students and their instructors and this in turn can have a positive effect on language learning in the online discussion forum.

In line with what Sultan perceived, Aziz perceived the online interactions of his instructor as useful because they fostered students' interactions and developed a strong relationship between students and their instructor in the discussion forum.

The most interesting thing which I noted during the interactions of instructor-student online exchanges in this study was the development of a strong relationship between students and their instructor.

It can be deduced that the interactions of instructors with their students might have developed a supportive relationship between students and their instructors because they interacted with each other as one learning community in the discussion forums. A good relationship between students and their instructors is seen as important for fostering online interaction and language learning among students because it can support them to interact and develop their language when they use the discussion forums. Finally, Faisal indicated why he liked to interact in instructor-student more than in student-student online exchanges by reflecting on his online interaction experience.

I liked instructor-student online interactions more than student-student online interactions because I felt more comfortable, social, and connected with my instructor than with my peers in this study. The time when my instructor started to interact with us was the most interesting thing I experienced in the online discussion forum in this study. This was because my instructor did not only post topics but he was there interacting with us most of the time and supporting our language to the extent that when I knew that he was there online I always tried to exchange with him and do my best to produce accurate and perfect language.

As can be deduced from the above interview excerpt, Faisal valued the interactions of instructor-student as more helpful than student-student online interactions because of the presence of his instructor. The presence of the instructor as the knowledge authority made him to feel happy, social, and connected with his instructor in the forum. The online exchanges of Faisal's instructor encouraged him to pay more attention to language errors and produce accurate language. Another interesting observation which

can be found in Faisal's interview excerpt above is that he used to exchange with his instructor more whenever he knew that he was online and did his best to produce accurate language. This shows that he was willing and happy to interact in instructor-student online exchanges because of the presence of the instructor.

7.4. Summary of Qualitative Findings: Students' Perceptions

To sum up, the qualitative analysis results of students' questionnaire and interview data demonstrate that students perceived the online interactions of instructor-student more positively than the online interactions of student-student. This result gives more support for the previous quantitative findings by noting that students valued instructor-student online interactions as more helpful for online interaction and language learning than student-student online interactions. Because of the presence of instructors, instructor-student online interactions encouraged students to interact, think carefully, pay attention to language errors, be reflective, and improve linguistic accuracy more than student-student online interactions. When instructors were present during online interactions, this made students feel comfortable because their instructors were available to support their interactions and language learning in the discussion forums. The referential questions and corrective feedback which were produced by instructors in the forums were seen as useful. The former encouraged students to think more and engage in interaction with their instructors and the latter helped students to improve their linguistic accuracy. Besides the above findings, students perceived the interactions of instructor-student more positively than student-student online interactions because instructors' interactions exposed them to the English language, helped them to learn language culture, and strengthened the relationship between them and their instructors.

Part V: Discussion and Conclusions

Chapter Eight: Discussion of Study Questions and Implications

8.1. Are there Significant Differences in Saudi Students' L2 Performance?

There were significant differences between the L2 performance of Saudi EFL students depending on whether they were interacting in student-student online exchanges or in instructor-student online exchanges. These significant differences were found in the frequencies of students' linguistic units and in the ratio of their linguistic measures.

Saudi students produced higher rates of T-units, clauses, lexical words, and words in their interactions when they interacted in student-student than in instructor-student online exchanges. This shows that students' interactions were longer when they interacted with their peers. These findings support previous studies where students interacted more with their peers (Kern, 1995) and their online discussions were found to be longer (Warschauer, 1996). Kern (1995) noted that student-student online interactions encouraged students to learn with their peers and increase the amount of their online contributions. However, no significant differences were found in the numbers of error-free T-units (EFT) and error-free clauses (EFC) between student-student and instructor-student online exchanges. This indicates that Saudi students produced similar rates of EFT and EFC frequencies in the two phases of online exchanges.

With respect to linguistic ratio measures, significant differences were found in the measures of students' lexical density of LW/W and linguistic accuracy of EFC/C between the two types of online exchanges. Saudi students' interactions were found to be more lexically dense when they interacted in student-student online exchanges and more linguistically accurate when they interacted in instructor-student online exchanges. This clearly shows that students' online interactions were lexically richer but linguistically less accurate when they interacted in student-student online exchanges. This lexical richness by Saudi students supports Stockwell (2010) which showed that students had more variation in their vocabulary when they interacted in student-student online exchanges although these variations were not significant. It also supports Miyazoe and

Anderson (2010) who found that students had higher lexical density because they benefited from their peers' interactions in the discussion forums. On the basis of the findings of lexical density of Saudi students and previous L2 studies (e.g., Miyazoe & Anderson, 2010; Stockwell, 2010; Warschauer, 1996), it can be argued that EFL students do not feel shy about interacting frequently with their peers and they produce high rates of lexical words when their instructors are not present.

In terms of linguistic accuracy, the present findings support the findings of previous studies (e.g., Loewen & Reissner, 2009) by finding that Saudi EFL students' interactions were more accurate when they interacted in instructor-student online exchanges than in student-student online exchanges. Loewen and Reissner (2009) attributed this to the fact that the presence of the teacher encouraged them to focus more on accuracy than meaning during their online exchanges. Stockwell (2010) also supports this finding by indicating that the presence of the teacher caused students to take more care in their writing while exchanging online. The qualitative findings were found congruent with the quantitative findings by noting that the presence of the instructors encouraged Saudi students to pay attention to and improve their linguistic accuracy in instructor-student online exchanges.

On the other hand, no significant differences were found in measures of students' fluency of W/T and W/C, linguistic accuracy of EFT/T, lexical density of LW/C and LW/T, and grammatical complexity (C/T) between the two phases of online interactions. This shows that the presence or absence of the instructor did not seem to affect the above linguistic measures of Saudi students in their online discussion forums. Kol and Schcolnik (2008) and Ritchie and Black (2012) did not find significant differences in the fluency and grammatical complexity of their students' online exchanges although the instructors were absent. They attributed their findings to the fact that online exchanges only occurred for one semester and this was not considered enough time for students to develop significant differences in their language. Given that there were no significant differences among Saudi students in terms of the measures of EFT/T, LW/C, and LW/T, it can be argued that coding stand-alone noun phrases and stand-alone dependent

clauses might have affected the results of the above measures because the numbers of stand-alone elements were not measured in the analysis.

On the basis of the mixed findings of lexical density in the present study, it should be pointed out that applying the measure of lexical density (i.e., token/token ratios) may not be as good as type/token ratio measures when assessing learners' language performance (c.f., Wolfe-Quintero et al., 1998). For instance, it is possible that learners can get high density scores when they produce small numbers of vocabulary items with many lexical repetitions. Type/token ratio measures unfortunately were not applied in the current study but it would be worthwhile if such type/token ratio measures are applied in future research to examine the lexical complexity of Saudi students' interactions when they interact with their peers and instructors in online discussion forums.

Furthermore, it should be pointed out that the index of EFT was found to be inefficient in detecting the multiplicity of Saudi students' errors (such as error clauses) within the T-units. Because of this difficulty, it can be argued that the T-unit as an analysis unit defined by Hunt (1965) failed to account for the accuracy of dependent clauses when they were not attached to or embedded within independent clauses of the L2 production of Saudi students. This finding gives further support to the findings of previous research which showed that EFT is not as efficient as EFC in assessing students' linguistic accuracy (e.g., Polio, 1997; Storch, 2005; Wolfe-Quintero et al., 1998).

8.1.1. What are the Qualities of Saudi Students' L2 Performance?

Saudi EFL students were found to produce different levels of performance during their student-student and instructor-student online exchanges. Saudi students produced higher rates of lexical words to overall words when they interacted in their student-student online exchanges. This is because of the absence of the instructors, which encouraged students to take risks in producing their language and expressing their thoughts, thus contributing to the lexical richness of their online interactions. However, the finding that students had higher levels of social presence can also explain why they had higher rates of lexical density in student-student online exchanges. Other observed

reasons for the lexical richness of Saudi students' interactions are the lexical learning in terms of consulting print and online vocabulary resources, the students' willingness to take part, and the stimulating discussion topics. For instance, students reported that they put more effort into lexical learning by surfing English websites and consulting English dictionaries more when they interacted in student-student than in instructor-student online exchanges. Other students also indicated that they were trying to do their best in expressing their thoughts and they used to look for new vocabulary and expressions in student-student online exchanges.

With respect to linguistic accuracy, Saudi students paid less attention to their linguistic accuracy when they interacted in student-student online exchanges. This finding is congruent with previous studies (e.g., Kern, 1995). Kern (1995) argued that his students may have focused on the meaning more than on the form. However, the present study argues that the lack of care about linguistic errors by Saudi students is because of the absence of the instructors, as with the results of both Loewen and Reissner (2009) and Stockwell (2010). Saudi students did not correct their linguistic errors when their instructors were absent even though they appeared to be aware of them. This finding is also consistent with previous studies where students did not correct their grammar (Hadjistassou, 2008; Loewen & Reissner, 2009) and rarely corrected their language errors (Liang, 2010; Salaberry, 2000). This can underscore the role of the instructors because it encouraged Saudi students to pay attention to language errors and improve their linguistic accuracy during their online exchanges.

During instructor-student online exchanges, on the other hand, the findings show that Saudi students produced smaller rates of lexical words to overall words. This can be attributed to several reasons. One of them, as mentioned above, is the presence of the instructors. Saudi students might have avoided taking risks by not writing longer interactions or posting frequently when their instructors interacted with them. This finding supports Stockwell (2010) who stated that "the presence of the teacher...may have led learners to avoid taking risks in writing messages" (p. 99). Another likely reason is that instructors in the present study seemed to interact with their students

infrequently and they took more time than other interlocutors in the interaction with their students, thereby possibly affecting their students' engagement and lexical density. The present study also argues that the small degrees of social presence projected by students and instructors in instructor-student online interactions might not have made Saudi students feel confident in producing their lexical words. In terms of linguistic accuracy, the findings clearly show that Saudi students noticed their linguistic errors and corrected them when their instructors were present in the forums. This finding is widely confirmed by the findings of previous studies in online discussion forums (e.g., Sotillo, 2000; Yang, 2011). Similar results were also found in text-based chatrooms (e.g., Alwi et al., 2012; L. Lee, 2008; Loewen & Reissner, 2009; Stockwell, 2010).

Given that Saudi students were found to pay more attention to the linguistic accuracy of their interactions in their instructor-student online exchanges, the present study found that students received corrective feedback from their instructors (e.g., Sotillo, 2000). This finding is congruent with previous studies where students benefited from their instructors' corrective feedback to improve their linguistic accuracy (e.g., Alwi et al., 2012; L. Lee, 2008; Loewen & Reissner, 2009; Yang, 2011). However, the language corrective feedback offered to Saudi students by their EFL instructors was rarely observed in their discussion forums. Instructors discussed some of their students' online language mistakes and give corrective feedback often during the times of FtF class (without referring to the names of students who did them) or via students' personal emails. This can clearly show that EFL instructors have used this strategy to avoid embarrassing students during their interactions in the discussion forums. On the basis of the above findings, it can be concluded that interaction with the instructor was seen as useful in terms of increasing Saudi students' attention to their language errors and improving their linguistic accuracy in their discussion forums.

8.2. Are there Significant Differences in Saudi Students' Social Presence?

There were significant differences in the degrees of Saudi EFL students' social presence between the two types of online interactions. This social presence was significantly found in the expressions of emotion, humour, compliment, and salutations. The other indicators of social presence did not have significant differences. Zhao and Bitchener (2007) found that student-student FtF interactions had significantly higher rates of acknowledgements than teacher-to-student FtF interactions. This observation is congruent with what the present study found in online interactions as Saudi students had higher rates of compliments and appreciation in their student-student interactions as compared with their instructor-student online interactions. The cross-comparison analysis between the discussion forums of students' English courses did not find significant differences in the degrees of Saudi students' social presence. The level of students' English was not found to affect Saudi students' social presence across the discussion forums of their English courses.

Among social presence categories, the only category which had a significant number of differences was emotional expressions. Saudi students used higher rates of emotional expressions when they interacted in student-student than in instructor-student online exchanges. The category of emotional expression comprises emotions, humour, and self-disclosure exchanges, with emotions and humour being the most prevalent. However, emotion had a greater significant difference than humour. The overall frequency of Saudi students' social presence was found to be significantly higher in student-student online exchanges than in instructor-student online exchanges. Because of the presence of the instructors, Saudi students felt too shy to project their social presence when they interacted in instructor-student online exchanges.

8.2.1. What are the Qualities of Saudi Students' Social Presence?

Saudi EFL students were found to project their social presence in various activities and in different frequencies during their student-student and instructor-student online exchanges. In student-student online exchanges, the most prevalent behaviour of social presence was expressing emotions. During this exchange, Saudi students engaged in typing conspicuous capitalizations, laughing, posting emotional characters (i.e., emoticons), and expressing happiness by writing. This finding is in line with what Sharifian and Jamarani (2013b) suggested in the sense that participants type capital letters and use emoticons to express their emotions when they interact online with other interlocutors. Saudi students exchanged emoticons very frequently when they interacted in student-student online exchanges and this contributed to the higher degrees of their social presence in the present study. This finding supports the results of Ko (2012) where students' social presence was mostly enhanced by the use of emoticons in online interactions. Saudi students expressed more emotions with their peers than instructors because the presence of the instructors limited students from expressing their emotions, as reported by students.

The second most prevalent social presence behaviour in which Saudi students engaged, when they interacted in student-student online exchanges, was the expressions of compliment and appreciation. This is in line with Sengupta (2001) whose results showed that students largely expressed compliments when they interacted in their student-student online interactions. Saudi students did this more frequently when they interacted in student-student than in instructor-student online exchanges and this contributed to the higher degrees of their social presence. The third dominant social presence behaviour was using salutations. Once again Saudi students engaged in salutations more frequently when they interacted in student-student than in instructor-student online exchanges. They were found to greet their peers and salute them when they opened and closed their online interactions. They also used humour more frequently in their student-student online exchanges. However, the use of humour was found to be the least frequent behaviour of social presence in which Saudi students

engaged. When using humour in student-student online exchanges, students engaged in teasing, joking, and irony. This was possible because of the absence of the instructors. Saudi students felt it was easy to use humour when they interacted with their peers. The higher rates of emotions, humour, compliments, and salutations which Saudi students projected contributed to the higher degrees of their social presence in student-student online exchanges.

With respect to instructor-student online exchanges, Saudi students displayed lower degrees of social presence. Students expressed emotions, humour, compliments, and salutations less frequently when their instructors interacted with them as compared with their student-student online exchanges. Interestingly, Saudi students engaged in the above social presence behaviours during their instructor-student online exchanges in the same order of frequency as in student-student online exchanges. The most prevalent social presence behaviour, which Saudi students engage in with their instructors, was emotions, the second most frequent kind of social presence was compliments, the third was salutations, and the least frequent one was humour. Saudi students reported that expressing emotions (e.g., conspicuous capitalizations, emoticons, and laughing) when they interacted with their instructors was not as easy as it was that with their peers because of the nature of the relationship between student and the instructor. However, Saudi students might also have avoided expressing emotions because their instructors were not found to express their emotions during online exchanges. Students seemed to believe that emotional exchanges indicate that they were not serious about their online interactions. They reported that their online interactions were more formal when their instructors interacted with them in instructor-student online exchanges.

Moreover, Saudi students reported that they found it also difficult to joke and use humour when their instructors interacted with them in instructor-student online exchanges. Some students avoided using humour in instructor-student online exchanges because instructors did not use humour with them. With regard to compliments and salutations, Saudi students did not appear to compliment and salute

their instructors. Although one of the instructors complimented his students, students did not appear to express compliments or respond to his compliments. The likely reason for that may be because the instructors did not exchange their opinions and interact frequently with their students. The lower rates of emotions, humour, compliments, and salutations which Saudi students maintained contributed to the lower degrees of their social presence in instructor-student online exchanges.

Saudi students used different editing features (such as different fonts, font sizes and colours, and different text styles) more frequently to display their social presence in student-student than in instructor-student online interactions. This can indicate that students were using these features to express their social presence in the discussion forums. However, based on the model of social presence (Garrison et al., 2000, 2001) and the coding template developed by Rourke et al. (2001), these editing features do not appear in the definitions of social presence. Therefore, it can be argued that Saudi students were also found to project their emotions by the ways of using different editing features in the forums besides using emoticons and conspicuous capitalizations which are defined in the model of social presence.

In the Saudi context, university students during social interactions believe that they have to show a higher degree of respect to their instructors than to their peers by avoiding informal expressions and words. They also feel too shy to start greeting their instructors in social interactions. Because of these beliefs, Saudi students avoided using *hi* and *hello* because they may have perceived that using them shows less degree of respect to their instructors when they interacted in instructor-student online interactions. Saudi students did not even use formal greetings such as *Dear* in their online exchanges. This may imply that they have not yet learnt English greetings in their EFL context. This finding supports the recommendations made by Hassanain (1994). He encourages EFL teachers to help Saudi EFL learners learn aspects of English greetings by training their students such as using role-playing or inviting English native speakers to help with demonstrating aspects of greetings in the Saudi EFL context.

Moreover, it should be pointed out that Saudi students always greet authority figures such as university instructors by using formal Arabic greeting like *peace be upon you* (short greeting) or *peace and blessings of Allah (God) be upon you* (long greeting). However, Saudi students did not use such greetings when they interacted with instructors in instructor-student online exchanges. The likely reason for this observation is that students did not think it was appropriate to use their first language greetings during their L2 interactions because they were asked to use their English in the present study. However, Hassanain (1994) argues for allowing Saudi students to use their L1 greetings in their EFL context because they are regarded as one of the linguistic abilities in social interactions.

8.3. Do Different EFL Instructors Produce Different Rates of Online Interactions?

The present study found that the instructors produced different rates of discourse functions, participation, and social presence. This clearly shows that the three different EFL instructors differed from one another when they interacted with Saudi students in the discussion forums. This can possibly be attributed to the individual differences between the instructors in the present study. Instructor Adel produced a higher rate of discourse functions than instructors Ibrahim and Omar. However, instructor Omar produced a higher rate of social presence than instructors Ibrahim and Adel. On the other hand, instructor Ibrahim produced the smallest rates of discourse functions, participation, and social presence among instructors in this study. He did not interact with his students frequently, maybe because he was busy with the commitments of his high administrative position in the faculty.

8.3.1. What are the Qualities of EFL Instructors' Online Interactions?

The three different EFL instructors exhibited different qualities in their interactions when they interacted with Saudi students in instructor-student online exchanges.

First, instructor Ibrahim produced the lowest rates of online interactions. He interacted less frequently and displayed a lesser degree of social presence with his students. His online interactions consisted mainly of the observations of sharing opinions, directing

questions, and providing suggestions. However, instructor Ibrahim rarely negotiated with his students, provided feedback, or expressed his emotions. Instructor Ibrahim was not found to compliment or greet his students. Secondly, instructor Adel produced the highest rate of discourse functions and his online interactions were dominated by directing questions and negotiations. He directed questions and negotiated with his students more frequently than other instructors. He engaged predominantly in posting questions and negotiating with students in the discussion forums. This supports previous L2 studies (e.g., Nor et al., 2012). It can be argued that directing questions appeared to contribute to the increase of the number of negotiations in the discussion forum. Furthermore, the degree of his social presence was smaller than instructor Omar but higher than instructor Ibrahim. However, instructor Adel's social presence was dominated by directing questions and he hardly engaged in any other social presence behaviours. Thirdly, instructor Omar gave the highest rates of participation and social presence and his interactions were dominated by providing feedback and expressing compliments more frequently than the other instructors.

8.4. Do Different EFL Instructors Influence Saudi Students' L2 Performance and Social Presence in Online Exchanges?

Cross-comparison between instructors' discussion groups in the present study showed that the only significant differences which were found were in the Saudi students' lexical density (LW/W) in their interactions with their instructors. Instructor Omar's students produced higher rates of lexical words to their overall words. This could be a direct result of instructor Omar's higher rates of interaction in feedback, compliments, and social presence. A relatively strong significant correlation was found between the frequency rates of lexical words and social presence of instructor Omar's students. Moreover, the current study did not find significant differences in the other linguistic measures and the degrees of social presence of students in instructor-student online exchanges. This clearly shows that Saudi students across instructors' discussion forums maintained the same levels of L2 performance and social presence with the exception of

lexical density, and the different roles the instructors played did not seem to affect students' online interactions in the discussion forums.

8.4.1. How Do EFL Instructors Influence Saudi Students' L2 Performance and Social Presence in Instructor-student Online Exchanges?

The present study found that the presence of the instructors and their scaffolding influenced Saudi students' L2 performance and the degrees of their social presence in several ways. Firstly, Saudi students paid more attention to the accuracy of their online interactions and they seemed to avoid taking risks in writing their posts. This resulted in minimizing the number of their errors during their instructor-student online exchanges. This finding supports previous studies (e.g., Loewen & Reissner, 2009; Stockwell, 2010) which argued that the presence of the instructors influenced students to take care of their language during their online interactions: "the presence of the teacher...may have led learners to avoid taking risks in writing messages, opting instead to take care in writing to avoid embarrassment in front of the teacher" (Stockwell, 2010, p. 99). Secondly, the corrective feedback, which was offered by instructors, appeared to influence Saudi students to pay more attention to the accuracy of their online interactions. The corrective feedback, which was given during classroom interactions and via emails, seemed to encourage Saudi students to improve their linguistic accuracy in the discussion forums. EFL instructors in the present study scaffolded Saudi students in the discussion forums and this scaffolding helped them develop their linguistic accuracy (e.g., L. Lee, 2008; Yang, 2011). This observation has been widely documented in previous studies (e.g., AbuSeileek, 2007; L. Lee, 2008; Loewen & Reissner, 2009; Yang, 2011). Thus, given that instructors' scaffolding was seen to be helpful to Saudi students in improving their linguistic accuracy, it can be suggested that "students gained confidence in correcting their linguistic errors from dependent performance (other-regulation) where they received the most explicit feedback to independent performance (self-regulation)" (L. Lee, 2008, p. 67). This was evident in the present study because Saudi students frequently repaired their linguistic errors after their instructors scaffolded their interactions.

On the other hand, the presence of the instructors appeared to limit the amount of Saudi students' lexical words. This presence influenced students by causing them to produce smaller rates of lexical words. Saudi students appeared to avoid taking risks in writing long messages because of the fear of making language errors in front of their instructors (e.g., Stockwell, 2010). Moreover, the frequency of instructors' online interactions might have influenced Saudi students' lexical density (LW/W). EFL instructors did not seem to exchange frequently with their students in the discussion forums and this might have hindered them from interaction and producing their lexical items. The present study observed other ways in which Saudi students' L2 performance could be influenced by instructors during instructor-student online exchanges. First, when instructors interacted with their students in the discussion forums some Saudi students were exposed to new lexical forms and instructors' scaffolding influenced them to detect lexical errors and improve their accuracy. Other students engaged in critical thinking when they came across the lexical forms produced by their instructors, which they have not yet acquired in their language system, and they appeared to engage in *languageing*, that is, talking to themselves and trying to solve their language problems. This finding is confirmed by Yang (2011) who found that students engaged in critical thinking to detect lexical errors and improve their language when they interacted with their instructors. Yang (2011) suggested that puzzling over word meanings, grammar, and sentence structure problems in L2 learning enhanced students' cognitive engagement and helped them improve their language during their online interactions with their instructors.

Secondly, instructors' scaffolding influenced some Saudi students to learn new grammatical features. For instance, one of the students learnt how to form polite questions. This finding is consistent with previous studies where students benefited from the scaffolding of their instructors to acquire new grammatical features (e.g., Salaberry, 2000). Another finding was that referential questions, which were directed by instructors to their students, appeared to enhance Saudi students' engagement in online interactions and influence them to interact and produce their language naturally.

McNeil (2012) pointed out that referential questions which are directed by the teacher can “elicit students’ thoughts, reasons, experiences, and opinions” and they can also “prompt students to comprehend and produce target language that reflects their own thinking”(p. 396). These linguistic processes were evident in the present study because Saudi students stated their thoughts and experiences and supported them when their instructors directed referential questions to them. Saudi students were able to respond to their instructors and produce their own L2 output, which reflected their own thinking. Thus, because of this engagement and L2 production, it can be suggested that responding spontaneously to referential questions is seen as an indicator of language learning (McNeil, 2012). Overall, instructors’ scaffolding was found useful for Saudi students in detecting their language errors, improving their linguistic accuracy, learning new lexical and grammatical features, and engaging in interactive exchanges. Thus, from a SLA sociocultural standpoint (Lantolf & Thorne, 2006; Swain et al., 2011), it can be claimed that the expert-student interactions seemed to promote Saudi students’ L2 learning because instructors scaffolded students helping them to pay more attention to their language errors and to develop their language. The instructor-student interactions helped Saudi students to produce their language, make them aware of their errors, and expose them to learn new lexical and grammatical features (e.g., Loewen & Reissner, 2009; Yang, 2011).

With regard to social presence, EFL instructors seemed to influence the degrees of Saudi students’ social presence. When instructors interacted with their students in the discussion forums, Saudi students projected lesser degrees of social presence. The likely reasons for lesser social presence by Saudi students can be attributed to the presence of the instructors and to the quality and quantity of social presence which instructors projected in the discussion forums. The presence of the instructors influenced Saudi students to avoid expressing higher rates of emotions, humour, compliments, and salutations. However, Paiva and Rodrigues-Junior (2009), in their online reading and writing courses, found the opposite, that the instructor helped students to engage in social presence behaviours. Apparently, teaching presence (i.e., frequent feedback and

support) provided by the instructor online in Paiva and Rodrigues-Junior (2009) seemed to help students' social presence in the discussion forum. However, it can be argued that the absence of teaching presence in the present study might have influenced Saudi students to not engage in social presence behaviours very frequently. With respect to the quality and quantity of instructors' interactions, as in Sotillo (2000), it was found that EFL instructors in the present study rarely expressed emotions, humour, greetings, and agreements when they interacted with their students and this might have influenced the quality and quantity of Saudi students' social presence. Another likely reason for this finding is that instructors reported that they could not argue and interact very frequently with their Saudi students because they did not have enough time.

8.5. Are there Significant Differences in Saudi Students' Perceptions?

The present study found significant differences in the perceptions of Saudi EFL students. Saudi students valued their instructor-student online exchanges more positively than their student-student online exchanges. This finding is consistent with previous studies (e.g., AbuSeileek, 2007; Yang, 2011; T. Zhang et al., 2007). This is because Saudi students perceived the online interactions of their instructors as more knowledgeable and important than the online interactions of their peers. They also felt comfortable and personally connected with their instructors when they interacted in the discussion forums. This clearly shows that Saudi students had a more positive attitude towards their instructor-student online interactions than towards their student-student online exchanges.

8.5.1. What are the Qualities of Saudi Students' Perceptions?

The present study found that Saudi students had different perceptions towards their student-student and instructor-student online exchanges. First, a considerable number of students valued the instructor-student online interactions as important because Saudi students benefited from their instructors' online interactions. As found, instructors' online interactions were valued as useful for students' language development because instructors' interactions encouraged Saudi students to express their thoughts and improve their linguistic accuracy in the discussion forums. These findings are consistent

with Yang (2011) who revealed that students benefited from the online interactions of their instructors to develop their language accuracy and their instructors' online interactions appeared to encourage them to express their thoughts. Secondly, a substantial number of Saudi students reported that they felt comfortable interacting in instructor-student online exchanges more than in student-student online exchanges. This finding supports the results of T. Zhang et al. (2007) that students felt more comfortable when interacting with their instructors than peers in the discussion forums. This is because students in T. Zhang et al. (2007) liked getting positive feedback from their instructors. In the present study, Saudi students liked their instructors' interactions because they benefited from them as they helped them to improve their language. Saudi students considered their instructors' online interactions to be reflective and useful for the development of their grammatical and spelling accuracy and encouraged their critical thinking thus strengthening the relationship between students and their instructors in the discussion forums.

8.6. Implications for Saudi Students' L2 Performance

The findings of the present study have some implications for promoting Saudi students' L2 performance in the ELD at KKU. In student-student online interactions, Saudi students paid less attention to their accuracy and did not appear to correct their language errors. They should be encouraged by their EFL instructors to pay attention to accuracy and to repair their linguistic errors. It can be also suggested that Saudi students could scaffold each other when they interact without their instructors, drawing their peers' attention to language problems and providing them with corrective feedback (e.g., Zeng & Takatsuka, 2009). However, adoption of this role by Saudi students should be used when it is necessary and it should not be comparable to the role of the instructor in order not to affect the levels of Saudi students' lexical density and social presence. When students are seen rarely to engage in error correction when they interact with their peers, Liang (2010) suggests that "instructors may need to proactively model, scaffold and support" students to promote their L2 learning (p. 45). Zeng and Takatsuka (2009) give more support to this by noting that students in student-student online interactions

might miss learning opportunities when they interact with their peers and accordingly these missed opportunities “would never be regained without the teacher’s helpful intervention” (p. 444). Because of this, EFL instructors should encourage Saudi students to put more effort into the linguistic accuracy of their student-student online exchanges or they should provide support to their students when language problems appear during L2 interaction.

In instructor-students online interactions, Saudi students produced a lower level of lexical density. EFL instructors should engage with Saudi students regularly in the discussion forums and respond promptly to avoid loss of interest on the part of students. Because the present study found that there was a relatively significant strong correlation between Saudi students’ lexical density and social presence in one of the instructors’ online discussion forums, it can be argued that it would be beneficial to Saudi students if EFL instructors increased the degrees of their social presence. It has been evident that complimenting EFL students and appreciating their contributions appeared to encourage them to post and exchange more in the discussion forum (e.g., T. Zhang et al., 2007).

8.7. Implications for Saudi Students’ Social Presence

To promote L2 learning in the ELD at KKU, Saudi students should display their social presence when they interact with other interlocutors in CMC-based interactions (e.g., Ko, 2012; Yamada, 2009; Yamada & Akahori, 2007). Thus, although the present study found that Saudi students, in instructor-student online interactions, projected less social presence when they interacted with their instructors, students’ social presence should be enhanced. Because EFL instructors rarely engaged in emotions, humour, compliments, and salutations when they interacted with their students in instructor-student online exchanges, this influenced Saudi students to display a smaller degree of their social presence. Thus, EFL instructors should increase the degrees of their social presence when they interact with their students in online discussion forums. This is important because the increase of social presence in the forums can help Saudi students to increase their social presence and accordingly contribute to the lexical density of their

online interactions. Saudi students in their interviews expressed the wish that their instructors would engage in emotions and humour when they interacted with them, so that they can exchange with them and contribute to the degrees of their social presence during their instructor-student online exchanges. This suggests that for Saudi students to display their social presence and promote their L2 learning in their discussion forums EFL instructors should pay more attention to the degree of their social presence and in this case, they should increase their social presence when they interact with their students. It can be also suggested that EFL instructors should counsel their students not to be shy or embarrassed and encourage them to express emotions, humour, teasing, or jokes because most Saudi students in their interviews were not sure if they were allowed to. Saudi students typed their online posts with different editing features such as font size and colour and typing styles. It can be contended that they used such textual features because they wanted to contribute to the degrees of their social presence when they interacted with their peers and instructors in the discussion forums. Thus, including elements such as font size, font colour, and typing styles in the definitions of social presence can improve the efficacy of the model suggested by Garrison et al. (2000) and (20001).

8.8. Implications for EFL Instructors

On the basis of the findings of the present study, it is possible to make some suggestions for EFL instructors in the ELD at KKU. The role of the instructor is seen as an essential one for promoting students' L2 learning in CMC-based interactions (e.g., Loewen & Reissner, 2009; Sotillo, 2000; Yang, 2011). It is important that the instructor should facilitate Saudi students' participation and L2 learning during their online interactions in the discussion forums. The instructor should read students' online interactions, respond to their contributions, provide them with feedback, argue with them, and compliment them for their contributions (c.f., Nor et al., 2012; Yang, 2011). In particular, this role should be utilized whenever learning problems arise. Furthermore, in terms of displaying social presence in the discussion forums, instructors should take into account that Saudi students may be influenced by the degrees of their instructors' social presence

when they interact with them. That is, Saudi students appear to be mindful of how their instructors display their social presence in the discussion forums and accordingly they might display the same degree as, or even less than their instructors. To foster Saudi students' online interactions and L2 learning in the discussion forums, EFL instructors should share their ideas, greet their students, express their emotions, use humour with them, compliment them and express appreciation of their contributions during their online interactions. They also should utilize their roles in a supportive way by considering why, when, and how to engage with students, provide them feedback, negotiate with them, scaffold them, and support their social presence.

Chapter Nine: Conclusions, Limitations, and Recommendations

9.1. Summary of the Findings

The study demonstrated that Saudi EFL students displayed different L2 performance and social presence when they interacted in student-student and instructor-student online exchanges. In student-student online exchanges, Saudi students paid less attention to the linguistic accuracy of their online interactions and did not correct their linguistic errors. They had a higher level of lexical density and displayed a higher degree of social presence. However, in instructor-student online exchanges, Saudi students paid more attention to the linguistic accuracy of their online interactions and they corrected their linguistic mistakes together with a smaller level of lexical density and a lower degree of social presence. With respect to the measures of fluency and grammatical complexity, although Saudi students showed higher fluency and grammatical complexity when they interacted in instructor-student online exchanges than in student-student online exchanges, there were no significant differences between their interactions in the two conditions of online exchanges.

The instructors' presence and scaffolding seemed to influence Saudi students positively in the discussion forums by providing them with more opportunities to develop their language. Students noticed their errors, paid attention to the accuracy of their online interactions, learnt new lexical and grammatical features, and engaged in reflective interactions. On the other hand, the instructors' presence and the quality of their online interactions seemed to influence Saudi students negatively by limiting the degrees of their lexical density and social presence. In terms of the role of the instructor, the three EFL instructors in the present study played different roles when they interacted with their students in instructor-student online exchanges. However, the influence of these different roles was only significant for the students' lexical density when interacting with instructor Omar. Instructor Omar's students had a significant higher rate of lexical density than other instructors' students and this was attributed to the higher degree of his social presence. With regard to students' perceptions, Saudi students perceived their

instructor-student online interactions more positively than their student-student online interactions. They valued the online interactions of their instructors as more important and useful for their L2 learning than the online interactions of their peers because the instructors appeared to encourage them to think critically, express their thoughts, and develop their grammatical and spelling accuracy.

9.2. Conclusions

Based on the findings of the present study, four conclusions can be drawn. First, student-student online interactions enable Saudi students to produce a higher amount of lexical density and display a higher degree of social presence; however, on the other hand, they do not encourage them to pay more attention to the linguistic accuracy of their online interactions. Secondly, instructor-student online interactions encourage Saudi students to pay more attention to the linguistic accuracy of their online interactions; however, on the other hand, they limit their lexical density and the projection of their social presence. Thirdly, Saudi students perceive the instructor-student online interactions more positively than the student-student online interactions because instructors' interactions encourage students to interact and develop their language. Most importantly, the instructor's presence and scaffolding in online discussion forums have the potential to influence Saudi students in developing their language. To sum up, it can be concluded that the instructor-student online exchanges provide Saudi EFL students with more opportunities to develop their language than the student-student online exchanges and this is because of the instructor's presence and scaffolding. Essentially, Saudi students benefit from instructor-student interactions as they help to develop various aspects in L2 learning, namely noticing and correcting language errors, thinking critically, learning new lexical and grammatical features, and engaging in reflective interaction.

9.3. Limitations

There are some limitations in the present study. First, the homogeneity of the participants as they are from the same department, not having female students, and the small sample size in the data analysis might have affected the results in the present study. Thus, the results of the study may not be generalizable to other EFL contexts. It would be worth investigating how Saudi female students perform their language and display their social presence, in comparison with Saudi male students, when they interact with and without their EFL instructors in online discussion forums. Secondly, because there was no control group it may be difficult to claim that the presence and social interactions of the instructor influenced Saudi students' L2 performance and social presence positively or negatively. Thirdly, because there were two consecutive phases of online interactions in the discussion forums throughout the course of the current study, it can be argued that Saudi students had been learning and this in turn may have affected the results of their L2 performance. The fourth limitation is that Saudi students did not participate in choosing the discussion topics and because of this some topics might not have stimulated students to interact more either in student-student or in instructor-student online exchanges. Because Saudi students interacted with instructors of non-Saudi cultural background, students' social presence may have been influenced because they might have been reluctant to display their social presence with other cultural backgrounds. Moreover, because the discussion forums were not integrated with automated emoticons, participants in the present study appeared to struggle with expressing their emotions and projecting their social presence. In turn, this technical limitation may have affected the extent of social presence of Saudi students and their instructors.

9.4. Recommendations for Future Research

The present study presents some recommendations for future research in the contexts of L2 and Saudi EFL learning. Empirical research with a control group and heterogeneous population of EFL participants would allow a more definitive and generalizable conclusion as to how L2 students produce their target language and project their social presence with their peers and instructors in online interactions. Future research should also account for exploring students' L2 performance and social presence in the different modalities of student-student and instructor-student CMC interactions. It would be useful to see how EFL students perform their language and display their social presence using different CMC modalities such as real-time chatrooms, blogs, and wikis. The role of the instructor is seen as crucial in students' online discussion forums. Future research should give greater attention to this role by looking at the potentials of instructors' presence and scaffolding to foster EFL students' online interaction. Because of the sensitivity of cultural background in online interactions, it is worth investigating the extent to which EFL students project their social presence in the discussion forums when they interact with EFL instructors from the same or different cultural backgrounds. Because lexical density (token/token) may not be the best measure for assessing L2 performance (c.f., Wolfe-Quintero et al., 1998), it would be worthwhile to apply other lexical measures such as lexical variation (type/token) and lexical complexity (type/type) to help examine students' L2 performance efficiently.

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Appendices

Appendix A:

Issues with recruiting participants

Participants were recruited from 12 undergraduate English blended courses with a total of 365 students and eight instructors in the present study. The following Table provides details of the English courses from which participants originated.

No	English Course	Students	Consented	Instructor	Level*
1. A	Applied Linguistics-2	33	24	1	Level 8
2. B	Language History section 1	33	29	1	Level 7
3. C	Language History section 2	34	32		
4. D	Applied Linguistics-1 section 1	37	25	1	Level 6
5. E	Applied Linguistics-1 section 4	29	20		
6. F	Introduction to Linguistics	31	14	1	Level 6
7. G	Translation-1 section 1	37	17	1	Level 5
8. H	Translation-1 section 2	32	23		
9. I	Translation-1 section 3	32	26	1	Level 4
10. J	Reading & Comprehension-4	27	28	1	
11. K	Writing-2	22	12	1	Level 2
12. L	Grammar-2	22	15		
Total		365	265	8	6
*refers to the students' study level in the English program. The English program is a four-year program of 8 levels.					

Factors that affected the process of sampling in the present study

Although all 265 students and eight instructors consented to participate, a number of students did not participate in some of the data-gathering stages. The following Table illustrates the courses and data collection stages in which students and instructors did not take part. The reasons for not participating are discussed in the following paragraphs.

As can be seen in the Table below, there were seven English courses where students did not participate during some required data collection stages—they were courses number six, seven, eight, nine, ten, eleven, and twelve. This made it difficult for the present study to collect its primary data (i.e., the transcripts of online interactions). The apparent reasons can mostly be attributed to instructors not guiding their students closely enough

as to on how to participate and use the discussion forums appropriately. Some other reasons can be attributed to students' low levels of English language proficiency and motivation and their perceptions of using the discussion forums in their L2 learning.

Courses and Data Collection Stages					
Study Stages/ Course No	Students- Student interaction	Instructor- student interactions	Student questionnaire	Student Interviews	Instructor Interviews
Course 6		No participation		No interview	
Course 7	No participation			No interview	
Course 8	No participation			No interview	
Course 9				No interview	
Course 10				No interview	No interview
Course 11	No participation			No interview	
Course 12	No participation				

Lack of instructor participation and guidance

Unfortunately, five instructors (instructors 4, 5, 6, 7 & 8) failed to adhere to the procedures set up by the study and they did not guide their students into participating. Although online discussion topics and participation guidelines were prepared for instructors well in advance, some instructors did not post them on the discussion forums. For instance, instructors 4 and 7 (in courses 9 and 10) were found to be behind and they only posted three topics (out of 12 topics) over the course of student-student and instructor-student online exchanges. Instructor 4 participated during student-student online exchanges but his participation violated the design of the present study. Instructor 7 and students (in courses 9 & 10) did not attend the interviews.

Furthermore, students (in courses 6, 7, 8, 11, and 12) found it difficult to participate because there was no adequate instruction and guidance from their instructors. For instance, instructor 5 (in courses 7 and 8) posted two topics on the discussion forums but did not post any further topics throughout the remainder of the semester. Consequently, students (in courses 7 and 8) did not interact because they were left waiting for other topics to be posted by the instructor.

Because he did not adhere to the study procedures, instructor 8 (in courses 11 and 12) posted four discussion topics at the same time and on the same thread of the forum. Accordingly, students did not interact in the online discussion forum because having several topics posted simultaneously hindered them from participation. Instructor 6 (in course 6) reported in the interview that he experienced some personal issues which prevented him from participating in the present study.

Students' language difficulties

Other reasons which were noted can be related to the students' low levels of English language proficiency and learning motivation or their perception of using the forums in their L2 learning. These factors were found predominantly where students had linguistic difficulties associated with mastering writing and grammar. According to instructors' interviews, instructor 8 for instance pointed out that his students (in beginner courses of writing and grammar) did not participate because of the language difficulty.

The biggest barrier for my students in the beginner English courses was the language barrier because it did not allow them to express different views with other interlocutors in the online discussion forums.

Instructor 5 indicated that his students did not participate because they seemed to be de-motivated or because of the time pressure of their examinations.

Most of my students were not much motivated for language learning at large and students discontinued participation in the present study may be because of examinations.

Moreover, instructor 6 attributed the lack of his students' participation to some perceptions which students had when they experienced the use of discussion forums.

Over the past two semesters, students still do not like spending some of their time on the online discussion forums even if they are given incentives for participation. They usually regard the discussion forum as a formal environment where the instructor lurks there and monitors what they are going to write.

These factors were noted and included the instructor's lack of instruction and guidance, low levels of students' language proficiency and learning motivation, and the perceptions of using the discussion forums. The participants of the above English courses (from number six to twelve) were excluded from the present study because they did not meet the study design and procedures.

Appendix B:

Online Discussion Topics

Phase One: Student-Student Online Discussion Topics	
1	<p><i>What is your favourite Saudi football team?</i></p> <p>Talk about your favourite Saudi team and why do you like it. Please feel free to discuss your favourite Saudi team!</p>
2	<p><i>Searching for the meanings of vocabulary in print English dictionaries is not as good as in electronic English dictionaries.</i></p> <p>Do you agree or disagree with this statement? Please try to discuss why you agree or disagree!</p>
3	<p><i>What are your opinions about eating fast food?</i></p> <p>Do you like to eat fast food and why? Why do you think eating too much fast food is not good for health? Please feel free to discuss this topic!</p>
4	<p><i>Students in English language programs have to be taught by both native and non-native speakers.</i></p> <p>Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!</p>
5	<p><i>How to be a successful learner in English language program?</i></p> <p>Please try to discuss this topic by telling the ways and things that can help you to learn English successfully!</p>
6	<p><i>Many students think that doing assignments and homework during the weekend should be avoided.</i></p> <p>Do you like to study during the weekend and why? Please try to support your discussion if you agree or disagree with this statement!</p>
7	<p><i>Students in English language programs have to be able to speak both American and British Englishes.</i></p> <p>Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!</p>

Phase Two: Instructor-Student Online Discussion Topics	
1	<p><i>What is your favourite shopping mall?</i></p> <p>Talk about your <i>favourite shopping mall</i> and why do you like it? Please feel free to discuss your <i>shopping mall</i>!</p>
2	<p><i>Searching for knowledge using internet is better than using library!</i></p> <p>Do you agree or disagree with this statement? Please try to discuss why you agree or disagree!</p>
3	<p><i>What are your opinions about drinking coffee and tea?</i></p> <p>Do you like to drink coffee and tea and why? Why do you think drinking too much coffee and tea is not good for health? Please feel free to discuss this topic!</p>
4	<p><i>To improve your English language, you should communicate it with local English people in Saudi private companies, banks, and hospitals.</i></p> <p>Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!</p>
5	<p><i>What do you think about learning English using the internet and the Blackboard of King Khalid University?</i></p> <p>Do you like learning English by using internet or the Blackboard system and why? Please try to support your discussion!</p>
6	<p><i>English textbooks should be provided free of charge for all students during their university study.</i></p> <p>Do you agree or disagree with this statement? Please try to support your discussion if you agree or disagree with this statement!</p>
7	<p><i>The University has to give good students in English language program some opportunities to travel to Europe or Australia for developing their English.</i></p> <p>Do you agree or disagree with this statement? Why do you agree or disagree? Try to support your discussion!</p>

Appendix C:

Grading Criteria for the Participation

Five marks will be allocated for students' exchanges in the discussion forum according to the following criteria.		
Participating in the online discussions	A student, in every discussion topic, has to discuss in the online discussion at least once by exchanging with his peers or instructor. (online exchanges can include replying to and commenting on others' contributions, asking others, elaborating...etc)	3 marks
Generating several threads	A student, in every discussion topic, has to contribute to the online discussion at least two threads by exchanging with his peer or instructor.	2 marks
Total	Total mark= total marks of all discussion topics/the number of the discussion topics	5 marks

Appendix D:

Student Questionnaires

Code:

QUESTIONNAIRE

We appreciate your willingness to participate in this study. The responses you write in this questionnaire will be treated with total confidentiality by the researchers. After completing this questionnaire, please put it in the enclosed sealed envelope. Then, put it into the students' box located at the Faculty of Languages and Translation.

This questionnaire has four sections (A, B, C, and D). Before you start completing this questionnaire, please read the instructions provided in every section carefully and choose items or answer questions accordingly.

A) Collecting Students' Personal and Background Information.

Please read each question carefully and choose the best answer by selecting a or b or by writing a correct answer under questions:

1) How old are you?

.....years old

2) Is Arabic your mother tongue language? If not, what is it?

☐

a. Yes

☐

b. No:

3) Is English your foreign language?

☐

a. Yes

☐

b. No

4) Do you speak other foreign languages? If yes, what are they?

☐

a. Yes:

☐

b. No

5) Have you performed an English international proficiency test (e.g., TOEFL or IELTS)?

☐

a. Yes

☐

b. No

What was the name of the test?

When did you do it?

What was the total score?

What was the score of writing?

6) Have you ever travelled to a country where English language is the formal language?

☐

a. Yes

☐

b. No

Where did you travel?

How long did you stay there?

- 7) **Have you ever studied any English course on the Blackboard while learning English language?**

☐ a. Yes

☐ b. No

How long have you studied using the Blackboard system?

How many courses did you study using the Blackboard system?

- 8) **Are you currently studying English courses on the Blackboard system?**

☐ a. Yes

☐ b. No

How many courses?

- 9) **How many years have you been learning the English language?**

I have been learning English language for.....years.

B) Rating Students' Computer and Internet Literacy.

Please rate the following items in terms of your ability in and familiarity with computers and the internet by circling one number only from 1 to 5 according to the scale in the below Table:

5	Very often
4	Often
3	Sometimes
2	Not often
1	Not at all

Please see the following example:

I use computer for my homework.	Not at all 1	Not often 2	Sometimes (3)	Often 4	Very often 5
---------------------------------	-----------------------	-------------------	------------------	------------	--------------------

Computer and Internet Literacy	Scale				
10. I use computers.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
11. I use the internet.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
12. I use e-mails.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5

13. I use English discussion forums on the internet.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
14. I use English chat on the internet.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
15. I use internet messenger.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
16. I use Arabic discussion forums on the internet.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
17. I use the university Blackboard educational system.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5
18. I use the discussion forums of the university Blackboard educational system.	Not at all 1	Not often 2	Sometimes 3	Often 4	Very often 5

C) Exploring Students' Perceptions of Online Interactions with Peers and Instructor

According to the scale in the Table below, please rate the following items in terms of your perceptions and attitudes towards your participation in the online discussion forums of the university Blackboard educational system by circling one number only from the scale 1 to 5.

5	Strongly Agree
4	Agree
3	Neither Agree/Disagree
2	Disagree
1	Strongly Disagree

First: Your interactions in student-student online exchanges.	Scale				
19. Online interactions were excellent with my peers.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
20. I felt comfortable interacting with my peers.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5

21. I know my peers in the discussion forum very well.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
22. I felt personally connected with my peers.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
23. Online interactions with my peers were very important.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
24. Online interactions with my peers gave me the confidence to participate and interact.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
25. Online interactions with my peers gave me a sense of being a part of one social learning community.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
26. Online interactions of my peers motivated me to engage in interaction in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
27. The topics used for online interactions motivated me to interact in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
28. The length of online interactions was good.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5

Second: Your interactions in instructor-student online exchanges.	Scale				
29. Online interactions were excellent with the instructor.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
30. I felt comfortable interacting with the instructor.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
31. I felt personally connected with the instructor.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5

32. Online interactions of the instructor were very important.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
33. Online interactions of the instructor gave me the confidence to participate and interact.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
34. Online interactions of the instructor gave me a sense of being a part of one social learning community.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
35. Online interactions of the instructor motivated me to engage in interaction in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
36. Online interactions of the instructor supported my interactions in the online discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
37. Online interactions of the instructor encouraged me to improve my English language in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
38. Online interactions of the instructor encouraged me to compose correct grammatical sentences in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
39. Online interactions of the instructor encouraged me to write correct spelling in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
40. The topics used for online interactions motivated me to interact in the discussion forum.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5
41. The length of online interactions was good.	Strongly Disagree 1	Disagree 2	Neither Agree /Disagree 3	Agree 4	Strongly Agree 5

D) Exploring Students' Perceptions (Open-ended Questions).

Please read the following questions carefully. According to your experience and feelings, write your answers clearly about your interactions in the online discussion forum in this study.

1) Did you like to interact more in student-student or in instructor-student online exchanges? Why?

.....

.....

.....

2) Was the presence of the instructor in the online discussion forum very important to you? Why?

.....

.....

.....

3) Did you feel comfortable and socially engaged when interacting in instructor-student online exchanges? Why?

.....

.....

.....

4) What was the most interesting thing to you about the interactions in instructor-student online exchanges?

.....

.....

.....

5) What was the most interesting thing to you about the interactions in the online discussion forum in this study?

.....

.....

.....

6) Did you find any difficulties in using the online discussion forum, or interacting in student-student and instructor-student online exchanges? If so, please mention some of these difficulties?

.....

.....

.....

7) If you would like to write or suggest anything about your participation in this study, or interactions in student-student and instructor-student online exchanges, please feel free to do so.

.....

.....

.....

Thank you very much for your participation ☺

Appendix E:

Student Interviews

INTERVIEW

In this interview, a student has to answer the questions prompted by the researcher around a discussion table. The role of the researcher is to listen to the interviewee's answers and interaction, and to make sure that the student responds to the interviewer's questions and provide information about the study. This interview has four sections (A, B, and C). The researcher will record the students' responses on computer audio files using a digital voice recorder.

A) General Questions about Participation in the Present Study.

- 1) How was your experience in participation in the online discussion forum in this study?
- 2) What was the most interesting thing to you in terms of interactions in the online discussion forum in this study?
- 3) Describe your interactions when you interacted in the online discussion forum?
- 4) What benefits did you gain from participation in the online discussion forum in this study?
- 5) Did you have any difficulties when you participated in this study?
- 6) Would you like to say anything more about interactions in the online discussion forum in this study?

B) Questions about Interactions in Student-Student Online Exchanges.

- 1) How was your experience in the interactions of student-student online exchanges in this study?
- 2) Were you willing to interact in student-student online exchanges in this study? Why?
- 3) Did you feel comfortable when interacting in student-student online exchanges in this study? In what way? Give some examples please?
- 4) Did you feel socially engaged when interacting in student-student online exchanges in this study? In what way? Give some examples please?
- 5) Did you feel a sense of being a part of one online social learning community when interacting in student-student online exchanges in this study? In what way?
- 6) Describe your reactions when you read the messages and posts of your peers in student-student online exchanges in this study?
- 7) How did you feel about your interactions in the online discussion forum compared to those of your peers when you interacted in student-student online exchanges in this study? Why?
- 8) What was the most interesting thing you found when you interacted in student-student online exchanges in this study?
- 9) Did the discussion topics stimulate you to interact in student-student online exchanges in this study? How? Give some examples please?

- 10) Do you think that your language improved as a result of your interaction in student-student online exchanges in this study? How? Give some examples please?
- 11) Did you have any difficulties during interactions in student-student online exchanges in this study?
- 12) Would you like to say anything more about the interactions of student-student online exchanges in this study?

C) Questions about Interactions in Instructor-Student Online Exchanges.

- 1) How was your experience in the interactions of instructor-student online exchanges in this study?
- 2) Were you willing to interact in instructor-student online exchanges in this study? Why?
- 3) Did you feel comfortable when interacting in instructor-student online exchanges in this study? In what way? Give some examples please?
- 4) Did you feel socially engaged when you interacted in instructor-student online exchanges in this study? In what way? Give some examples please?
- 5) Did you feel a sense of being a part of one online social learning community when you interacted in instructor-student online exchanges in this study? How?
- 6) What were your feelings about the presence of the instructor during instructor-student online exchanges in this study?
- 7) Describe your reactions when you read the messages and posts of the instructor in instructor-student online exchanges in this study?
- 8) Did the presence of the instructor encourage you to interact in instructor-student online exchanges in this study? How?
- 9) How did you feel about your interactions in the online discussion forum compared to those of your peers when you interacted in instructor-student online exchanges in this study? Why?
- 10) What was the most interesting thing to you when you interacted in instructor-student online exchanges in this study?
- 11) Did the discussion topics stimulate you to interact in instructor-student online exchanges in this study? How? Give some examples please?
- 12) Do you think that your language improved as a result of interacting with the instructor in instructor-student online exchanges in this study? How?
- 13) Did you have any difficulties during interactions in instructor-student online exchanges in this study?
- 14) Would you like to say anything more about your interactions in instructor-student online exchanges in this study?

Thank you very much for your participation!

Appendix F:

Instructor Interviews

A) Interactions in Instructor-Student Online Exchanges.

- 1) What was your experience like when you interacted with your students in instructor-student online exchanges in this study?
- 2) What was the most interesting thing you found when you interacted with your students in instructor-student online exchanges in this study?
- 3) Did you feel socially engaged when you interacted with your students in instructor-student online exchanges in this study? In what way? Give some examples please?
- 4) Did you feel a sense of being a part of one online social learning community when you interacted with your students in instructor-student online exchanges in this study? In what way?
- 5) Describe your reactions when you read your students' messages and posts in instructor-student online exchanges in this study?
- 6) How did you feel about the interactions of your students in terms of language performance and the degree of their social presence when you interacted in instructor-student online exchanges in this study?
- 7) Please describe the grammatical complexity and linguistic accuracy of your students' interactions when they interacted in instructor-student online exchanges in this study?
- 8) Did you find that your students paid more attention to the linguistic accuracy of their interactions when they interacted in instructor-student online exchanges in this study? How?
- 9) Did they tend to write sophisticated sentences when they interacted in instructor-student online exchanges in this study? How?
- 10) Did the discussion topics stimulate you and your students to interact in instructor-student online exchanges in this study? How? Give some examples please?
- 11) Did you have any difficulties during interactions in instructor-student online exchanges in this study?
- 12) Would you like to say anything more about your interactions in instructor-student online exchanges in this study?

Thank You Very Much for Your Participation! ☺

Appendix G:

Instructors' Pre-Interview Questionnaire

Instructors' Background Information

Code.....Interview#.....

We really do appreciate your participation in this study. Please kindly answer the following questions!

1) How old are you?

.....

2) What is your nationality?

.....

3) What are your qualifications?

.....

4) How many years have you been teaching English language in general?

.....

5) Have you ever taught English Language to students in Europe? If yes, please specify.

.....

.....

6) How many years have you been teaching English language in the Faculty?

.....

7) How many years have you been teaching English language courses using the mode of blended learning?

Before joining the Faculty:

After joining the Faculty:

8) Have you ever used email lists or online discussion forums in language teaching with your students? If so, where and when did you use it/them, and what was the name of the course?

.....

9) How many English courses do you currently teach using the mode of blended learning?

.....

10) Do you use any technology other than the Blackboard educational system when you interact and communicate with your students? If so, what are they and for what purposes do you use them?

.....

.....

11) If you would like to say anything about the study, the interactions in instructor-student online exchanges, or the blended teaching/learning mode please feel free to write it down?

.....

.....

.....

.....

Thank You Very Much for Your Participation! ☺

Appendix H:

Ethics Approval



MONASH University

Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date: 29 January 2010

Project Number: CF09/3554 - 2009001915

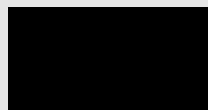
Project Title: Exploring the Influence of Instructor Presence on EFL Students' Interactions in Asynchronous Computer-Mediated Communication (ACMC)

Chief Investigator: Associate Professor Farzad Sharifian

Approved: From: 29 January 2010 To: 29 January 2015

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. **Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.**
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.



Professor Ben Canny
Chair, MUHREC

cc: Dr Simon Musgrave, Mr Ali Hussein Alamir

Postal – Monash University, Vic 3800, Australia
Building 3F, Room 111, Clayton Campus, Wellington Road, Clayton

ABN 12 377 614 012 CRICOS Provider #00008C

Appendix I:

Consent Form for Students

26 September 2010

(Online Interactions, Questionnaire, and Interview)

Research Title: *Student-Student versus Instructor-Student in Online Interactions: A study of second language performance and social presence of Saudi university English as foreign language learners*

NOTE: This consent form will remain with the Monash University researchers for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

- | | | |
|--|------------------------------|-----------------------------|
| I agree to participate in the online interactions | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| I agree to complete questionnaires asking me about my attitudes | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| I agree to be interviewed by the researcher | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| I agree to allow the interview to be audio-taped | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| I agree to make myself available for a further interview if required | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the online transcripts, interviews, or questionnaires for use in reports or published findings will not, under any circumstances, contain names or characteristics that might identify the participants.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

I understand that data from the online transcripts, interviews, and questionnaires will be kept in secure storage only accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Student's Name.....

Signature

Date.....

Consent Form for Instructors

25 September 2010

(Online Interaction and Interview)

Research Title: *Student-Student versus Instructor-Student in Online Interactions: A study of second language performance and social presence of Saudi university English as foreign language learners*

NOTE: This consent form will remain with the Monash University researchers for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

I agree to participate in instructor-students online interaction	<input type="checkbox"/> Yes	<input type="checkbox"/> No
I agree to be interviewed by the researcher	<input type="checkbox"/> Yes	<input type="checkbox"/> No
I agree to allow the interview to be audio-taped	<input type="checkbox"/> Yes	<input type="checkbox"/> No
I agree to make myself available for a further questionnaire if required	<input type="checkbox"/> Yes	<input type="checkbox"/> No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the online transcripts, interview, or questionnaires for use in reports or published findings will not, under any circumstances, contain names or characteristics that might identify the participants.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

I understand that data from the online transcripts, questionnaires, and interview will be kept in secure storage only accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Student's Name.....

Signature

Date.....

Appendix J:

Instructors' Evaluation Survey

Evaluating the Use of Blackboard System and Online Discussion Forums

- 1) For how long have you been using the Blackboard system?
.....
- 2) In what English courses and levels do you use the Blackboard system?
Courses:Levels:
- 3) Have you used the online discussion forums with your students?
.....
- 4) How often do you use the online discussion forums with your students?
A. Always B. Usually C. Sometimes D. Never
- 5) Do your students participate and interact in the online discussion forums effectively?
- 6) Do you allocate any grade to the use of Blackboard system and online discussion forums? If yes, How?
.....
.....
- 7) Do you have any comments or feedback about the use of Blackboard system or the online discussion forums?
.....

<u>English Course Details</u>		
Name of Instructor		
English Course		
English Level		
Section		
Number of students		
Possible time to visit students		


	Day: Time: Course: Section: Level:
Any needs (e.g., assisting with the use of online discussion forums)	
Notes:	

Appendix K:

Guidelines for Participants

Guidelines for Students
<ol style="list-style-type: none">1. By using the online discussion forums on the Blackboard of King Khalid University, you will interact in two phases of online exchanges. That is, first, you will interact in student-student online exchanges in the discussion forum for a period of five weeks. After that, you will interact with the instructor in instructor-student online exchanges in the discussion forum for a further period of five weeks.2. During interactions in both online exchanges (student-student and instructor-student), you should use English language.3. You will be given some topics for interactions in both online exchanges in the discussion forum.4. Not more than two topics will be discussed every week during both online exchanges in the discussion forum.5. Topics will be posted by the instructor on the online discussion forum at the appropriate time.6. You should follow the instructions provided with each topic as some of the topics may vary such as statements and questions.7. You can post on the online discussion forum and engage in interactions at any time.8. You can also go back to the older topics in both online exchanges and discuss them if you like.9. Some helpful information about the use and the functions of the online discussion forums are provided with the project's documents which previously given to you.10. Before starting the interactions in student-student and instructor-student online exchanges, you must ask your instructor if you are not familiar enough with this project or have any difficulties accessing or using the online discussion forum. You can also contact the researcher if you have any difficulties or any enquires about this research project. The researcher's contact email is [REDACTED]

Guidelines for Instructors

1. By using the online discussion forums on the Blackboard of King Khalid University, your students will interact in two different online exchanges. That is, first, they will interact in student-student online exchanges in the discussion forum for a period of five weeks. After that, they will interact with the instructor in instructor-student online exchanges in the discussion forum for a further period of five weeks.
2. During interactions in both online exchanges (student-student and instructor-student), your students should use English language.
3. Students will be given some topics for interactions in both online exchanges in the discussion forum.
4. Not more than two topics will be discussed every week in both online exchanges in the discussion forum.
5. Topics will be posted by the instructor on the online discussion forum once they are due during both online exchanges.
6. Students should not be forewarned of the discussion topics in order to control factors such as advanced preparation and vocabulary study from affecting their interaction during student-student and instructor-student online exchanges.
7. Students can go back to the older topics in both online exchanges and discuss them if they like.
8. Student should follow the instructions provided with each topic as some of the topics may vary in terms of the type and content (statements, questions...etc).
9. You should tell your students, right from the beginning that you will not be participating during student-student online exchanges in the online discussion forum. However, they should know that you will only be posting discussion topics.
10. You will participate and interact with your students in the online discussion forum during instructor-student online exchanges.
11. Before the start of this research project, if your students are not familiar enough with the project or have any difficulties accessing or using the online discussion forums, they should consult you or contact the researcher.
12. Please feel free to contact the researcher if you have any difficulties or any enquires about this research project. The researcher's contact email is 

Appendix L:

Guidelines Template for Coding Linguistic Measures

Unit	Definition and Guidelines
1. Clauses	<p>A. Independent Clause: a grammatical structure that contains a subject/omitted subject and a finite verb and can stand on its own. E.g., [<i>I totally agree with you.</i>]</p> <ol style="list-style-type: none"> 1. Clauses that have imperatives without a subject are considered independent clauses. E.g., [<i>have some grammar.</i>] 2. Co-ordinated clauses with omitted subject are considered independent clauses. E.g., [<i>The teacher shows his students images (visual aids), and asks them</i>] <p>B. Dependent Clause: a grammatical structure that contains a finite or a non-finite verb and at least one additional grammatical element such as a subject, an object, a complement, or an adverbial. The following underlined clauses are dependent clauses.</p> <p>E.g., [<u><i>When we translate, for instance, we don't have much time</i></u>]</p> <p>E.g., [<i>I believe <u>that electronic dictionaries are more helpful than paper dictionaries.</u></i>]</p> <p>E.g., [<i>we should limit eating fast food <u>to keep our bodies healthy</u></i>]</p>
2. T-Unit	<p>A main (independent) clause with all dependent clauses attached to or embedded in it. The following example has one T-unit composed of one main independent clause with an attached dependent clause.</p> <p>E.g., ₁[<i>When we want to get the pronunciation of a specific word, electronic dictionaries are so much better, especially those with human pronunciation of words.</i>]</p> <ol style="list-style-type: none"> 1. Count run-on and comma-splices sentences as T-units. The following example has three T-units. E.g., ₁[₂[₃[<i>Panda is my favorite shopping center, I like it because every things available in that center, the prices are ready in every commodities and normal prices.</i>]]] 2. Noun phrases and dependent clauses that stand alone are not counted as T-units.

	<p>E.g., (<i>yes to some extend.</i>) and (<i>By studying and revising what we have studied in lectures.</i>)</p> <p>3. Count sentences fragments---only when the verb or copula is missing---as T-units. E.g., ₁[<i>I like it because every things available in that center</i>]</p> <p>4. Count imperative sentences as T-units. The following example has two T-units. E.g., ₁[₂[<i>to be a successful learner of English try to read a lot and study hard</i>]]</p> <p>5. A co-ordinated clause without having a grammatical subject is still counted as one T-unit. The following example has two T-units. E.g., ₁[₂[<i>The teacher shows his students images (visual aids), and asks them to tell him what they see</i>]].</p> <p>6. Count sentences in parenthesis as separate T-units.</p> <p>7. Quotes from other participants should not be counted as T-units.</p>
3. Lexical Words	<p>Lexical words in a text include: nouns, lexical verbs, adjectives, and adverbs. The following words and characters are not considered to be lexical words.</p> <p>A. Function words such as determiners, pronouns, prepositions, conjunctions, numerals, and auxiliary verbs.</p> <p>B. Emotional characters (e.g., :), ^ _ ^) and auditory words (e.g., okay, Ooops!).</p>
4. Words	<p>1. Words with contractions should be counted as individual words. E.g., “isn’t” (is not) and “you’re” (you are).</p> <p>2. Compound words should be counted as separate words. E.g., “Non-native speakers” (Non native speaker), “well-organized teacher” (well organized teacher), and “E-learning” (electronic learning).</p> <p>3. Do not count symbols as words.</p> <p>4. Quotations from other messages are not counted as words.</p>
5. Errors	<p>1. Count verb omissions and wrong formations as errors. E.g., [<i>but you have to know my friend that some <u>native speakers weak</u> in the grammar</i>] = One error. [<i>I drink a cup of tea every night after that I <u>am</u> not <u>feel</u> <u>asleeping</u>.</i>] = Three errors.</p> <p>2. Count noun-verb disagreements or s-verb omission in simple present as errors. E.g., [<i>the weekend <u>give</u> the student good time to study</i>] = One s-verb omission error.</p>

3. Incorrect tense/aspect choice or formation should be counted as an error according to the context of the preceding discourse rather than looking at sentence in isolation.
E.g., [*Sometimes I eat fast food if I cann't found any other food,*] = one grammatical error plus a misspelling error.
4. Count incorrect forms of prepositions, adjectives and adverbs as errors.
E.g., [*I agree with you it is quickly*]= One adjective error.
5. Count word/expression choice as an error if it changes meaning or is considered to be wrong choice.
E.g., [*i agree with this due to the benefit which is the leaner will break this fair through this kind of conversation*] = one word choice error.
6. Count articles omissions or incorrect uses as errors.
E.g., [*I think, this is fantastic opportunity to improve our English.*] = One omission error.
7. Count incorrect singular and plural nouns as errors.
E.g., [*My friend said there are many way*] [*the Internet is full of false informations*] = one error each.
8. Count incorrect spellings as errors and be lenient with some spellings.
E.g., [*the prosses of learn will be greet.*] = Three errors, and
[*In my opnion the weekend is the a ppropriate time to do all your assinments*]= Not errors.
9. Only capitalization errors in proper nouns are counted.
E.g., [*it is good to get a vocabulary from the british and American .*] = One capitalization error.
10. Do not count words that are used in spoken English as errors.
E.g., [*so we gotta enjoy it*] and [*I dunno why !*]
11. Count repetitive words in the clause as errors.
E.g., [*it make makes me nervous more than I should be ..*] = One error.
12. Do not count words that are abbreviated or replaced with numbers as errors.
E.g., [*there is a new web site which allows u to create ur own character and room*], and [*i didn't know that the tea is good 4 us*].
13. Do not count hesitation or auditory words and emotional characters as errors.
E.g., [*OOOOOh ya Hilaly, BE PROUD. YOU'RE HILALY :(.],
[*Hmmm No I really don't think the students will experience a cultural shock*]*
14. Errors of punctuation are not counted.

Appendix M:

Examples of Social Presence Observations

<i>Students' Social Presence Examples</i>		
<i>Category</i>	<i>Indicators</i>	<i>Examples</i>
Emotional Expressions	Expression of emotions	<p>"I like drinking tea soooo much especially with a lot of suger."</p> <p>"thanks alot Hassan for this video.. ^ _ ^"</p> <p>"that what will make it UNFORGETABLE .."</p> <p>"I BELIEVE THAT THERE WOULD BE NO POORER TEAM MORE THAN AL-NASSER :\$"</p> <p>"hhhhhh"</p> <p>"very very nice"</p> <p>"sorry brother I have to disagree"</p> <p>"Really?, when?"</p> <p>" :-)"</p> <p>"NO! NO!"</p> <p>"YO! YO! Abadi .. what's up ??"</p> <p>"I really like it"</p>
	Use of humour	<p>"Yeah my dear, that's in case of English any other intact language not in our Multi-Trapped-Twisted Lingual approach of English .. ^ _ ^"</p> <p>"Sometime I feel that Google is more qualified than other teacher.."</p> <p>"I think there will be more than one Krashen .. ^ _ ^"</p> <p>"I'm sorry dude if i gave you extra homework by replaying to your post ;p"</p>
	Self-disclosure	<p>"so I go to my room and listen to my favorite music. And sometimes when I feel lonely I invite people to my room to practice my English."</p> <p>"I play in the famous web site which is called Gamezer billiards."</p> <p>"I can get the stuff which I like such as shoes , different kinds of perfumes and different kinds of clothes Jackets , t- shirts ' jeans , pyjamas, shorts etc."</p> <p>"Personally, I used to have fast food daily but now I prefer natural and healthy food to fast food."</p> <p>"I used to go there not for shopping but to have a cup of Cappuccino and a sweet pancake at the Crepe Cafe."</p>

Open Communication Mutual Awareness and Recognition of others' Contributions	Continuing a thread	Numbers of online replies in the forums were counted
	Quoting from others' messages	Numbers of quotes in the forums were counted
	Referring explicitly to others' messages	<i>"I mean as you said Mr. [Name]"</i> <i>"As your decomment [Name]"</i> <i>"more than what you have mentioned Mr. [Name]"</i>
	Asking questions	<i>"Mr. [Name] , Do not you think that Panda is very expensive?"</i> <i>"Don't you agree :-) ?"</i>
	Complimenting, expressing appreciation	<i>"Thanks for this useful thread."</i> <i>"Thank you Mr. [Name] for your advice ,"</i> <i>"Good effort"</i> <i>"Thank you so much my friend."</i> <i>"yeah, great response"</i> <i>"Good ways brother"</i>
	Expressing agreement	<i>"Well, I do agree with you that we must practice English as much as we can."</i> <i>"You are right , I agree with you"</i> <i>"I strongly agree with that statement,"</i> <i>"Ok, I will visit it , God willing"</i>
Group Cohesion	Vocatives	<i>"Mr. [Name] I have to thank u about ur spporting"</i> <i>"Thanks Doctor"</i>
	Addresses or refers to the group using inclusive pronouns	<i>"I know it's harmful but what should we do."</i> <i>"So, some of you my friends prefer paper dictionary"</i> <i>"But I think the paper dictionaries make us - as students - used to the books"</i> <i>"I think it is a good ,useful way to learn because it helps us as students"</i> <i>"may Allah protect us"</i> <i>"let's hope .. ^ _ ^"</i>

	Phatics, salutations	<p><i>“peace be upon you”</i></p> <p><i>“Hello all ,”</i></p> <p><i>“Good evening”</i></p> <p><i>“Hi everybody...”</i></p> <p><i>“Nice to meet you too”</i></p> <p><i>“Thanks.”</i></p> <p><i>“GOOD LUCK “</i></p> <p><i>“Hello doctor”</i></p>
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Appendix N:

Assessing Social Presence in ACMC Interaction (Rourke et al., 2001, p. 11)

<i>Category</i>	<i>Indicators</i>	<i>Definition</i>	<i>Example</i>
<i>Affective</i> [Emotional Expressions]	Expression of emotions	Conventional expressions of emotion or unconventional expressions of emotions, includes, repetitious punctuation, conspicuous capitalization, emotions	"I just can't stand it when...!!!!" "ANYBODY OUT THERE!"
	Use of humor	Teasing, cajoling, irony, understatements, sarcasm	The banana crop in Edmonton is looking good this year;-)
	Self-disclosure	Presents details of life outside of class, or express vulnerability	"Where I work, this is what we do..."I just don't understand this question"
<i>Interactive</i> [Mutual Awareness and Recognition of other's contributions]	Continuing a thread	Using reply feature of software, rather than starting a new thread.	Software dependent, e.g., "Subject: Re" or "Branch from"
	Quoting from others' messages	Using software features to quote others entire message or cut and pasting selections of others messages.	Software dependent, or e.g., "Martha writes:" or text prefaced by less than symbol<.
	Referring explicitly to others' messages	Direct references to contents of others' posts.	"In your message, you talked about Moore's distinction between..."
	Asking questions	Students ask questions of other students or the moderator.	"Anyone else had experience with WEBCT?"

	Complimenting, expressing appreciation	Complimenting others or contents of others messages.	"I really like your interpretation of the reading"
	Expressing agreement	Expressing agreement with others or content of others' messages.	"I was thinking the same thing. You really hit the nail on the head."
<i>Cohesive</i>	Vocatives	Addressing or referring to participants by name.	"I think John made a good point." "John, what do you think?"
[Group Cohesion]	Addresses or refers to the group using inclusive pronouns	Addresses the group as we, us, our, group.	"Our textbook refers to...", "I think we veered off track..."
	Phatics, salutations	Communication that serves a purely social function; greetings, closures.	"Hi all," "That's it for now" "We're having the most beautiful weather here"