Chinese Language Learning on WeChat:

How Paralinguistic Features as an Indicator of Social Presence Influence Mentor-Mentee Relationships and Learning

Submitted by

Yanjun Xue

B.A., Henan Normal University, China

M.A., Beijing Language University, China

A thesis submitted in total fulfillment

of the requirements for the degree of

Doctor of Philosophy

School of Education

College of Arts, Social Sciences and Commerce

La Trobe University

Victoria, Australia

June 2021

Table of Contents

List of Tables

List of Figures

List of Appendices

Text Extract Presentation Conventions

- If the Chinese text messages contain the linguistic phenomena that are being investigated in the table, then the translations are word for word literal translations. Colloquial translations are provided in angled brackets ("< >") ONLY WHEN the literal translations may cause confusion or misinterpretation for readers who are not proficient in Chinese. However, if the Chinese text messages do not contain the focused linguistic phenomena that are being investigated in the table, then I only provide colloquial translations.

- The focused incorrect parts in the mentors' and the mentees' text messages are in red (they are also in red in the translations). The corresponding correct parts are in blue.

- In the translation column, the implied or understood parts in the mentors' or mentees' text messages are in square brackets ("[ ]").

- The notes in the tables of excerpts of chat logs are in *Italics*.

- In the translation of the text message, the first letter will not be capitalized if there is not a punctuation mark to indicate the completion of the sentence in the corresponding Chinese text message (e.g., full stop, exclamation mark, and question mark).

- The focused phenomena being investigated in the table are highlighted in yellow.

Abbreviations

Ax_1-Lx_2: "A" stands for Australian mentee; "x_1" indicates the serial number of this mentee in this level; "Lx_2" refers to the mentee's Chinese language level depending on his/her Chinese class (e.g., L1, L2, or L4).

Cx: refers to the serial number of a Chinese mentor ranging from 1 to 15.

Ax_1-Lx_2 & Cx: refers to the mentor-mentee relationship in a pair.

CMC: computer-mediated communication

CMD: computer-mediated discourse

CMDA: computer-mediated discourse analysis

CoI: the Community of Inquiry

AP(s): Australian participant(s)

CP(s): Chinese participant(s)

F2F: face-to-face

IME: input method editor (also known as "keyboard")

IMP(s): interactive multimodal platform(s)

PF(s): paralinguistic feature(s)

Px: proposition and its serial number in an e-turn, e.g., "P1" refers to "proposition 1 in an e-turn".

Ps: refers to a consecutive number of propositions, and it is often followed by numbers, e.g., Ps 1-3, which means "Propositions 1-3".

W-x: refers to the week number ranging from 1 to 14, that is, from the 1st week to the 14th week of Semester 2 at the Australian university.

Abstract

Australian university learners of Chinese as an additional language confront challenges including having limited learning time, being unlikely to obtain tailored support from teachers in their classroom learning settings and lacking extra support outside class. Online learning may offer ways of overcoming some of these challenges but sustained participation in online learning programs is difficult to achieve. In this thesis, I explore possible ways to achieve sustained and regular online Chinese language learning by investigating three pairs (consisting of Australian university learners and Chinese language teachers) who had extensive communication on social media WeChat (微信, Wēixìn) while learning Chinese. I report evidence of learning. Through the lens of social presence of the Community of Inquiry (CoI) theoretical framework, I identify nine aspects that influenced the mentor-mentee relationships and the opportunities created for Chinese learning. I show that paralinguistic features (e.g., emoji) in WeChat's text-based communication played a distinctive role in contributing to learning opportunities.

My theoretical contributions are four-fold. First, I reconceptualise the social presence element of the CoI theoretical framework in order to extend the framework to the context of informal, international and intercultural Chinese as an additional language learning via WeChat. Second, I identify two vital roles that paralinguistic features play in text-based computer-mediated learning: a catalyst that functions as an icebreaker to overcome unfamiliarity; and a barometer that can indicate the level of social presence in the learning relationship. These roles mean that paralinguistic features play a significant role in the establishment and maintenance of social presence (including exchanging emotions, establishing familiarity and maintaining the mentor-mentee relationships) and the creation of opportunities for learning. Third, I identify the under-explored function of social presence in increasing opportunities for Chinese learning and facilitating learning processes. Fourth, I use the insights gained to suggest modifications to the existing model of the CoI theoretical framework to increase its inclusiveness and explanatory power.

Keywords: Chinese language learning, additional language, paralinguistic features, social presence, Community of Inquiry, WeChat (微信)

Statement of Authorship

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis accepted for the award of any other degree or diploma.

No other person's work has been used without due acknowledgment in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

All research procedures reported in the thesis were approved by the Human Research Ethics Committee at La Trobe University (HREC Number: 15-005).

Yanjun Xue
02 June 2021

Publications integrated in the thesis:

Xue, Y. (2017). *Understanding relationship building in learning Chinese as an additional language on WeChat: Resolving methodological challenges*. In 7th Annual International Conference on Education and e-Learning (EeL) Proceedings, Global Science & Technology Forum (GSTF), Singapore.

Xue, Y. (2018). *Social presence in Chinese as an additional language learning on WeChat.* Paper presented at the ALAA2018 Conference: Engaging diversity: creating connections and building knowledge, Wollongong.

Acknowledgements

This thesis, which has taken seven years to complete, is the culmination of an educational journey that started in my childhood in China, and a life journey that has taken me to Australia. This thesis would have never been possible without the continued support and encouragement from many people, in China and Australia, to whom I am deeply indebted.

I am grateful to my Principal Supervisor Professor Howard Nicholas, my Co-supervisor Dr. Kate O'Connor, and my previous Co-supervisor Dr. Baoqiang Gao. Howard, thank you for your wisdom and for contributing your profound insights to my thesis; as a supervisor you have always been my invaluable beacon. Kate, thank you for your constructive suggestions, patience and encouragement. Baoqiang, I really appreciate your professional advice and encouragement, which have been the driving force behind the completion of this thesis.

I highly appreciate Professor Jo Lampert, Associate Professor Donna Starks, Dr. Shem Macdonald, Dr. Mike Brown, Dr. Dorothy Smith, Dr. Yuzeng Xu and Dr Yangbin Chen for their enlightening comments and support. A special thank you goes to Louise, April, Vera and Hilarie for seeing me through various challenges.

I am particularly grateful to all my Australian and Chinese participants, and the audit trail transcribers, for their participation and contribution to this thesis. I would also like to thank my friends, Lee Cheng Koh, Nhan Phan, Tu Thanh Tran, Pande Made Sumartini and Thuy Duong, for their hugs.

I am deeply thankful to my family. To my husband, Kun, thank you for your unconditional love, constant encouragement and the sacrifices and contribution you have made to our family. I cherish what you said to me: "follow your heart", and "it is my responsibility to make you and our son happy". To my son Mohan, you have grown to become a teenager during my academic journey; thank you for your love and understanding, even though I did not spend enough time with you during school holidays and weekends. To my parents-in-law, thank you for your support with our household. To my two brothers and sisters-in-law, thank you for your unconditional support of me, your younger sister, to pursue my goals. Thank you, Huichao, for your assistance; I am so fortunate to have you as my sister.

The people whom I am indebted to predated the start of my PhD journey. I am grateful to Professor Xun Liu and Professor Yonghua Cui, who, after the oral defense of my Master's thesis in 2007, encouraged me to pursue a PhD. My gratitude also to Associate Professor

Ningzhi Zhang, my Master's Thesis Supervisor, who spurred me on to do a PhD abroad in 2012. Thank you all for your encouragement and support; without you I would not have had the confidence and courage to pursue this daunting life course.

The deepest and fondest memories that have accompanied me on my PhD journey are those with my parents. I thank them for their every effort to help me see the world step by step, from a Chinese village to Melbourne. They encouraged me to be kind, persevering, courageous and confident; these are the invaluable inheritance they left me, which had helped me get through this strenuous journey and will give me strength to go further.

To my mother, these words are for you: without your love, persistence and faith in me, regardless of the endless sarcasm and objection, I would have dropped out of school when I was a little girl. You left this world shortly after I started my academic journey in Australia. Then, I vowed that I would do my utmost to complete my PhD and never give up, although I knew that you only wished me to live a simple and happy life. It was the only thing that I could do to cope with my grief and honour your devotion to me. Mother, this thesis is dedicated to you. R.I.P. 母亲，女儿谨以此论文献给您。您安息吧。

Chapter 1: Introduction

1.1 General context of this study

1.1.1 Challenges in learning Chinese[1] as an additional language in Australian tertiary education

Students learning Chinese as an additional language in Australian universities confront a range of challenges. First and foremost, Australian university learners of Chinese language have limited exposure to the Chinese language in their formal classroom learning settings. At Australian universities, it is common for an elective Chinese language subject to consist of a weekly set of 2-hours of lectures and 2-hours of tutorials (or workshops) for the semester. Each semester has 12 weeks for learning and teaching in each of the two semesters each year, but students have often approached me asking for additional support.

Second, language learning is in particular need of collaboration, therefore, learners need conversational partners who can engage them in challenging but supportive communication experiences. However, Australian university learners of Chinese language may lack learning and practice opportunities outside formal classes. Jiang and Li have argued that it is not easy for the learners to approach Chinese native speakers (2018, p. 2). In this thesis, I use the Community of Inquiry (CoI) theoretical framework as a way of looking at how sustained learning relationships between mentors and mentees are established.

The third challenge lies in the heterogeneous challenges of formal classroom learning, which make it difficult for teachers to target individual learner needs. As Liu and Lo Bianco (2007) point out, although Australian university Chinese language instructors prefer that the placement of the learners is on the basis of Chinese language proficiency, learners are only roughly categorised as: beginning learners, post-secondary learners, background learners, and native speakers. Learners in the post-secondary category have a further three sub-categories of proficiency, ranging from low to high. Liu and Lo Bianco reported that this kind of mixed proficiency placement can cause substantial problems among learners, for instance, boredom or loss of confidence (2007, p. 108).

---

[1] The Chinese language has substantial dialects, but the official version acknowledged and promoted in Mainland China is 普通话 (Pǔtōnghuà, Standard Mandarin). Therefore, the general term for the language is "Chinese", but it will be used to refer to "Standard Mandarin" in this thesis, unless differently specified (e.g., Taiwanese Mandarin).

Addressing these challenges raises the question of whether it is possible to extend Chinese learning outside the classroom to offer Australian university learners of Chinese supplementary support by connecting them with Chinese native speakers regardless of their location. The advent of mobile Internet technology and the prevalence of both smart portable devices (e.g., smart phones) and social media may offer such opportunities.

1.1.2 Using social media as a language learning environment: benefits and problems

It is generally argued that mobile devices are particularly well-suited to support social contacts and collaborative learning as part of language learning (Kukulska-Hulme & Shield, 2008, p. 271). Kukulska-Hulme (2014, p. 14) further stated:

> People now travel more, time-shift and multitask; they make use of their diverse online networks and ubiquitous mobile devices. The ability to extend language learning beyond the classroom, perhaps interweaving it with work and other activities, is an important attraction. Mobility, in conjunction with the use of social networks and portable devices, can create entirely new possibilities for language learning.

However, the educational value of social media or social networking sites is controversial. For example, dozens of studies have produced contrasting results concerning the educational value of Facebook (Manca & Ranierit, 2013). On the one hand, Madge et al. (2009) reported that students viewed Facebook as largely to be used for social purposes rather than for formal teaching purposes even though they occasionally used it informally in support of their learning (p. 141). In contrast, Luo (2013) investigated 44 empirical studies published between 2008 and 2012 of programs using Web 2.0 tools in language learning. The languages investigated in the 44 studies included French and German as a foreign language, and English as a second language. Amongst the Web 2.0 tools that the 44 studies investigated, Blogs and Wikis ranked as the first and the second most investigated tools. In third place were social networking tools, including Facebook and Twitter. The educational benefits of the Web 2.0 tools that were claimed include: promoting affective learning, enhancing collaborative learning, fostering a learning community, augmenting performance, and supporting metacognitive learning (Luo, 2013).

An example of a Web 2.0 tool that is particularly popular in China is 微信 (*Wēixìn*, its international version is WeChat), a social media application, developed by a Chinese company, Tencent (腾讯, *Téngxùn*) and launched in 2011. Its basic features are designed for social purposes, for example, users can send text messages (up to 5,000 characters per

message), audio messages (recordings up to 60 seconds), pictures (a maximum of 9 pictures can be sent simultaneously), web links, video clips, and digital files, and make audio calls, video calls, as well as post ideas on Moments (which is similar to Facebook Wall). Users' WeChat contacts are able to view and comment on these posts. WeChat is designed to be used on desktop and portable devices (such as laptops, smart phones and tablets), which makes it plausible as a means to extend learning outside classroom settings. Because WeChat is available to both Australian university learners of Chinese language and Chinese people who live in Mainland China[2], it is a practical way to connect learners of Chinese with native speaker partners.

Despite the widely reported effectiveness of online learning, issues regarding "student retention" in online learning environments or "sustainability" in mobile learning research projects have been reported repeatedly, such as in the study of Means et al. (2009, p. ix). Boston et al. (2009) reported that the attrition rates for online courses were usually much higher than for campus-based courses (pp. 67-68). The online course completion rates varied across institutions, ranging from 80% to 10% (Carr, 2000, p. 39), which indicates that there can be a substantial dropout rate. Patterson and McFadden (2009) suggested that the dropout rates were up to six to seven times higher in some online programs than in campus-based programs. These findings underline the significance of sustaining student engagement in online learning programs.

1.2 The background of the study

The study reported in this thesis focuses on the learning and learning-relationship-building experiences of three mentor-mentee pairs, who were part of a larger learning project that commenced in June 2015 and used WeChat as an informal learning platform to connect Australian university learners of Chinese and native speakers of Chinese (in particular, Chinese language teachers).

The teaching initiative involved 15 Chinese native speakers and 17 Australian participants who were taking Chinese classes at one of three levels (1, 2 and 4, ranging from beginner level to pre-intermediate and advanced levels) at an Australian university in the second semester of 2015. Acknowledging that the mentors (15) were busy working and studying but that there were more mentees (17), I set the rule that each Chinese participant would have at least one but no more than two mentees, and each mentee could have at least one

---

[2] Chinese people in Mainland China do not have access to some western social media (such as Facebook and Twitter).

but no more than two mentors, which resulted in the formation of 22 valid WeChat-mediated pairs involving one native speaker and one student, including some pairs where membership changed. Only some of these pairs became part of the study. Three pairs did not submit logs of their interactions. Others did not have the extensive communication that was needed for this study. As a result, as outlined below, three pairs became the focus of this thesis.

The pairs were intended to work together for 14 weeks. This did not occur for all pairs. In particular, the communication in the three focused pairs in this thesis did not last 14 weeks, because these particular mentor-mentee relationships were established later than others. See Appendix 1 for more details. More explanations are provided in Section 3.3.1 The communication between a mentor and a mentee took place in the private chat mode on WeChat. I was not part of those chats, but I asked the participants to send me logs of their chats (for further details see Chapter 3). Of the 22 pairs, 19 sent their chat logs to me. I used their data to select the participants for this study. The primary basis for the selection was that the pairs had sustained their learning relationships, that is, they had extensive communication over a minimum of five sessions across a minimum of ten weeks of interaction.

The decision to focus exclusively on three mentor-mentee pairs was made because, as demonstrated in Appendix 2, these three pairs met the minimum criteria. A4-L4 & C13 had regular communication from when the mentor-mentee relationship was established. Although A1-L4 & C11 and A2-L4 & C11 did not have regular communication on a weekly basis, they had communication over a minimum of five sessions. Additionally, as shown in Figure 1, the three pairs contributed the majority of the messages (782, 413, and 439 respectively; 1,633 in total), nearly 57% of the corpus of 2,872 messages, which means that all the three pairs had extensive communication.
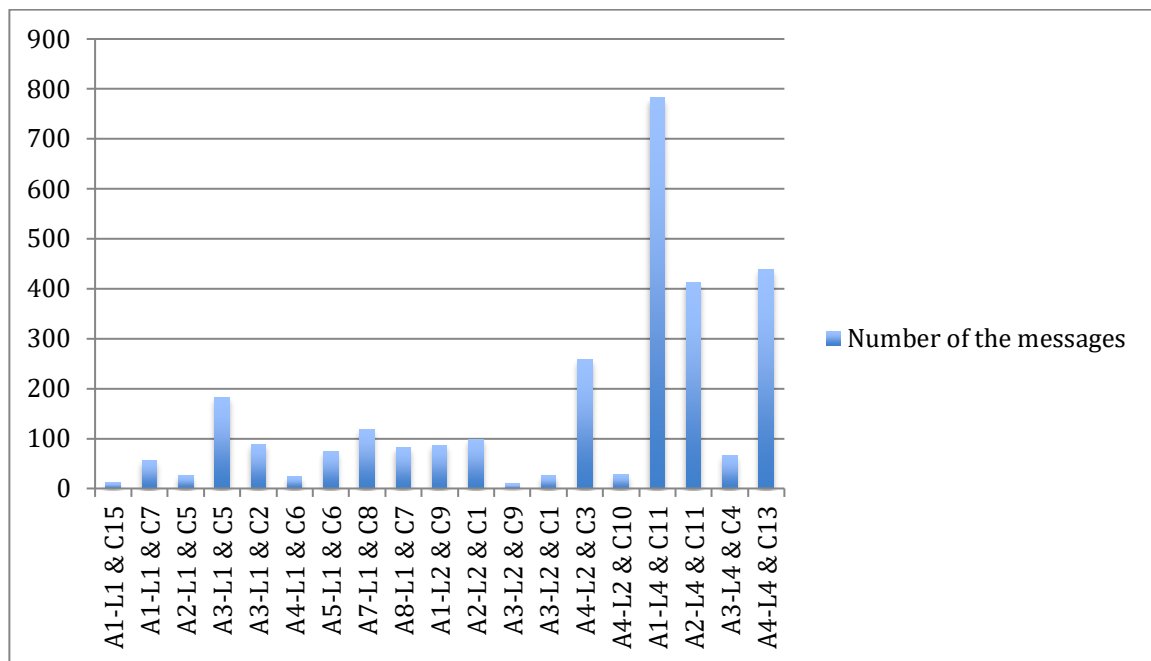
Figure 1 - Quantity of Messages Sent by Each Pair

Note: The messages are counted according to the time that each message appeared on the chat logs that the participants sent to me. The time is provided by WeChat system. The importance of analysing the messages by time will be elaborated in Section 3.5.4.1.

Accompanying the quantification of communication that is recorded in Figure 1 were additional comments from the participants about influences on their mentor-mentee relationships. While other aspects also inhibited communication, the most prominent subjective factor mentioned by 10 out of the 14 mentees that inhibited them from communicating with their mentor(s) was academic and (or) work pressure (including A2-L4 and A4-L4).[3]

In contrast, 14 out of the 15 mentors (including C11 but excluding C13) reported that the fundamental factor that hindered them from communicating with their mentee(s) was "情感缺失" [the absence of emotions], or "缺乏情感交流" [lack of emotional exchanges], both were expressions coined by C1 (other similar expressions used by other mentors include: "心理距离" [psychological distance], "不熟" [not acquainted], "陌生的感觉" [sense of strangeness], "完全不认识" [completely do not know]. This motivated my interest in the three pairs in three respects: the learning experiences in each pair, what aspects influenced (facilitated or inhibited) and how they influenced their emotional exchanges, their

---

[3] Other aspects mentees mentioned included: 1) constraints on Chinese language proficiency; 2) family commitment; 3) not having the habit of using WeChat; 4) social activities and travelling; 5) being hesitant to contact their mentors (e.g., being unfamiliar with their mentors and feeling shy); and 6) learning habits: learning at a fixed place.

establishment of familiarity and WeChat-mediated Chinese learning.

This study investigates the connections between three key aspects: computer-mediated communication (CMC) on WeChat, the dynamics of mentor-mentee relationships (including emotional exchanges, establishment of familiarity and maintenance of mentor-mentee relationships) and the dynamic Chinese learning process. Therefore, it is necessary to draw on a theory that incorporates these three aspects. Because the latest Community of Inquiry (CoI) theoretical framework acknowledges the influence of emotion on online learning, and the social presence element of the CoI theoretical framework acknowledges that the relationships (i.e., group identity vs personal identity) among stakeholders make a difference in the dynamics of online learning, the CoI theoretical framework appears to fulfill this requirement. I will elaborate more on this connection in Section 2.3.

1.3 Aim and research scope of this study

On the basis of studies that investigate utilizing social media as a language learning environment, in this study I aim to explore what contributes to and occurs in sustained online Chinese learning. The focus of my study is the three pairs who all had extensive communication but had different degrees of sustained mentor-mentee relationships.

My investigations of the learning experiences in the three pairs provide evidence that mentees' "learning" rather than "socialising" does occur in this computer-mediated context. After demonstrating that there was learning, I turn to influences on that learning: *what* aspects contributed to the emotional exchanges, the establishment of familiarity, the maintenance of mentor-mentee relationships and Chinese learning in the three pairs in Level 4, and *how* the aspects exerted such influence (i.e., supported or inhibited).

Investigations of the *what* and the *how* are about probing the interpersonal relationships in CMC. Ng and Nicholas proposed a person-centred sustainable model for mobile learning (2013, p. 699), which "shows the various stakeholders and their actions that contribute to the sustainability of mobile learning programmes in schools" (p. 698).

In elaborating the sustainability of mobile learning in institutions (including schools and universities), Ng and Nicholas focused "on the people who use the devices rather than on the device(s) and associated technical requirements or contexts" (2016, p. 5). Undeniably, as will be further reported in Chapter 3, technological aspects do influence mentor-mentee relationships and the opportunities for Chinese learning, but the focus of this thesis will be

on the people, that is, I will focus on the people involved in this research project and delve into what aspects influence and how these aspects influence the dynamics of mentor-mentee relationships and consequently Chinese learning. The person-centred rather than the technology- or medium-centred perspective will be the general approach and will be in the foreground of my investigation of the *what* question and the *how* question.

This thesis is not meant to be a guide about "how to sustain mentor-mentee relationships and the associated Chinese learning using WeChat." Its primary task is to give an account of phenomena (i.e., the aspects) that may contribute to or inhibit the *what* and the *how* questions, and then, on the basis of the these investigations, identify the specific features in participants' communication on WeChat that have such influence.

1.4 Research questions

The research aim and scope mentioned above give rise to three research questions:

Q1: What is the evidence of the mentees' learning of Chinese on WeChat?

Q2: What aspects of social presence influenced the mentor-mentee relationships and Chinese language learning and how did they exert such influence?

Q3: What are the specific features of text-based communication on WeChat that impacted the mentor-mentee relationships and Chinese language learning?

The notion of "social presence" offers the key to the last two research questions. Social presence has been investigated in multiple disciplines, such as media and communication as well as education. The CoI theoretical framework initially proposed by Garrison et al. (2000) looks into the interactions of three elements of online learning (e.g., social presence, teaching presence and cognitive presence), and takes account of both situational aspects and technological aspects in understanding online learning, which fits in my research scope. Therefore, I investigate the three research questions through the lens of social presence by focusing on the CoI framework but also drawing on the findings about social presence in other disciplines.

1.5 Significance of the study

This study has theoretical significance. For example, I have reconceptualised the social

presence element of the CoI theoretical framework and extended the framework to the context of WeChat mediated informal, international and intercultural Chinese language learning. Moreover, I found two vital roles (i.e., catalyst and barometer) of paralinguistic features (e.g., emoji and emoticons) in WeChat-based communication in establishing and maintaining social presence (including exchanging emotions, establishing familiarity and sustaining the mentor-mentee relationships), and creating opportunities for Chinese language learning. Additionally, I identified the underlying functions of social presence that have remained implicit within the CoI theoretical framework: it can increase opportunities for Chinese learning and facilitate learning processes. Furthermore, I used the insights gained to suggest modifications to the existing model of the CoI theoretical framework to increase its inclusiveness and explanatory power.

This study also has practical significance. Since the time spent in formal classrooms in Chinese learning is limited and precious, it is necessary for us not only to make the best of that learning time, but to explore how to extend the formal classroom learning settings to other learning settings outside the classroom. The investigations of three pairs will not only identify more pedagogic potentials of WeChat in Chinese learning, but also assist to make tertiary learning of Chinese in Australia more productive because we will be able to take advantage of the contributing aspects and avoid the inhibiting aspects identified in the three pairs.

1.6 Definitions of key terms in this thesis

1.6.1 Chinese as a second, foreign or additional language?

In Mainland China, teaching Chinese to foreign students is conventionally called "Teaching Chinese as a Foreign Language" although it is well acknowledged that in essence, it is "Teaching Chinese as a Second Language" (Liu, 2000, pp. 4-6; Zhao, 2006, pp. 9-12). However, for Australian learners of Chinese in this study, Chinese is a language that is not used to negotiate daily life, and it is not necessarily a second language, because for some of them (e.g., A2-L4 and A4-L4) Chinese is neither available for daily negotiation of life, nor is it their sequentially second language because it is their third or even fourth language. Therefore, I will use the term "Chinese as an additional language", which is in line with Nicholas and Starks (2014, p. 74). And when I refer to "learning Chinese" or "Chinese learning" in this thesis, I mean the learning of Chinese as an additional language, unless otherwise specified.

1.6.2 Sustained mentor-mentee relationships

The sustained mentor-mentee relationships in this study refer to participants' continued engagement with learning or teaching Chinese on WeChat. The criterion used is that there were exchanges between the mentor and the mentee in their pair every week (not necessarily every day) consecutively from the week when the mentor-mentee relationship was established until the end of the 14-week semester period (between 27 July and 1 November 2015).

1.6.3 Informal learning

Livingstone defined *informal learning* as: "any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria" (2001, p. 5). Similar to the term *informal learning*, there is a term *incidental learning*, which is described by Kerka as "unintentional or unplanned learning" (2000, p. 1). Jones et al. (2014, p. 77) argued: "Unlike formal, classroom-based learning, it is not led by a tutor, nor does it follow a structured curriculum or result in formal certification."

Jones et al. (2014) differentiated *informal learning* from *incidental learning*. They maintained that *incidental learning* is not planned, that is, there is no goal to achieve learning outcomes set previously, additionally, it may take place when pursuing another goal, or emerge when doing another task (p. 77).

The Chinese language learning on WeChat in my study was with a mentor, who was not governed by externally imposed curricular criteria and assessment. The mentor-mentee relationships were able to be directed differently by each mentee. However, the pairs were established with the explicit goal of supporting the mentee's Chinese learning. Therefore, the learning in this study can be seen as *informal learning*.

1.7 Thesis organization

This thesis consists of six chapters. Chapter 1 has briefly introduced the challenges arising in Chinese learning in Australian tertiary education, Chinese social media WeChat and its pedagogic potential in Chinese learning. Then it described the background of this study and explained the reasons why the three pairs in Level 4 have been chosen for comprehensive investigation in this thesis. It proposes three research questions followed by definitions of terms employed in this thesis.

In Chapter 2, I first review literature that used WeChat as a language learning environment, with a focus on studies on WeChat-mediated Chinese language learning, and identify seven research gaps. Then I introduce social presence in studies other than the CoI theoretical framework, subsequently I review how studies within the CoI theoretical framework have interpreted the notion over time. As a result, I make some additions and adaptions to the existing social presence element of the CoI theoretical framework, that results in a consolidated list of nine indicators of social presence that can be used to investigate the last two research questions, extend the framework to the context of informal, international and intercultural Chinese learning on WeChat, and identify six research gaps within the framework. In the following section, considering that participants' use of emoji and emoticons is a noticeable and regular phenomenon in their communication on WeChat, I review literature about this phenomenon in text-based CMC in terms of its varieties, functions, as well as positive and negative perceptions of its contribution.

Chapter 3 starts with a review of literature concerning the general methodological challenges in researching mobile informal learning and argue for the necessity of collecting multiple data sources. Then it describes the research design, followed by descriptions of the data sources, the stages of data collection and data processing (including data analysis methods, anonymization, transcription, segmentation of chat logs, criteria for counting messages and issues of validity and reliability, and coding).

Chapter 4 begins with a demonstration of patterns of Chinese learning in the three pairs. I show that the more sustained the mentor-mentee relationships are, the more opportunities there are for learning. Then I investigate how the nine proposed indicators of social presence influenced (supported or inhibited) the mentor-mentee relationships and the associated opportunities for Chinese learning. Next, I show that paralinguistic features (e.g., emoji and emoticons) are a vital part of communication and play a significant role in the establishment and maintenance of social presence (including exchanging emotions, establishing familiarity and maintaining the mentor-mentee relationships) and the creation of opportunities for Chinese learning. After that, I identify the underlying function of social presence that has not been revealed or made explicit by the existing CoI theoretical framework. I claim that the key function of social presence is to increase learning opportunities and finally to facilitate learning processes. As a result, I identify an apparent consistency between the different degrees of sustained mentor-mentee relationships, the varying degrees of social presence and the different quantity (including the frequency and the duration) of opportunities for Chinese learning in the three pairs, which gave rise to the necessity to distinguish *opportunities for learning* from *learning* itself. Finally, I provide an

overview of the influences of the proposed nine indicators on the mentor-mentee relationships and the different degrees of social presence in the three pairs, and on the establishment of higher degrees of social presence as a collaborative task that requires each member of the pair to be aware of and fulfill the capacity of each indicator.

Chapter 5 discusses what the accounts in Chapter 4 reveal. First, I report the distinctive features of Chinese learning on WeChat that embody pedagogic values, and the importance of both mentors' and mentees' noticing and initiative. Next, I discuss social presence in this study, including: 1) the roles of paralinguistic features in establishing and maintaining social presence (including exchanging emotions, establishing familiarity, sustaining mentor-mentee relationships) and creating opportunities for Chinese learning: as both catalysts (or icebreakers) and barometers; 2) the need for the affective communication category of social presence to be developed earlier than the other two categories in the context of the present study; and 3) the importance of online etiquette. Then I propose issues that should be taken into consideration in the social presence element of the CoI theoretical framework. After that, I discuss four aspects of digital literacy that participants need to cultivate in Chinese learning with WeChat.

In Chapter 6, I first present the theoretical implications of this study, which are connected with the issues that should be taken into consideration of the social presence element of the CoI theoretical framework, and I propose a modified model of the CoI theoretical framework. Then I outline the practical implications, followed by the limitations of the study. I conclude this thesis with proposals for future research in Chinese learning using social media like WeChat.

Chapter 2: Literature Review

2.1 Introduction

In Section 1.1.2 I reported that studies using social media as a language learning environment have identified both benefits and problems. In this chapter I first review studies using one social media platform, WeChat, as a language learning environment. My focus on studies investigating WeChat-mediated Chinese language learning identifies that participants have emotional needs for the establishment of familiarity and maintenance of close learning relationships with other participants in online learning. Because the social presence notion looks at interpersonal relationships in CMC, I then review studies on social presence in the disciplines of media, communication and education that do not draw on the CoI theoretical framework to obtain findings to facilitate my interpretations of the notion of social presence. Because studies of social presence in approaches other than the Community of Inquiry framework do not concurrently consider the three key aspects in the present study: CMC, interpersonal relationships (including emotional exchanges, establishment of familiarity and maintenance of mentor-mentee relationships) and online learning, I then turn to the latest Community of Inquiry (CoI) theoretical framework. This version explicitly acknowledges the influence of emotion on online learning, and the social presence element of the CoI theoretical framework acknowledges that the relationships (i.e., group identity vs personal identity) among stakeholders make a difference in the dynamics of online learning. This connection is central to my development of an answer to the second research question. I then review literature on social presence within the CoI theoretical framework, which provides a contextualized framing of interpersonal relationships in computer mediated online learning on WeChat. Although emoji and emoticons represent a distinctive phenomenon that is increasingly widely used in social media communication, the latest social presence element of the CoI theoretical framework does not clearly address their roles in emotional exchanges, interpersonal relationships and online learning. Therefore, in Section 2.4, I provide a comprehensive review of this phenomenon, which will help to frame my answer to the third research question.

2.2 Studies on using WeChat as a language learning environment

Many studies consider WeChat-based language learning as a sub-category of mobile-assisted language learning, and therefore locate their literature reviews under the umbrella of mobile-assisted language learning. In this thesis, I do not follow this tradition because my

focus is to investigate participants' exchanges on WeChat regardless of which device(s) (e.g., mobile phones, tablets, laptops, desktops or web) it is used on. That is, my focus is not on the mobility that the program enables, but rather on WeChat as an example of a digital communication tool. Therefore, the wider construct of computer-assisted language learning (that includes mobile-assisted language learning) is more appropriate. In Section 2.2, I will use computer-assisted language learning as the general context, and my literature review will focus broadly on studies using WeChat as a language learning platform rather than narrowly on studies using it only on mobile devices.

In Section 1.1.2 I have pointed out that studies have identified both benefits and problems associated with using social media as language learning environments. In relation to WeChat, since 2014, research into the application of WeChat in language learning has reported consistent findings on its pedagogic benefits. Xue and Churchill (2019) investigated 21 empirical studies that used WeChat as a learning platform and identified seven categories of educational affordances associated with WeChat (e.g., resource sharing, authentic learning and motivating environment). A substantial number of these studies have investigated English as a foreign/second language on WeChat.

Xue and Churchill's (2019) article analysed learning in a WeChat setting in peer reviewed journal articles and peer reviewed conference proceedings published between 2014 and June 2018, all of which were written in English. It excluded dissertations and non-reviewed conference papers. Among the 21 empirical studies on using WeChat as a learning setting investigated in their article, 14 were about language learning/teaching (8 about English, 4 about Chinese, and 2 about both English and Chinese). To extend beyond the six studies concerning WeChat-based Chinese language learning included in Xue and Churchill's (2019) study (Jin, 2018; Luo & Yang, 2016; Qi & Wang, 2018; Sung & Poole, 2017; Wang et al., 2016; Xu & Peng, 2017), I have included nine more studies on WeChat-based Chinese language learning/teaching that were published in recent years (till 2021). Four of these nine studies were in Chinese. Among the four studies written in Chinese, three are peer-reviewed journal articles (Li, 2016; Lv, 2014; Wang, 2015) and one is a Master's thesis (Lv, 2016). As did Xue and Churchill (2019, p. 1236), I excluded studies that only presented personal opinions and speculative arguments but lacked empirical data. My review below considers 15 studies, including Xue and Churchill's (2019) six reported studies involving Chinese and the further nine more recent studies that I have identified.

2.2.1 WeChat-based Chinese learning studies: reported benefits and problems

The pedagogic affordances of WeChat and the benefits of using WeChat in Chinese language learning have been well documented by 12 of the 15 studies. The remaining three studies did not involve investigations of the benefits or drawbacks of WeChat-based Chinese learning (Chen et al., 2021 focused on learners' uses of social strategies on WeChat and other online leanring settings; Li, 2016, focused on teaching Spoken Chinese on WeChat's public platform; and Qi & Wang, 2018, focused on teachers' professional development).

The benefits of WeChat-mediated Chinese learning documented by the 12 studies can be categorised into eight aspects: (1) it extends the learning to places outside the classroom and it also extends the learning time, therefore the learning can literally take place anywhere and anytime; (2) it provides learners with more exposure to Chinese linguistic resources (e.g., casual, colloquial expressions and slang) in real-life communication and with authentic and meaning-focused communication with interlocutors; (3) it makes accessing Chinese native speakers easy and therefore enables learners to know more about China, Chinese people and Chinese culture; (4) it facilitates a supportive Chinese language learning community and enhances learners' motivation in learning; (5) it eases learners' anxiety caused by being corrected in the presence of others if the correction takes place in WeChat's one-to-one communication, and it lessens awkwardness and nervousness of interacting in F2F contexts; (6) it enables learners to obtain individualised feedback from teachers and Chinese native speakers; (7) it makes sharing thoughts and information efficiently (e.g., sharing or enquiring about information on assignments and asking for leave); (8) it provides space for new learner identity creation (e.g., from a beginning-level learner to a fluent, competent Chinese language learner, see an example in Jin, 2018).

The problems or drawbacks reported by participants in 10 of the 12 studies that are related to the focus of the current study mainly involve two aspects. The first one concerns 'heavy workload'. The second one concerns learner's emotional needs. I will discuss these two issues in this sequence.

Learners of Chinese language in two studies (Luo & Gui, 2021; Luo & Yang, 2016) reported a similar complaint: the heavy workload imposed by their learning on WeChat. And in Luo and Gui's (2021) study, the teacher-researcher also complained about the heavy work load resulting from the WeChat-based project.

In Luo and Yang's (2016) study, students' proposed resolution to the heavy workload was to

make the integration of WeChat with classroom learning optional with extra credit being offered for the WeChat activity, instead of making the participation compulsory (2016, p. 92). Both the complaint and the suggestion indicate that WeChat-based informal Chinese learning appeared to be considered beneficial by the students.

Luo and Gui (2021) investigated a 15-week Chinese-American telecollaborative learning program (i.e., online exchanges) on WeChat and Skype. It was mandatory for the American students to participate in this program and their performances in the program contributed up to 20% of their final scores. The American learners of Chinese were required to participate in four components of the project in addition to their regular Chinese course: weekly half an hour (half in English and half in Chinese) one-on-one Skype conversations with their Chinese counterparts using the American university's lab computers, 8-weeks of WeChat group cultural discussions with their Chinese counterparts (mainly in English), daily one-on-one WeChat conversations, and writing weekly reflection journals. Their study (2021) reported some challenges, and the third biggest challenge (reported by 15 out of 21 American participants) was "heavy workload". Moreover, the teacher-researcher also identified some challenges, such as the amount of time consumed in organizing and coordinating American participants and Chinese participants, and the struggle to balance between the roles of being both a teacher and a researcher in the program.

The review of Luo and Yang's (2016) study and Luo and Gui's (2021) study suggests that participants' complaint in the two studies about the "heavy workload" was due to the activity design. The review also indicates the promising benefits of WeChat-based informal Chinese learning if it did not involve an increase in teachers' and students' workloads. However, only one study (Jin, 2018) researched this area, I will elaborate more about this issue later.

The second problem identified above is related to learners' emotional needs, which was identified in learners' self-reports in three of the 15 studies concerning WeChat-mediated Chinese learning and one of WeChat-mediated English learning.

One Chinese learner in Wang et al.'s (2016) study reported that it was "extremely uncomfortable being paired with a total stranger from a different culture who speaks a different language," and another learner reported that it was awkward to speak Chinese with his/her Chinese language partner as they did not know each other well (Wang et al., 2016, p. 29). One of the drawbacks reported by Sung and Poole's (2017) participant was: "It can be hard to express the right emotions as with any messaging program" (p. 109). One of

Jiang and Li's participants' suggestion coheres with this report: "allow students to conduct the task with their existing Chinese friends if they have any" (2018, p. 10). Two participants in the study of Jiang and Li (2018, p. 12) reported that it was a bit hard to start a conversation at the beginning of the learner-native speaker communication on WeChat.

In the study of Wu and Miller (2021, p. 575), which investigated WeChat-mediated English language learning, two of their participants suggested that to support meaningful and sustained participation, it would be necessary to develop both online and offline relationships with other participants. One of them said: "We could have one round offline discussion and then use WeChat when we know each other" (p. 575). Another participant in their study commented that: "I don't know them. I could have determined what kind of languages style to use if I had gotten to know their personality traits." (2021, p. 575)

The eight participants' feedback in the above four studies (Jiang & Li, 2018; Sung & Poole, 2017; Wang et al., 2016; Wu & Miller, 2021) coheres with what 14 out of the 15 mentors in my learning project reported: how the "不熟" [not acquainted], "陌生的感觉" [sense of strangeness], or "完全不认识" [completely do not know] hindered them from communicating with their mentees (as mentioned in Section 1.2). As a result, a central concern of the present study is to investigate: what aspects influenced and how they influenced emotional exchanges, the establishment of familiarity, the maintenance of mentor-mentee relationships and the computer-assisted (specifically, WeChat-mediated) Chinese language learning, which is the second research question of the current study sets out to investigate.

Having identified the central concern of the present study, in Sections 2.2.2-2.2.4, I review the 15 studies with three themes that are consistent with the three research questions mentioned in Chapter 1. The first theme involves what is the evidence of Chinese language learning on WeChat. The second theme concerns what situational aspects influenced the emotional exchanges in the mentor-mentee relationships and Chinese language learning and how they exerted such influence. The third concerns the specific features of text-based communication on WeChat that impacted the mentor-mentee relationships and Chinese language learning.

2.2.2 WeChat-based Chinese learning studies: methodological issues in relation to providing the evidence of learning

Although studies have reported benefits of and problems in WeChat-based Chinese learning

(as mentioned in Section 2.2.1), there are two potential issues in relation to the provision of evidence of learning. The first potential issue is that the 15 studies on WeChat-mediated Chinese language learning/teaching only addressed contexts in which the relationships between participants were either already established or relatively easy to establish.

Considering the studies through the lens of formality and judging by the definition of *informal learning* that I mentioned in Section 1.6.3, 13 out of the 15 studies can be considered to have been conducted in formal learning settings. In those studies the use of WeChat to learn Chinese language was part of a regular Chinese course, and usually the learners of Chinese language were offered extra credit points for participating in the research projects or their performance on WeChat was assessed and the outcome contributed a certain percentage of their final grade. Qi and Wang's (2018) study was excluded from the analysis of this issue, because it did not include learners of Chinese as participants. I assume that in Chen et al.'s (2021) study, WeChat was used in formal learning setting, because WeChat was one of the online tools used in two learning contexts: "(1) self-directed learning outside the synchronous online classes; (2) assessment task completion online (ongoing assessments, a Wiki writing assignment, a speaking assignment or an oral test) outside the synchronous online classes" (2021, pp. 6-7), where WeChat was part of Chinese language class. Among the 15 studies, only Jin's (2018) study investigated the affordances of WeChat in Chinese learning in informal settings, in that American learners' use of WeChat was not part of their Chinese class, their WeChat-based experience was not assessed as part of their final grades nor were they given extra credit points.

Considering the 15 studies through the lens of location, in four of the 15 studies on WeChat-based Chinese learning/teaching, both the learners of Chinese language and Chinese native speakers were in the same country (i.e., in China) and at the same universities (Huang, 2019; Jin, 2018; Wang, 2015; Xu & Peng, 2017). The exceptions were four studies: Qi and Wang (2018), either because there were no student participants; Li (2016) and Lv (2014, 2016) or because their participants were all learners of Chinese language (i.e., no Chinese native speakers were involved as participants) at the same universities in China. In a further four studies, participants were all in the same countries outside China: in the United States (Luo & Yang, 2016; Sung & Poole, 2017) and in Australia (Chen et al., 2021; Jiang & Li, 2018). A further three studies involved international communication where the learners of Chinese and Chinese native speakers were physically in different countries, including Wang et al. (2016) (Australia and China), Pamintuan et al. (2018) (Philippine and China) and Luo and Gui (2021) (USA and China).

Even though Chen et al.'s (2021) study involves Chinese native speakers as participants, it can be considered as an intercultural study because there was learner-native speaker communication (excluding the Chinese language teachers as native speakers in the studies). However, because in Chen et al.'s (2021) study there was only one screenshot of a Chinese learners' communication with Chinese native speakers on WeChat (see Figure 4 on Page 14), the evidence of learner-native speaker communication on WeChat -mediated Chinese learning was limited. As a result, after excluding the study of Qi and Wang (2018) (because there were no student participants), and after taking account of the informality, location and interculturality as variables, then 14 of the 15 studies investigated the learning in relation to no more than two of the three variables. Less attention has been given to a multifaceted or a more complex context, namely, covering informal, international and intercultural context.

As a result, the first research gap to be addressed is: to investigate evidence of learning via WeChat as an informal Chinese learning environment with participants physically located in different countries (i.e., international) and involving communication between learners of Chinese language and Chinese native speakers (i.e., intercultural communication), and to demonstrate how the learning happens in such context. That is what the first research question of the present study sets out to do.

The second potential issue in the quality of the learning evidence concerns the data sources. Specifically, there is lack of data sources that can demonstrate both segmented and longitudinal evidence of learning, which concerns the second research gap.

Two studies were excluded from the analysis regarding the second issue. The study of Li (2016) investigated the application of the WeChat public platform in a Spoken Chinese class, but mainly focused on how to teach Chinese and did not provide evidence of students' learning. Similarly, the study of Qi and Wang (2018) focused on teachers' professional development and did not provide evidence of learning.

Only Wang (2015) and Pamintuan et al. (2018) used a quasi-experimental method (involving comparisons between pretest and posttest, control group and experimental group), and reported that the WeChat-based Chinese language learning had significantly more positive effects than were available in the control condition. Although the comparisons between pretest and posttest, control group and experimental group indicated the evidence of changes in learning, the evidence of learning was only briefly sketch and details of how the learning took place were not depicted.

Huang (2019) compared two groups of participants' learning outcomes that occurred in two different years (2017 and 2018). Although as Huang stated, even though the course environment was kept the same, "the social environment may be beyond control" (p. 19), which may be a limitation of that study. But Huang provided longitudinal evidence of individual learners' linguistic improvements over time, which could largely compensate for the limitation. Specifically, Huang (2019) demonstrated that for the learning outcomes, both the formative assessment results and the summative assessment results were better than those in the first round. Meanwhile, in the questionnaire survey, Huang (2019) used 5-point scale to gauge learners' overall perceptions of the WeChat-mediated Chinese learning experience, and the results suggested that learners in the two rounds all had positive experiences and recognized the learning was productive and effective (p. 11).

Being the teacher-researcher, Lv (2016) analysed learners' learning behaviours on teacher-student private chat mode on WeChat and provided data about their learning activities, such as asking about scores, submitting assignments, asking for leave and their uses of WeChat features (i.e., how many text messages, audio messages, pictures, animated emojis and links that they sent). However, this kind of evidence cannot demonstrate students' longitudinal learning trajectories.

I believe that demonstrating both momentary evidence and longitudinal evidence of Chinese learning on WeChat can advance our understandings of the affordances of WeChat, hence we can obtain more benefits and avoid some problems. In the present study, in answering the first research question, I will provide both momentary and longitudinal evidence of mentees' learning.

The remaining nine studies mainly used questionnaire surveys and/or interviews to elicit participants' perceptions of their learning experiences, which I believe is not enough because participants' self-reports in questionnaires and/or interviews do not necessarily align with what they actually did on WeChat. It is necessary to include participants' chat logs to demonstrate how the learning actually took place.

Although eight (excluding Lv, 2014) of the 13 studies used a limited number of screenshots of participants' communication (or "chat logs") on WeChat as supplementary data sources, most of the screenshots and excerpts of chat logs involved only a couple of message exchanges, which can demonstrate evidence of learning, but they can only be regarded as evidence of static and momentary segments of learning, which cannot depict learners' learning trajectories over time. As a result, there is still a significant lack of comprehensive

documentation of the evidence of Chinese language learning in the literature. However, it is necessary to provide comprehensive documentation because if a study is about learning, it is necessary to provide evidence of what aspect(s) of Chinese language (e.g., vocabulary, grammar or Chinese character) has/have been taught/learned (this is what Section 4.3.1 in the present study will provide) and evidence of changes in learners' Chinese language use (this is what Section 4.3.2 will provide) to demonstrate that learning rather than merely socializing happens on WeChat. In this study I address the second research gap by providing both static and dynamic evidence of learners' actual Chinese learning on WeChat. To include, the investigations related to the first research question in this study set out to bridge the first and the second research gap.

2.2.3 WeChat-based Chinese learning studies: reported situational aspects that shaped learning

As discussed previously, participants' emotional needs for an established relationship and familiarity among participants in WeChat-mediated Chinese learning have been reported in three studies (Jiang & Li, 2018; Sung & Poole, 2017; Wang et al., 2016) and in one study (Wu & Miller, 2021) concerning WeChat-mediated English learning, which underlines the need to investigate what aspects influenced and how they influenced participants' emotional exchanges as well as the establishment of familiarity among learners of Chinese and Chinese native speakers in WeChat-mediated Chinese learning.

Because participants' emotional exchanges in WeChat-mediated Chinese language learning are related to interpersonal relationships, one study attracted my attention. Chen et al. (2021) investigates Australian university Chinese language learners' social strategies used in online Chinese language learning across multiple online settings (e.g., Blackboard supported Discussion Boards, Wikis, online quizzes, email, and WeChat) in two computer-mediated learning environments (i.e., asynchronous and synchronous). They (2021) investigated what types of social strategies their participants used and in what way they were used in different online learning contexts, as well as what key aspects influenced the learners' uses of these strategies.

Chen et al. (2021) identified five social strategies that their participants used in different online Chinese language learning contexts: one of them (i.e., "asking for clarification or verification") is a general strategy that had also been identified in F2F language learning; and four of them are specific to online collaborative Chinese learning: "netiquette", "sharing with other students", "negotiating with other students", and "using the tools available to

improve communication and interaction (Chen et al., 2021, pp. 11, 14). Chen et al. (2021) identified 14 ways that participants used the five social strategies, but only five of the 14 ways were used on WeChat, including "respond to the language partners' messages in a timely manner", "ask the teacher explain grammar points in ongoing assessment", "share photos and comments on the photos on a private Chinese friend circle" (see Table 2 in Chen et al. p. 11), "use different contact tools to interact with different groups of people", and "negotiate the time and digital location to practice Chinese speaking" (see Table 3 in Chen et al. p. 14). They reported that there were two key aspects (they also used the term "main reasons" on page 22) for participants to use these strategies: "to achieve the collaborative learning required by the assessment design in the courses, and a desire for good learning outcomes" (2021, p. 22). In line with Le et al. (2018, p. 116), who identified that a key obstacle in online collaborative learning was building positive social relationships to ensure successful collaboration, Chen et al. maintained that a way of overcoming the challenge was to use "netiquette" (also known as "online etiquette") strategies to "compensate for the lack of visual cues and immediacy in asynchronous text-based interaction and communication" (2021, p. 22). They also contended that using the four strategies could cultivate a sense of social presence and have a positive influence on online learning (2021, p. 22). That is, Chen et al. (2021) connected social strategies with interpersonal relationships and social presence in computer-assisted Chinese language learning. Considering that Chen et al.'s (2021) study involves a formal, non-international (Chinese learners and Chinese native speakers at the same university in Australia) and intercultural (as discussed previously) context, the five ways in which their learners' use social strategies on WeChat may not apply in the context of my study. Therefore, it is necessary to explore the situational aspects that shaped participants' emotional exchanges, the interpersonal relationships and WeChat-based Chinese learning in the context specific to the present study.

To my knowledge, Wang et al.'s (2016) study is the only study researching WeChat-based Chinese language learning that draws on the social presence element of the CoI theoretical framework. They investigated three presences of the CoI theoretical framework, and for the social presence, they investigated three indicators identified in Garrison and Anderson (2003): *self-projection/expressing emotion* (of the *Affective Expression* category), *trust/risk free climate* (of the *Open Communication* category), and *collaboration and interaction* (of the *Group Cohesion* category). Wang et al. analysed students' use of WeChat features to investigate the first two indicators. They investigated participants' uses of emoticons (e.g., ":)"), pictures, stickers (animated emojis) and hyperlinks (see examples of these features in Wang et al., 2016, pp. 27-28). Based on their results, Wang et al. (2016) argued that two aspects contributed to the establishment of social presence in their study: the collaborative

language exchange tasks and "the friendly and lively environment afforded by the the various features" on WeChat (p. 33).

I identify three research gaps in Wang et al.'s (2016) study, which are the third, fourth and fifth research gaps that the present study sets out to fill. First, the CoI framework has been developed further since they did their study, and so their findings did not address the latest development of the framework, which will be explicated in Section 2.3.2.1. Second, Wang et al. (2016) only investigated three indicators (i.e., one for each of the three categories) of social presence, therefore, it remains unclear whether more indicators in the latest classification of social presence would influence social presence in the WeChat-mediated Chinese language learning. Third, they did not report indicators of social presence that lessened any sense of trust or the creation of a friendly atmosphere. This decision was probably because their participants only had positive experiences on WeChat. I think that including the potential for exploring participants' negative experiences will enable me to make comparisons and understand how indicators of social presence can influence (support or inhibit) mentor-mentee relationships and participants' learning experience.

The sixth research gap involves methodological issues in investigating emojis (whether they are static or animated) and emoticons (which are combinations of punctuations) in participants' WeChat-mediated communication. Four of the 15 WeChat-based Chinese language studies analysed participants' use of emojis and/or emoticons (Chen et al., 2021; Jin, 2018; Lv, 2016; Wang et al., 2016). Lv (2016) counted her participants' uses of animated emoji but it is not clear whether the numbers stand for the frequency of a single animated emoji, or different emojis. In analysing the three indicators of social presence, Wang et al. (2016) took account of their particpants' frequency of use of four WeChat features (i.e., emoticons, photos, stickers and hyperlinks, see Tables 6-7 in their study for some examples of the features). They reported that their participants' purpose in using them was "to express emotion and enhance a sense of trust and create a friendly atmosphere" (2016, p. 26). It is not clear on what basis Wang et al. identified and reported participants' purpose in using the four features. I assume that the investigation of how frequently an emoticon or sticker is used cannot fully reveal participants' purpose or intention to use it, and at least three other issues should also be taken into consideration: 1) the types of these images (whether static or animated, whether combinations of punctuation marks or mixtures of different images); 2) how they are used in relation to the textuality of a message (i.e., with or without Chinese characters) and 3) the analyses of participants' purposes and the effects or influences of using emoticons or stickers should take account of the context in which they were used. More of my elaborations regarding this issue will be in Sections 3.5.1.2-3.5.1.3.

Overall, the second research question will address four research gaps (from the third to the six).

2.2.4 WeChat-based Chinese learning studies: reported specific WeChat features used in learning

As mentioned previously, Wang et al. (2016) reported that their participants' purpose of using WeChat's features (such as audio message, text message, stickers and emoticons) were "to express emotion and enhance a sense of trust and create a friendly atmosphere" (2016, p. 26), and they stated that these WeChat features "helped to create a trusting, relaxed and friendly environment for the online exchange" (Wang et al., 2016, p. 33). However, some issues were not fully addressed, for example, on what basis they identified participants' purposes, in particular in relation to stickers and emoticons, what emotions stickers and emoticons expressed, and in what ways participants used these features to express emotions and in what ways they enhanced a sense of trust and created a friendly atmosphere.

Jin (2018, p. 41) documented that one of her participants used a sad rabbit emoji to show sadness and a smiling octopus emoji to show happiness, and maintained that these choices reflected the participant's literacy skill in using stickers on WeChat. But Jin (2018) did not explore and therefore did not provide evidence of the influence of using emojis on the learner-native speaker relationships and Chinese language learning.

Chen et al. (2021) also documented participants' uses of emojis on WeChat, but compared to Wang et al.'s (2016) study, they have provided evidence and confirmed the influences of participants' use of emojis on interpersonal relationships and learning. For example, they reported that the thumbs-up emoji and the smiley face emoji "helped create a supportive environment to make up for the lack of facial expression in their text chat", and with these emojis, "the students were able to communicate and interact with others" in online learning settings "in a much quicker, more light-hearted and expressive way" (p. 17), and could "create an encouraging atmosphere" (p. 19). However, these findings were on the basis of the researchers' judgement, Chen et al. (2021) did not provide participants' opinions about these influences. In the present study, I will provide mentees' self-reports about these influences.

In conclusion, whether features such as emojis (whether static emojis or animated emojis) and emoticons would be the specific features of text-based communication on WeChat that have potentially significant influences on mentor-mentee relationships and Chinese

language learning. How these features exert such influence still remain largely unclear. These questions concern the seventh research gap. The investigations of the third research question will shed light on these questions. A comprehensive review of emoji and other nonverbal features that are increasingly widely used in CMC and their influences on interpersonal relationships will be in Section 2.4.

What aspects of CMC and how they influence interpersonal relationships has been substantially documented in studies through the lens of social presence both outside and within the CoI theoretical framework, which will be elaborated in Section 2.3.

2.3 Social presence

In this section, I first briefly review studies concerning social presence that do not use the CoI theoretical framework (from disciplines such as media, communication and education). Such an interdisciplinary perspective provides me with a broader view in investigating the last two research questions. Social presence of the CoI theoretical framework covers the three key aspects in the second of my research questions: CMC, interpersonal relationships and learning, that theoretical frameworks in other disciplines (such as media, communication and education) fail to cover. For this reason I then provide a comprehensive review of social presence within the CoI theoretical framework and redevelop nine indicators of social presence to be investigated in this thesis.

2.3.1 Social presence in studies other than the CoI theoretical framework

What aspects of CMC and how these aspects impact interpersonal relationship dynamics have been extensively investigated in the realm of media and communication, with many of the studies following the social presence construct developed by Short et al. (1976). The core of the definition of social presence proposed by Short et al. (1976, p. 65) is the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships...". This definition conceived social presence as "a quality of the medium itself" because the quality was viewed as a fairly static capacity of the medium to transmit information (e.g., facial expression and posture) and hence to contribute to the degree of social presence (Gunawardena, 1995, p. 151).

Short et al.'s (1976) argument that social presence is largely an attribute of the communication medium generated a wide range of criticism (see Walther & Parks, 2002, pp. 529-531 for more details). One example of the alternative perspective, in the realm of

education, was in the results of Gunawardena's (1995) study, which suggested a more dynamic view because they showed that participants (instructors/moderator) "can be trained to create social presence in a text-based medium and build a sense of community" (p. 163). This result demonstrated that social presence can be cultivated, rather than just being an apparent attribute of the communication medium (see also Gunawardena & Zittle, 1997; Tu, 2000; and Tu & McIsaac, 2002).

The evolutions of the definitions of social presence in some key studies include: from discussion of social presence being an attribute of the communication medium by Short et al. (1976), to Gunawardena's interpretation of "the degree to which a person is perceived as a 'real person' in mediated communication" (1995, p. 151), to "the degree of feeling, perception, and reaction to another intellectual entity in the CMC environment" (Tu & McIsaac, 2002, p. 146), to Biocca and Harms' more elaborated definition of a "property of people, not of technologies, but it is a moment-to-moment phenomenal state facilitated by a technological representations of another being" (2002, p. 11), which contains three ascending levels: perceptual level, subjective level, and intersubjective level. As will be seen below, these evolutions also exist in the CoI theoretical framework (refer to Table 1).

This synthesis of the definitions of social presence in some key studies, makes clear that there have been two apparent but gradual shifts in researching the aspects of CMC and how these aspects impact interpersonal relationship dynamics: First, since the 1970s, the definitions of social presence have shifted from media-centred to user-centred, that is, the focus has shifted from technological-factor-driven to situational-factor- driven. Second, the definitions have increasingly taken account of more variables over time. Such shifts indicate that participants are able to use indicators of social presence to change relationships between them.

Overall, major established findings in relation to social presence in educational contexts include: social presence is related to satisfaction (Gunawardena & Zittle, 1997; Hostetter & Busch, 2006); it is a dynamic variable (Tu, 2000); it can be cultivated (Gunawardena, 1995; Gunawardena & Zittle, 1997; Tu & McIsaac, 2002); it can be measured using semantic differential techniques, for instance, bipolar scales (Gunawardena, 1995; Gunawardena & Zittle, 1997). These findings offer important insights into both my investigation of the three research questions and my ways of thinking about how the existing social presence element of the CoI theoretical framework needs to be modified.

2.3.2 Social presence in the CoI theoretical framework

Because the social presence element of the CoI theoretical framework looks at the connections between CMC, interpersonal relationships and online learning, which addresses the three key constructs in my research questions, I use it as a key theoretical reference in this study. The inclusion in the framework of specific indicators that participants in learning/communication can use to shape social presence opens up for me a way of framing the investigation of how the participants in my study dynamically shaped their language learning relationships as they communicated via WeChat.

2.3.2.1 About the CoI theoretical framework

The CoI theoretical framework[4] was initially proposed by Garrison et al. (2000). This framework reflects collaborative constructivist views of teaching and learning. As Garrison (2017, pp. 24-25) argues:

> More specifically, the CoI framework establishes procedures for critical inquiry and the collaborative construction of personal meaningful and shared understanding. It represents a process of designing and delivering deep and meaningful learning experiences through the development of three interdependent elements—social presence, cognitive presence and teaching presence. These presences create a sense of being or identity through purposeful communication and distributed teaching and learning responsibilities.

The CoI theoretical framework was initially used in analysing learning in computer conferencing and online contexts before being used in the blended learning context (Garrison, 2017, p. 33).

The latest version of the structural relationships between the three presences that are central to the framework is shown in the three intersecting ovals within the circle in Figure 2 below (Garrison, 2016, p. 59; Garrison, 2017, p. 25).

---

[4] In his latest book, Garrison (2017) contends that the CoI framework is not a fully mature theory yet, therefore he suggests that it would be better to use the term "theoretical framework".
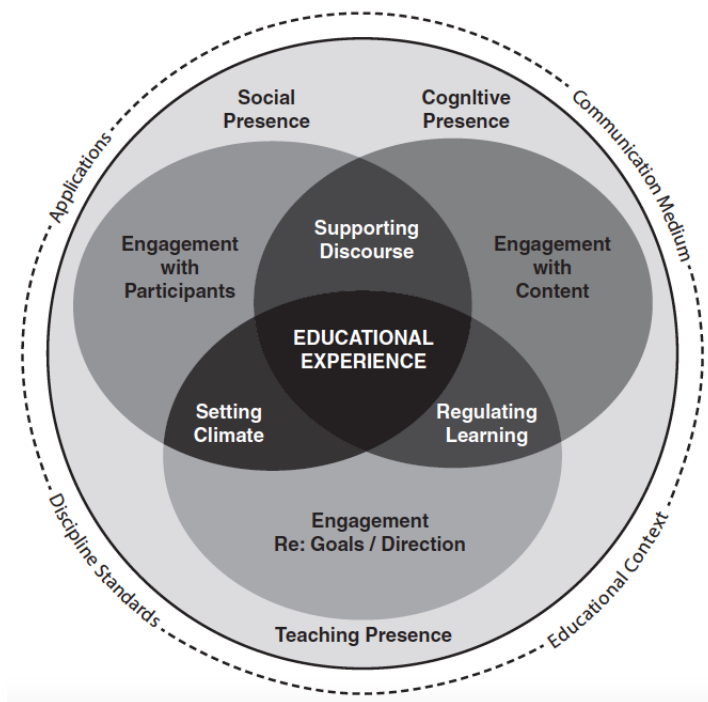
Figure 2 - The Current Model of the CoI theoretical Framework (Garrison, 2016, p. 59; 2017, p. 25)

The frequently-cited definitions of each of the presences within the CoI theoretical framework are provided below.

- "Social presence is the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities." (Garrison, 2009, p. 352, see Table 1 for the evolution of its definition).[5]

- Cognitive presence is defined as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry" (Garrison et al., 2001, p. 11).

- Teaching presence is defined as "the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson et al., 2001, p. 5).

The CoI model is a process model, as Akyol et al. (2009) contended: "While the seminal CoI work does not exclude the consideration of intended learning outcomes, the focus has been consistently on the nature of the educational transaction." (p. 124) As elaborated in Chapter 1, I will demonstrate that some learning has occurred rather than assessing the quality of mentees' Chinese language learning outcomes in this thesis. And as discussed in Section

---

[5] Because Short et al.'s (1976) definition, as mentioned earlier, is controversial and different from that in Garrison's CoI theoretical framework, I will draw on Garrison's definition.

2.2.2, my analysis of participants' language data will demonstrate that Chinese learning (rather than socialising) has occurred. This will provide an answer to the first research question.

The reasons for me to use the social presence element of the CoI theoretical framework as the key theoretical reference

Wang et al.'s (2016) study followed the CoI theoretical framework put forth by Garrison et al. (2000). They investigated the three presences (i.e., social presence, cognitive presence and teaching presence) together. Their data analysis was based on the study of Garrison and Anderson (2003) but the CoI theoretical framework has developed substantially since then. Therefore, it is necessary to follow the latest development and research findings of the framework.

Five reasons can explain why my investigations in this thesis are built on the social presence element of the CoI theoretical framework. Firstly, the latest CoI theoretical framework acknowledges the influence of emotion on online learning. Garrison (2017, p. 40) argues that what creates positive emotion and how emotion influences learners' thinking and learning in online learning are still not clear. He proposes that investigating the pervasive influence of emotion must be a focus of further study (Garrison, 2017, p. 45).

As discussed in Section 1.2, 14 out of 15 mentors reported that the biggest hindrance for them to communicate with their mentees was the lack of emotional exchanges, which motivated me to investigate how the three pairs who are the focus of this study exchanged emotions and sustained the mentor-mentee relationships. My motivation is in line with the research attention that is being directed to the role of emotion in the CoI theoretical framework and my investigation of the last two research questions may shed light on the *what* and the *how* questions put forth by Garrison (2017, p. 40).

Secondly, the second and the third research question in this study frame the investigation of the connections between three key aspects: CMC on WeChat, the dynamics of interpersonal relationships (including emotional exchanges, establishment of familiarity and maintenance of mentor-mentee relationships) and the dynamic Chinese language learning process. Therefore, it is necessary to draw on a theory that incorporates the three aspects. The latest perspective on social presence within the CoI theoretical framework not only conceives emotional exchanges in the CMC as a focus of investigation, but extends the investigation to a broader scope of the interpersonal relationships by emphasing two issues: participants'

academic identity and academic purpose in in their participation. In discussing the importance of social presence to online learning, Garrison contends: "Establishing interpersonal relationships and a sense of belonging are important to an academic endeavor." (2017, p. 37) The definition of social presence in the CoI theoretical framework mentioned previously suggests that it addresses the three aspects that my study sets out to explore, hence it appears to fulfill the requirement and can be used as the key theoretical reference for my study. However, in this thesis I will mainly focus on one element of the CoI theoretical framework: social presence, because I do not have enough space to investigate all three elements. I will demonstrate how the social presence element itself is a satisfactory means of explaining the relationships between my answers to the three research questions.

Thirdly, it is possible to see the central role of social presence in the CoI theoretical framework (Figure 2). The three presences intersect and overlap, which means that it is possible to explore social presence in my investigations of what aspects influenced and how these aspects influenced the maintenance of the mentor-mentee relationships and Chinese language learning (involving mentees' cognitive presence and mentors' teaching presence). In this approach, the investigation will involve mentors' teaching presence and mentees' cognitive presence, but the focus is the negotiation of social presence.

Fourthly, the CoI framework takes account of both medium aspects and situational aspects in understanding online learning throughout its development over time. For example, Garrison et al. (2000) stated: "The extent to which cognitive presence is created and sustained in a community of inquiry is partly dependent upon how communication is restricted or encouraged by the medium" (p. 93). And as shown in Figure 2, the communication medium and education context are an integral part of the CoI theoretical framework. The categories, indicators and definitions of the existing social presence element in the CoI theoretical framework concentrate on the situational aspects (see Table 2). The perspective of considering both medium aspects and situational aspects is in line with one of the analytical approaches employed in this thesis: computer-mediated discourse analysis (which will be discussed in Chapter 3). But the focus of this thesis is on the situational aspects, in this case, features of the communication between the participants.

And lastly, Boston et al.'s study (2009) investigates the relationship between the indicators of social presence of the CoI theoretical framework and student retention in online learning. Their study demonstrates "a significant amount of variance in re-enrollment can be accounted for by indicators of social presence" (p. 67). And it suggested: "As educators continue to develop interventions to promote retention, they should pay particular attention

to how the institution encourages interaction among its students" (Boston et al., 2009, p. 77). It is apparent that the maintenance of mentor-mentee relationships in the three pairs investigated in my study is relevant to student retention, making the CoI theoretical framework an appropriate approach. Building on this approach, I will identify the aspects that influenced the mentor-mentee relationships and Chinese learning through the participants' WeChat communication and how they exerted such influence,

However, as mentioned previously, I will also take account of the findings in studies that investigate social presence and interpersonal relationship dynamics in CMC educational contexts even when they do not use the CoI theoretical framework (e.g., studies by Charlotte N. Gunawardena and her colleagues or by Chih-Hsiung Tu and his colleagues) and studies in the realm of media and communication (e.g., studies by Joseph B. Walther and his colleagues or by Frank Biocca and his colleagues).

The importance of social presence in the CoI theoretical framework

Around 2008, studies began to raise doubts about the importance of social presence in online learning, in particular, its influence on cognitive presence. For example, Nippard and Murphy (2007, p. Abstract) found that expressions of social presence may distract students' attention from the content. Akyol and Garrison (2008) found that social presence did not have any impact on learning but was correlated with satisfaction (p. 18), but they did assume that social presence might probably have more influence on learning in specific learning contexts, such as in informal learning (2008, p. 18). As for the role of social presence in relation to cognitive presence and teaching presence, Swan et al. (2008) raised a question concerning whether social presence was really a necessary precursor of cognitive presence (pp. 8-9). In support of Swan et al.'s (2008) position, Jahng et al. (2010) found that a higher level of social communication was not necessarily an indicator of a higher level of collaborative learning activities (p. 54). The differences between these conclusions indicates that there is a need to further investigate how social presence is established and maintained and how it might be related to learning, particularly in contexts where participants in the learning relationship are unfamiliar with one another.

Shea and Bidjerano (2009) found that social presence correlated with comfort in online learning and was the most significant item in relation to the variance in the cognitive presence of participants. To be specific, a lower level of comfort with an online learning experience is strongly correlated with a lower level of cognitive presence (p. 551). Garrison et al. (2010) also maintained the importance of social presence and said that social presence

had a mediating role between teaching presence and cognitive presences, which means "it is a responsibility of teaching presence and a condition for creating cognitive presence (i.e., collaborative inquiry)" (p. 32). These studies suggest that there is a role for social presence in learning relationships but do not show that it is clearly related to learning itself.

In Garrison's latest book, he states that social presence in an academic context creates a social-emotional climate so that participants may feel sufficiently comfortable to engage in meaningful and sustained online learning (2017, p. 38). Garrison (2017) identified a substantial body of research in maintaining that cognitive presence can be enhanced and sustained when social presence is established (p. 26). He confirmed the critical influence of social presence by saying that it is "an important antecedent to collaboration and critical discourse" (2017, p. 37). Despite these claims for the significance of social presence, there remains a lack of clarity about whether and, if so, how social presence contributes to learning.

2.3.2.2 The evolution of the definition of social presence within the CoI framework

Unlike the definitions of the other two presences (i.e., teaching presence and cognitive presence) which have remained relatively stable since 2001, the definition of social presence has changed over time, as shown in Table 1 below. In that table, I highlight some key terms in different colours in order to show more clearly the changes between different versions of the definition.

The initial definition was put forth by Garrison et al. (2000), but Garrison (2009, p. 352) argued that the definition put in 2000 neither reflected the full complexity in establishing a purposeful educational community nor adequately spoke to the overlap with the other two presences or the developmental nature of social presence itself. Garrison (2009) put forth a fine-grained definition, which is the most-cited definition and has remained stable.

Garrison (2017) maintains that the 2009 definition "better conveys the dynamic nature of the social presence construct in a purposeful and developing community of inquiry. That is, it places a priority on academic goals and communication within the community, which leads to increased group cohesion." (p. 42) The dynamic nature of social presence can be described as: there may be fluctuations in student social presence in responding to the rises or falls of the instructor teaching presence (Swan & Shih, 2005). The dynamic nature of social presence had already been identified in the work of Swan & Shih (2005). What remained unclear in the literature is what this dynamism looks like, who is involved in its

negotiation and how they are involved. This is a key aspect addressed in this thesis. The first step in that is to trace the developments in the definition of social presence within the CoI framework

Table 1 - The evolution of the definition of social presence in the CoI theoretical framework

Source	Definition
Garrison et al. (2000, p. 89)	Social presence is 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 (2009, p. 352)	Social presence is the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities.
Garrison (2011, p. 23)	Social presence is the ability of participants to identify with a group, communicate purposefully in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities.
Garrison (2017, p. 25)	Social presence is the ability of participants to identify with a group, communicate openly in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities[6].

From Table 1 we can see that there have been adjustments of the definition of social presence over time, which reflect the controversies concerning the importance of emotion in the CoI theoretical framework. The discussions below will highlight these disputes by opening up the following two issues: 1) the role of emotion in online learning and its position in the social presence element in the CoI theoretical framework and 2) participants' purpose (academic purpose or social purpose) of participation in the CoI, and their identity (group identity or personal identity) in the CoI.

The role of emotion in online learning and its position in the social presence element in the CoI theoretical framework

In this thesis I will investigate mentor-mentee relationships in an informal, international and intercultural learning context. For this analysis I will argue that a mentor-mentee relationship in a pair in this study is like a teacher-student relationship. It contains emotional challenges similar to those in a teacher-student relationship, but there are additional spaces that can be explored because in one-to-one mentor-mentee relationships the emotional space can be manipulated or is more flexible than in one-to-many teacher-

---

[6] There is a slight difference between the definitions on page 25 and pages 41-42 in Garrison (2017). In the latter, the word is "purposefully" rather than "openly".

student relationship. Therefore, there are overlaps between the investigations of emotions in the mentor-mentee relationships and teacher-student relationships.

Around 2010, controversies arose concerning whether or not the role of emotion was critical in online learning. Garrison (2011, p. 37) maintained that after a decade of research regarding the CoI framework, affective responses seemed not to be the defining characteristic of social presence, instead, group identity took precedence over personal identity. As a result, as shown in Appendix 3, he downgraded the "affective expression"[7] to a lower level: from being one of the three categories to one of the indicators of the category "interpersonal communication" (see more in Garrison, 2011, pp. 38-39).

Shortly after this and in contrast to Garrison (2011), Cleveland-Innes and Campbell stated that the role of emotion in online learning had been underestimated: affective responses are not just an indicator or a category of social presence; rather, they underpin the broader online learning experience (2012, p. 283). In taking this stance, they were building on a position outlined at a conference in 2006. At that conference Cleveland-Innes and Campbell proposed the construct of *emotional presence* (Swan et al., 2008, p. 9). Consoliding this position, they (2012) further acknowledged the significance of emotional experience in online learning circumstances, juxtaposed *emotional presence* with social presence, cognitive presence, and teaching presence in the CoI theoretical framework, and put forth its definition (2012, p. 283).

In the meantime, scholars also noticed that deficient emotion could also cause flawed thinking (see Cleveland-Innes & Campbel, 2012, p. 273 for the associated studies), which appears to be coherent with the 14 mentors' reports (i.e., lack of emotional exchanges was the fundamental factor that hindered them from mentoring their mentees) mentioned in Chapter 1. Considering that the research contexts of these studies are different from mine, we cannot know whether these considerations apply in my specific research context, and if so, what aspects influenced and how these aspects influenced (i.e., supported or inhibited) the emotional exchanges and Chinese language learning.

In light of the concerns about whether emotion could be a distractor, Cleveland-Innes and Campbell (2012) proposed: "[E]motion may constrain learning as a distractor but, if managed, may serve as an enabler in support of thinking, decision making, stimulation, and directing." (p. 285)

---

[7] It is "affective responses" in Rourke et al., (1999), and "emotional expression" in Garrison et al., (2000)

In response to the trend of investigating the role of emotion in online learning within the CoI theoretical framework, Garrison has more recently shifted his position and argued that "Emotion is an affective state that fluctuates with the social conditions and, therefore, is within the purview of social presence" (2017, p. 41). Garrison also states: "It is clear that understanding the pervasive influence of emotion must be a focus of further study" (2017, p. 45). Garrison admits that it has been clear that emotions have impacts on regulating cognition and decision making (see Garrison, 2017, p. 40 for the associated studies). An example that can exemplify Garrison's latest position on the importance of emotion in the online learning is that he (2017, p. 41) uses the metaphor of gravity:

> It could be argued that emotion is the gravity of a community of inquiry in that it is pervasive, holds things together, plays an essential role in decision making, and is often the prime mover (volition).

Garrison (2017, p. 45) also puts "affective communication" as the first category of social presence, which means that he raises the importance of the affective communication to an upper level: from an indicator level to a category level. That is contrast to what he did in 2011 as mentioned earlier.

However, Garrison does not think that the "emotional presence" proposed by Cleveland-Innes and Campbell (2012) is necessary as an additional element of the CoI theoretical framework (see Garrison 2017, p. 41 for his elaboration). Whether or not it is necessary and legitimate to add emotional presence to the existing CoI theoretical framework, the issue of emotional presence as a distinct category is beyond the scope of this thesis.

Garrison (2017, p. 41) reminds us that we must not place undue emphasis on emotion in online learning, and that it is crucial to distinguish between trust and undue politeness for creating and sustaining a CoI (2017, p. 47). Garrison's (2017) caveats can be summarized as follows: it is necessary to balance two groups of relationships: academic purpose vs social purpose, and group identity vs personal identity, as will be elaborated below.

Academic purpose versus social purpose, group identity versus personal identity

Garrison (2017, pp. 36-37) argues: "The exact nature of the interpersonal communication will be shaped by the implicit understanding of the specific purpose of the community of inquiry." However, he states that social purpose must not take precedence over academic purpose, because the primary reason that students appear in the community of inquiry

settings are to learn specific subjects (2017, p. 39). "Therefore, the evidence seems to support the position that participants identify first and foremost with the academic purpose of the group and personal relationships should evolve from these interactions." (Garrison, 2017, p. 40)

I align with Garrison on this point. I assume that the development of social presence in my study should be focused on academic purpose, in that mentors and mentees participated in my learning project for the purpose of learning rather than socializing, even though they were engaged in informal learning (i.e., it did not have academic requirement from the university). For the participants, I made this explicit in both English and Chinese in the Rules of Conduct for WeChat Project Participation (see Appendix 4): "Please always bear in mind that WeChat **in this research** is not a tool for the purpose of general socializing, but for learning and practising Chinese." (bold in the original)

As for the relationship between group identity and personal identity, Garrison (2017, p. 45) argues that although it has been clear that the social-emotional environment is important in regulating cognition, group identity should take precedence over personal identity in online learning, which also addresses why participants are there. The CoI theoretical framework concentrates on two types of relationships in the online learning community: 1) the one-to-many relationship between one teacher and many students, or one student to many other students and the teacher; 2) the many-to-many relationship between many students and many other students including the teacher. Therefore, it is legitimate to argue that the group identity should take precedence over an individual teacher's or student's personal identity.

However, in this study, since Chinese learning took place in one-to-one mode, involving only two participants in a pair, where the mentor/mentee identity is only valid within the specific pair. In other words, the mentor C13 is the mentor of the mentee A4-L4 in the pair A4-L4 & C13, whereas C11 is the mentor of the mentee A1-L4 in the pair A1-L4 & C11, and she is also the mentor of the mentee A2-L4 in the pair A2-L4 & C11. Hence, I am taking Garrison's perception of "group identity", and I am still looking at "group" but it is a smallest "group" involving only a mentor and a mentee. I resonate with Garrison (2017, p. 45) and assume that the group identity of the five participants should take precedence over their personal identity.

2.3.2.3 The latest classification of Social presence in the CoI theoretical framework

To build my investigations on the social presence element of the CoI theoretical framework, I

need the latest classification of its structure and content. There has been a tradition that the social presence element in the CoI theoretical framework has three *categories*, each *category* has a couple of *indicators*, and each *indicator* has a couple of *definitions*. However, unlike the clear classifications with tables containing the categories, indicators and definitions (preferably with some examples of the definitions), in Garrison (2011, pp. 38-39) and Rourke et al. (1999, pp. 61-62), there is not a clear classification (e.g., such as a table) to depict the structure and content (i.e., the indicators and their definitions) of social presence element in Garrison's latest books (2016, 2017), instead, there are mainly general descriptions, and it is particularly so for the definitions of the *indicators*.[8] To present the *categories*, *indicators* and *definitions* both clearly and explicitly, I will synthesise the key literature that Garrison was involved in (Garrison, 2009, 2011, 2016, 2017; Garrison et al., 2000; Rourke et al., 1999) to consolidate the latest classification of social presence in the CoI theoretical framework into a single table (see Table 2).

Although Garrison (2017, pp. 45-46) describes and names the three categories clearly and describes the indicators in great detail, he does not list the names of the indicators explicitly, even though the indicators obviously follow the previous termiology (i.e., the categories and the indicators mentioned in the key studies in 2000, 2009, 2011 and 2016, as mentioned in the previous paragraph). To synthesise the latest findings, I name the categories according to Garrison's latest (2017, p. 45) descriptions.

In Garrison's latest social presence element (2017, pp. 45-46), there are three categories (i.e., *affective communication*, *open communication*, and *cohesive responses*). I will use these categories. Appendix 3 details the evolution of the affective/emotional category and its indicators within the social presence element and shows that it has been generally consistent (i.e., its first indicator is generally *expressions of emotions)*. I will follow this pattern and name the first indicator of affective communication as "*expressions of emotions*".

On the basis of the classification of social presence in Garrison (2011, pp. 38-39) (specifically, adopting the definitions of each indicator) and also taking Garrison's (2017 pp. 45-47) descriptions of the indicators and their definitions, the latest classification of social presence (with 12 indicators) within the CoI theoretical framework is presented in Table 2 below.

---

[8] The discussion of the categories and indicators of social presence was in Garrison, Anderson, and Archer (2000) but a detailed discussion of this element was first presented in Rourke et al. (1999). Moreover, Garrison (2009, p. 353) only provided one indicator as an example of the personal/affective category.

Table 2 - The latest classification of social presence element in the CoI theoretical framework

Category	Indicators	Definition
Affective communication	Expressions of emotions	Conventional expressions of emotion, or unconventional expressions of emotion, including repetitious punctuation, conspicuous capitalization, emoticons
	Self-disclosure	Presentation of biographies, details of personal life outside of class, or expressions of vulnerability
	Use of humour	Teasing, cajoling, irony, understatements, sarcasm
Open communication	Continuing a thread	Using reply feature of software, rather than starting a new thread
	Quoting from others' messages	Using software features to quote others' entire messages, or cutting and pasting selections of others' messages
	Referring explicitly to others' messages	Direct references to contents of others' posts
	Asking questions	Students ask questions of other students or the moderator
	Complimenting, expressing appreciation	Complimenting others or contents of others' messages
	Expressing agreement	Expressing agreement with others or content of others' messages
Cohesive responses	Vocatives	Addressing or referring to participants by name
	Addresses or refers to the group using inclusive pronouns	Addresses the group as "we", "us", "our", "group"
	Phatics, salutations	Communication that serves a purely social function: greetings, closures

The expression of emotions in the first social presence category of *affective communication* has three major indicators: emoticons and capitalization that can compensate for the lack of visual cues and vocal intonations; language itself, in particular, humour, that conveys goodwill; and self-disclosure (see Garrison, 2017, p. 45 for more details). Garrison argues that in addition to the increasingly accepted means of emoticons, "language itself through the content of messages is a very powerful communicator", and he assumes that probably humour is "the easiest to appreciate but most difficult to identify" (2017, p. 45).

The second category *open communication* is, according to Garrison (2017, p. 46):

 … built through a process of recognizing, complimenting and responding to the

questions and contributions of others, thereby, encouraging reflective participation and discourse. Expressing agreement, as well as questioning the substance of messages, reveals engagement in the process of reflection and discourse.

Burbules contended that a sustained dialogue not only depended on lively inter-change about a topic, but on a speaker's commitment to his/her interlocutor, which developed in the spirit of the engagement over time (1993, p. 15, as cited in Garrison, 2017, p. 37). Garrison resonates with Burbules (1993, p. 15) and argues that open communication in collaborative inquiry should be reciprocal and respectful (2017, p. 45).

For the third social presence category, *cohesive responses*, studies suggest an empirical connection between addressing students by their names and cognitive, affective, and behavioural learning (see Rourke et al., 1999 for the associated literature). For example, the study of Eggins and Slade suggested that "the use of redundant vocatives would tend to indicate an attempt by the addresser to establish a closer relationship with the addressee" (1997, p. 145). Likewise, Garrison maintains that group cohesion begins with simple behaviours such as addressing the interlocutors by name, and it develops to "the next level by using inclusive pronouns" (2017, p. 46) (e.g., "we", "us", and "our") to indicate the group identity.

Garrison further elucidates that when students identify themselves as part of a CoI, "the discourse, the sharing of meaning and the quality of learning outcomes will be optimized", and in turn, "success in the cognitive domain also has a reciprocal and reinforcing effect on group cohesion" (2017, p. 46). But as mentioned in Chapter 1, beyond establishing that learning has occurred, the quality of mentees' Chinese learning outcomes will not be the focus of my study.

Garrison (2017, p. 39) argued that the three categories of social presence have different schedules, specifically, open communication and cohesion should develop earlier than affective communication, so that the learning climate and interpersonal relationships will not distract from the development of the shared academic purpose and group identity. Such a view foregrounds the academic purpose of the CoI, in that "[T]he primary reason students are there is to learn about a specific subject" (Garrison 2017, p. 39).

2.3.2.4 Summary of the research gaps concerning social presence relevant to this study

In reviewing the literature in relation to the social presence element of the CoI theoretical framework, I identify six research gaps, where my study may offer some insights:

First, a study (Akyol & Garrison, 2008) presumed that social presence might have more influence in informal learning environments (p. 18). My study cannot answer whether social presence has more influence in informal learning settings than in formal or blended learning settings, since my study does not involve such a comparison. But my study can offer some insights into social presence in informal learning settings.

Second, as mentioned earlier, Garrison (2017) argued that what creates positive emotion and how emotion influences thinking and learning are still less clear (p. 40) and must be a focus of future study (p. 45).

Third, as Garrison (2017, p. 44) proposed: "Further study is required to better understand social presence including patterns of development, connection to the other presences, and its influence on dependent variables such as learning outcomes and retention."

Fourth, although Rourke et al. (1999, p. 67) postulated that fairly high levels of social presence are necessary to support online learning, they expected that there could be an optimal level to avoid the negative influences resulting from the undue social presence (for instance, excessive social presence may result in pathological politeness, whereas too little will also be problematic, as mentioned in Garrison, 2017, pp. 46-47). Similarly, the study of Jahng et al. (2010, p. 54) concluded that "there may be an appropriate level of social communication that supports collaborative activity more generally directed at a learning goal [cognitive presence]". Therefore, the research gaps still exist: whether there is an optimal level of social presence in the dynamic process of online learning, to avoid the problems of excessive social presence or deficient social presence. If it is "yes", then what would be the optimal balance between different elements (dimensions) of social presence, and is it the more the better?

Fifth, as mentioned earlier in this chapter, Garrison maintains that the development of open communication and cohesion should take precedence over affective communication (2017, p. 39). Is it the case in the present study?

Sixth, as discussed in Section 2.2, to my knowledge, only Wang et al.'s (2016) study concerning Chinese language learning on WeChat was conducted using the social presence element within the CoI theoretical framework, but their study did not consider the latest development of the framework, therefore, it remains unclear whether there should be modifications to reflect the characteristics of Chinese as the learning object.

2.3.3 Indicators and their definitions of each category of social presence to be investigated in this thesis

After reviewing literature concerning the social presence element of the CoI theoretical framework (e.g., Garrison, 2009, 2011; Garrison, 2016; Garrison, 2017; Garrison et al., 2000; Rourke et al., 1999), I find that I cannot adopt all of the content in Table 2 and there should be modifications. Here are six reasons:

First, the indicators and their definitions do not manifest the disciplinary characteristics of additional language learning. I contend that language as a domain of learning has distinctive disciplinary characteristics, and requires an engagement with culture, which are different from other domains of learning (such as mathematics). Therefore, I assume that the indicators of social presence and the definitions of the indicators should be varied across subjects or courses.

Second, some of the content does not reflect the relevant aspects of Chinese culture, which is an important consideration in communication between mentors and mentees in this intercultural communication. For example, the definition of the indicator *vocatives* is "addressing or referring to participants by name", but it is impolite for a student to address a teacher by name in Chinese culture.

Third, there are one-to-one mentor-mentee relationships in my study, whereas some indicators in the current social presence element of the CoI theoretical framework were designed for one-to-many or many-to-many communication, therefore they become irrelevant for my study. This is especially apparent in the second category: *open communication*. For example, the definition of the *asking questions* indicator is: "Students ask questions of other students or the moderator". However, the communication in my study mainly happened in pairs, involving two parties: a mentor and a mentee, therefore, the mentee in a pair will not ask questions of other students.

Fourth, some indicators do not manifest characteristics of communication on social media

such as WeChat. For example, the *continuing a thread* indicator in Table 2. In computer-mediated communication such as on WeChat, it is highly common that new topics come up, new threads emerge, some threads disappear permanently, some threads disappear for some time then become revived, and so forth. This is because communication on social media is not one-off and does not only take place within a certain time limit, but can last hours, days and even weeks, that is, there is no time limit. As a result, this indicator should be deleted.

Fifth, because other disciplines such as media, communication and education are also investigating social presence, some of their findings can enrich my interpretation of social presence. Therefore, these findings need to be included in my investigation of social presence, as will be explicated in Sections 2.3.3.2, 2.3.3.3 and 2.3.3.5.

Sixth, the definition of the indicator *use of humour* in Table 2 is: *teasing*, *cajoling*, *irony*, *understatements*, *sarcasm*. However, some of these words have obvious negative meanings and implications, which cannot be used as neutral definitions to indicate how social presence is negotiated in online learning settings. If we are to take account of the current perception that social presence in online learning is "largely responsible for setting the academic climate" (2017, p. 38), there may therefore be a need for some of these words to be changed to emphasise inoffensive, mild and friendly intentions: "bantering, or expressing irony/sarcasm in a friendly manner".

To conclude, I will build on the latest classification of the social presence element in the CoI theoretical framework (as shown in Table 2) and redevelop it to extend it to the specific context of informal, international and intercultural Chinese learning using WeChat. Specifically, I will delete some irrelevant indicators or definitions then add something new and adapt some indicators or definitions to manifest the specific research context of my study. Sections 2.3.3.1-2.3.3.5 will explicate my modifications of five key points.

2.3.3.1 Expressions of emotions

In Table 2, the definition of the indicator *expressions of emotions* identifies both the conventional and non-conventional ways of expressing emotion, to be specific, it mentions emoticons used in an unconventional way. But I will extend the range of this definition and use the term "paralinguistic features in the text-based CMC" (in short, "paralinguistic features", PFs) to include more phenomena concerning participants' uses of nonverbal cues (e.g., repetitive punctuation, conspicuous capitalization, emoticons, and emoji etc. See a full

discussion in Section 2.4) on WeChat. The analysis and discussion will be focused on the functions of emoji use in sustaining the mentor-mentee relationships and their influences on the Chinese language learning.

2.3.3.2 Participant's photographs

Nowadays, social networking sites and social media allow users to present themselves with a favorable profile picture, and many users choose not to be anonymous by presenting profiles with their real photos and detailed descriptions of themselves, which can be used for impression formation (Utz, 2000, p. 314) and impression management of self and a certain public self-image (Lim & Basnyat, 2016, pp. 25-27).

Nowak and Biocca's (2003) study examined the influences of users' virtual profile images on users' sense of presence. The results of their study suggest that "when people interacted with a partner represented by any visible image, they felt more immersed in the virtual environment (presence) than when there was no visible image" (2003, p. 491). Nowak and Biocca's study shows that any image is better than no image, and people should choose their images to represent themselves carefully in CMC contexts in that appearance matters (2003. p. 491).

Studies (Liu et al., 2016; Segalin et al., 2017; Wu et al., 2015) suggest that social media users' profile pictures may reveal their personalities. Liu et al. (2016) reported five personality traits: introversion-extraversion, openness to new experiences, conscientiousness, agreeableness, and neuroticism. Therefore, profile pictures can be used to gauge users' personality types (Segalin et al., 2017, p. 461).

The study of Walther et al. (2001) concluded that in new and unacquainted teams, being able to see one's partner's photograph promoted affection and social attraction, whereas in long-term (i.e., participants have had established relationships) online groups, the same type of photograph may restrict affinity (p. 105). In my study, a mentor and a mentee in a pair were not acquaintances and had not established relationships before they participated in my research project, therefore, it appears necessary for participants to use their photograph to enhance affinity.

In conclusion, I assume that it is necessary to include participants' profile pictures as a definition of self-disclosure. And I assume that investigations of participants' profile pictures and their changes not only may reflect participants' dynamic process of their relationships

but may indicate the kind of role they are playing in sustaining the mentor-mentee relationships and the associated Chinese language learning.

2.3.3.3 Apology and/or explanation

According to Leech's component maxims of the General Strategy of Politeness (GSP), compliments give a high value to other person's (mainly addressee's) qualities, whereas thankings give a high value to speaker's obligation to the other person (mainly addressee) (2014, p. 91). Leech conceived apologizing, like thanking, not only "as an acknowledgement of an imbalance in the relation" between *the speaker and the hearer,* but "as an attempt to restore the equilibrium to a certain extent" (1983, p. 125). Further, Leech assumed that apology is a kind of positive politeness, and it "is meant to be face-enhancing to the hearer" (2014, p. 121). However, although there are indicators of politeness in the present social presence element (in Table 2): *complimenting, expressing appreciation*, what is missing is *apologizing*. Therefore, I believe that if participants' expressions of appreciation are regarded as an indicator of open communication, their expression of apology should not be ignored. I contend that participants' uses of "apology" are also an indicator of their social presence and can be analysed under the *open communication* category.

However, there are concerns that excessive politeness could harm rational thinking: if a learning environment is too social and too polite (i.e., excessively polite), not critical or challenging, then the learning experience is unlikely to be productive (Garrison, 2017, p. 47). Garrison's colleague, Walter Archer coined the phrase "pathological politeness" (as cited in Garrison & Anderson, 2003, p. 53). Claims related to politeness remain based on their assumptions and lack empirical evidence. Consistent with the dynamic perspective that I am taking, I will not attempt to implement a de-contextualised view of politeness and assume that a single or fixed level of politeness will have a universal effect on social presence. Rather, I will look at how the relationship between the participants has evolved and how signals of politeness are contextualized by features of the established learning relationship.

To avoid the possibility of imposing excessive politeness requirements, I assume that if the mentor-mentee relationship has been close enough, it is likely that the both parties may not need to apologise (because it might appear overly polite), rather, they may provide explanations. To be specific, if one party, regardless of whether they are the mentor or the mentee, caused inconvenience (or possible offence) to the other, there is a space that can be potentially filled by an apology and an explanation, but if a close mentor-mentee relationship has been established, an apology probably seems too formal; explanations for

reasons of inconvenience (or offence) may be sufficient to restore the equilibrium in their relationships and repair the mentor-mentee relationships. Therefore, *apology and/or explanation* will be considered as a single indicator in my investigation in this thesis.

2.3.3.4 Who initiated new conversations

I assume that because there are only two interlocutors in a pair (i.e., a mentor and a mentee), who initiated new conversations may indicate his/her willingness to remain engaged in further communication with the interlocutor. But whether the initiation of new conversations and the response indicate a positive attitude, it should be assessed in relation to the context, that is, with the textual clue of the new conversation and the response. Below is an example. A and B had a quarrel yesterday and today A initiates a new conversation:

> A: Would you like to go to Queensland for a holiday with me?
> B: Leave me alone!
> B: You owe me an apology for what you did yesterday!

In this example, we can see that A initiates a new conversation (different from the quarrel), but if we only consider B's response of "leave me alone", it would imply that B does not want to keep the communication open: B responds just to close down the communication. If we take account of the following response, we can see that the communication is still open provided A provides an apology to B. Therefore, such initiations should be included as an indicator of open communication, but whether or not it functions to keep the communication open will be assessed with the context clues, the same as the interlocutor's responses.

2.3.3.5 Addressing or referring to the interlocutor by title or by name

The indicator of *vocatives* in Table 2 only includes one definition: *addressing or referring to participants by names*, which may reflect the interpersonal relationships between students, and between students and teachers in western cultures. However, in Chinese culture, a student addressing his/her teacher by title is regarded as normal and polite: usually it is "老师" (lǎoshī, literally, *teacher*) or "the teacher's surname + 老师" (lǎoshī). Whereas a teacher often addresses a student by his/her full name or given name, in particular, addressing the student by his/her given name can convey a closer relationship than by his/her full name. In contrast, students addressing their teachers by their given names and full names would be regarded as impolite or even offensive. Therefore, it is necessary to take account of such cultural characteristics in analysing participants' vocatives.

Additionally, specific Chinese linguistic phenomena should also be taken into consideration. English does not have honorific forms of second-person pronouns, whereas Chinese has: "你" (nǐ, conveys neutral and general meaning) and "您" (nín, conveys respectful meaning). Phenomena such as this also exist in other languages, for instance, *tu* and *vous* in French; *du* and *Sie* in German (Leech, 2014, p. 105). Therefore, to investigate social presence in these languages as additional languages learning by analysing participants' CMC, it is necessary to consider this linguistic factor. Therefore, I assume that addressing the mentor with "您" (nín) or "你" (nǐ) may reflect a mentee's perception of his social status in the mentor-mentee relationship, and "linguistic expressions of social status" can be used as an indicator of social presence.

Based on the above elaboration, the indicators of social presence to be investigated in the three pairs are presented in Table 3. The items in red are my additions or adaptations.

Table 3 - The indicators of social presence to be investigated in the three mentor-mentee relationships

Category	Indicators	Definition
Affective communication	Expression of emotions	Conventional expressions of emotion, or unconventional expressions of emotion conveyed by paralinguistic features in the text-based CMC (including emoticons, emoji etc.).
	Self-disclosure	Presents biographies, details of personal life outside of class, expresses vulnerability, or uses their real personal profile picture.
	Use of humour	Bantering or expressing irony/sarcasm in a friendly manner.
Open communication	Complimenting and expressing appreciation	Complimenting others or contents of others' messages.
	Apology and/or explanation	Apologize for the breakdown of communication and explain it (no matter whether the breakdown results from technological problems or personal issues) when necessary.
	Initiating new conversations actively	Who actively initiates new conversations.
Cohesive response	Vocatives	Addressing or referring to the interlocutor by title or by name; using linguistic expressions to indicate the interlocutor's social status.
	Addressing or referring to the pair using inclusive pronouns	Addresses the pair as *we*, *us*, or *our*.
	Salutations and phatics	Communication that serves a purely social function: greetings, closures.

Considering that visual elements are an increasingly significant resource in CMC and that there is an increasing interest in researching the strategies that can compensate for the absence of verbal cues in the text-based CMC, I review literature of this kind in the next section.

2.4 Paralinguistic features in text-based CMC

2.4.1 Types of paralinguistic features in text-based CMC

Studies have confirmed that the absence of verbal cues and visual cues in text-based CMC

settings may be compensated for by other strategies, for example, multiple punctuation markers (e.g., "???", "!!!" in Halvorsen, 2012, p. 695) , nonstandard punctuation (e.g., ". . ." in Vandergriff, 2013, p. 1), lexical surrogates (e.g., "hmmm" in Vandergriff, 2013, p. 1), non-standard spelling especially letter repetitions (e.g., the example in Darics, 2013, p. 144: "IIIIITTTTTTTT"SSSSS THE WEEEEEKEND BAAAAAAAAAAAABBBBBYYYYYYYY!!!!!!!") , capitalization (see the previous example), exclamations (e.g., "umm", "eww"), and abbreviations (e.g., "lol" to stand for "laugh out loud") (Kalman & Gergle, 2014; Kim et al., 2014, p. 226), emoticons (e.g. ":-)" or its graphical counterpart "☺", which is automatically converted by its American Standard Code for Information Exchange [ASCII] emoticon sequence as reported in the work of Dresner and Herring (2010, p. 249). It also has a variant without the nose: ":)", as reported in Rezabel & Cochenour, 1998, p. 208) and emoji (e.g., 😂 in Miller et al., 2016).

There are different terms referring to such phenomena. The term *paralinguistic features* was used in Pasfield-Neofitou (2012). Other terms include *CMC cues* (Vandergriff, 2013), *nonverbal behaviors or cues* (Derks et al., 2008; Tossell et al., 2012), *textual features* (Pasfield-Neofitou, 2007), *quasi-nonverbal cues* (Lo, 2008), and *paralinguistic cues* (Kim et al., 2014; Pavalanathan & Eisenstein, 2016). Dunlap et al. used the term "*paralanguage*" (2015, p. 164), which tends to be easily confused with the term *paralanguage* in the face-to-face (F2F) communication context coined by Trager (1958). The broad definition of *paralanguage* provided by the 1984 ERIC is the "study of those aspects of speech communication that do not pertain to linguistic structure or content, for example, vocal qualifiers, intonation, and body language" (Houston, 1984, p. 185, as cited in Pennycook, 1985, p. 260). To avoid confusion, in this thesis I use "paralinguistic features in text-based CMC" as the general term, and usually refer to it as "paralinguistic features" (PFs) unless otherwise specified.

2.4.1.1 Recategorisation of emoticons and emoji

Among the different types of PFs mentioned above, emoticons and emojis are the two most prominent types. However, it is necessary to differentiate them in this study, because they are produced differently and encompass different (sometimes overlapping) ranges of meanings. For example, Provine et al. (2007) only used the black and white image "☺" (which is converted from its ASCII emoticon sequence ":-)") to indicate "emoticons", but judging from Page 302 in their study, we can see that they also investigated colored emoji. Therefore, the "emoticons" in their study were actually a combination of emoticons and emoji. Another example is the study of Dunlap et al. (2015), where it seemed that they

categorised emoji as a sub-set of emoticons (p. 164; p. 166).

Emoticons

Fahlman (n.d.-b) mentioned that missing nonverbal clues in text-based CMC may cause serious issues: *"(I)n at least one case, a humorous remark was interpreted by someone as a serious safety warning").* These issues triggered Fahlman's invention of the first two emoticons on 19 September 1982: ":-)" and ":-(" (sideways smiley face and frowny face). They were used "to explicitly mark posts that were not to be taken seriously" (Fahlman, n.d.-a, n.d.-b).

According to The Unicode® Consortium, "Emoticons ("emotion" plus "icon") are specifically intended to depict facial expressions or body posture as a way of conveying emotion or attitude in e-mail and text messages." (http://www.unicode.org/faq/emoji_dingbats.html) Emoticons mainly use symbols. Despite some cultural differences, being text, emoticons can be displayed relatively consistently across operating systems (Miller et al., 2016).

Emoji

Emoji are often regarded as the successor to, or a new generation of emoticons (Novak et al., 2015), or extensions of emoticons (Hern, 2015). Pavalanathan and Eisenstein (2015) further maintained that emoji were replacing, not complementing, emoticons in fulfilling the same paralinguistic functions on Twitter.

The Unicode® Consortium (http://unicode.org/consortium/consort.html) defines emoji as "pictographs (pictorial symbols) that are typically presented in a colorful form and used inline in text." (http://unicode.org/emoji/) Most commonly-used Unicode® emoji[9] are encoded in the Unicode® Standard for indexing characters (http://www.unicode.org/standard/standard.html).

Compared with emoticons, the use of emoji in text-based CMC has increased dramatically, and emoji have become a staple of digital communication since 2010 (Danesi, 2016, p. 34). Dimson (2015) depicted that in March 2015, nearly half of texts on Instagram contained emoji, and there was a sharp increase after the Android users received native support for emoji in July 2013.[10]

---

[9] Unicode® emoji in this study are copied from Emojipedia: https://emojipedia.org, and based on the Apple's emoji list, unless otherwise specified

[10] To see the dynamic real-time emoji use on Twitter, visit http://emojitracker.com

And in 2015, the pictograph 😂 (also known as the "Face with Tears of Joy" emoji) was named the "'Word' of the Year" for 2015 by Oxford University Press and a keyboard-app company SwiftKey. It was unprecedented because it is not a string-of letters-type word. This can be seen as an acknowledgement of the popularity of emoji in the digital world (Steinmetz, 2015). And as Oxford Dictionary's team wrote in a press release: "Emoji have come to embody a core aspect of living in a digital world that is visually driven, emotionally expressive, and obsessively immediate." (as cited in Steinmetz, 2015)

WeChat has three types of native emoji: WeChat QQ emoji (hereinafter referred to as "QQ emoji", which are not encoded with Unicode®), WeChat default Unicode® emoji, and WeChat animated emoji (hereinafter referred to as "animated emoji"). Additionally, WeChat users may access Unicode® emoji that are built-in to the operating systems of their devices, and Unicode® emoji that are built-in to the third-party IMEs (also known as keyboards) that Android users can download (see more in Xue, 2017).

As mentioned previously, I will use PFs as the general term in this thesis. Considering that non-standard punctuation, non-standard spelling, capitalization, exclamations, abbreviations and emoticon, they are texts that can be transmitted relatively consistently across operating systems, therefore, they are classified as *PFs other than emoji*, which is to separate them from the analysis of emoji.

2.4.1.2 Key studies of PFs that are relevant to the present study

There is a large body of research concerning PFs in text-based CMC, in particular, exploring the use of emoticons, which mainly follows the quantitative paradigm (Derks et al., 2008, pp. 255-256; Kalman & Gergle, 2014; Tossell et al., 2012). Some qualitative instances follow the pragmatic approach, such as Dresner and Herring (2010) and Vandergriff (2013).

Pasfield-Neofitou (2007) examined the interactions between Australian Japanese language learners and Japanese native speakers via MSN Messenger in terms of the textual features. And Pasfield-Neofitou (2012) investigated two paralinguistic varieties in her participants' emails, namely, Japanese style emoticon, (e.g., "^_^") and western style emoticon (e.g., ":)"). The two studies drew my attention to both emoji (Pasield-Neofitou classified it as "emoticon") and the Japanese (or to be more inclusive: "Asian") style of emoticon (Pasfield-Neofitou classified it as "text art", e.g., ^_^) in my investigation of participants' use of PFs on WeChat.

Dresner and Herring (2010) maintained that emoticons could convey not only emotions but speech acts. More discussions of their study will be presented shortly. They mainly investigated the illocutionary force of smiley (the smiling face ":-)" as well as its variant ":)" and its graphical counterpart "☺") and its brethren (the frowning face ":-(" or "☹", the tongue sticking out face ";-p", the winking face ";-)", ";)" and ";->"). In this thesis, I will extend the investigation to include emoji, and cover more types of PFs.

Danesi (2016) articulated multiple aspects of emoji, such as emoji competence, emoji semantics, emoji grammar, and emoji pragmatics. Below are five key points proposed by Danesi (2016) that are significant for my study.

First, emoji competence. Danesi stated that just as using the alphabetic code requires linguistic competence, it is increasingly apparent that there is an "emoji competence", which "entails knowledge of how to use the images to make messages with them or to locate them in written messages that both make sense and are easily interpretable by receivers" (2016, p. 35).

Second, emoji semantics. Emoji have denotative meaning and connotative meaning. The denotative meaning is initially built in an individual emoji, which makes it able to be distinguished from others. For example, the van (or minibus) emoji 🚐 , when it is considered as a separate emoji has the denotative meaning, whereas when it is used in a specific context, it may have many connotations based on its previous social and cognitive uses. Readers do not opt to recognise such connotative meanings, rather, they are inclined, or indeed even impelled, to extract such connotative meaning (Danesi, 2016, pp. 58-60), which has the *thesaurus effect*, which Danesi defined as: "the implied, potential set of related cultural and symbolic concepts that are evoked by an emoji as it is used in some specific context" (p. 55).

Third, emoji grammar. Danesi (2016, p. 77) argued:

> In other words, emoji grammar is often nothing more than a "placement grammar", based on calquing, or the superimposition of emoji in slots where verbal structures would otherwise have occurred if the text were within entirely in words. However, in some texts, there is a different system at work, whereby the sequencing and compositional aspects are governed by conceptual aspects, rather than strict rules of grammar. In such cases it is obvious that there is a pictorial-conceptual grammar involved.

Danesi (2016, p. 78) reminded us that "emoji grammar is not just a replica of linguistic grammar with visual symbols; it has its own 'syntactics', or system for organizing the emoji to create coherent and meaningful sequences or combinations." Danesi proposed that there are three types of distribution of emoji (i.e., emoji grammar), which "allows users to engage in the cognitive flow of text and thus either to produce or comprehend its meaning" (2016, p. 78): 1) syntactic, which refers to emoji that are inserted at locations where punctuation marks or salutation formulas occur or co-occur; 2) semantic, which indicates that emoji are inserted to represent some meaning emotionally at locations where the meaning occurs; and 3) reinforcing, which indicates that emoji are "inserted to reinforce some verbally indicated meaning" (2016, p. 87).

Fourth, the relationship between emoji and written text in text-based CMC. Danesi (2016, p. 36) proposed that emoji can be mainly used in two ways in the text-based CMC. 1) They are used adjunctively within a written text. That is, adjunctive texts are blended with written forms and emoji in the flow of the message. In my opinion, a comprehensible example of this point can be: "I love my dog 🐕 ". In this example, the dog emoji is added to the text adjunctively. 2) They are used to substitute a chunk of written text (see Danesi, 2016, p. 36 for an example of the substitutive emoji text).

Danesi also mentioned the "mixed textuality", that is where "the written text is used in tandem with emoji that do not have just adjunctive function but are designed to substitute content in specific ways" (see an example of the mixed textuality text in Danesi, 2016, p. 38). Therefore, I conclude that emoji have three types of relationships with text in the text-based CMC: adjunctive, substitutive, or in a mixed textual fashion.

Fifth, the term *naked emoticon* was coined by Provine et al. (2007) referring to the stand-alone emoticons that are not attached to a textual utterance. To avoid the subtle negative meaning of the word "naked", I tend to use the term "pure" and extend "emoticon" to "PFs" to include emoji, that is, a "pure PF" refers to a message containing only one PF.

For the sake of clarity, in this thesis I classify the relationships between PFs (in particular, emoji) and written text as: pure written text message (i.e., no PFs); mixed textual message (contains both written text and PFs); and pure PFs (i.e., contains mere PFs). This classification can reveal the writing style of a participant's messages together with their uses of punctuations, adverbs (that indicate degrees), modal particles and interjections, and so on. It is only when it is necessary to differentiate in what way emoji are inserted in the

written text message that I will analyse whether it (or they) are inserted adjunctively, as substitutes or in a mixed textual fashion.

2.4.1.3 Characteristics of PFs usage

Danesi (2016) proposed two characteristics of emoji use. First, emoji use is *peer- and age-sensitive* (p. 20). As one participant in Danesi's study encapsulated, "it would seem a bit weird" and "you're a bit old" if Danesi used emoji in his text communication with the participant (Danesi, 2016, p. 20). Scherr et al.'s study (2019) also shows such characteristics (p. 32). However, the age-sensitive characteristic is controversial, as studies reviewed by Dunlap et al. (2015, p. 167) report that people's emoji use is not age-sensitive.

Second, it is *culture-sensitive* (2016, p. 26). Danesi (2016) offered two examples. The first is the *nail polish* emoji, which is found to have unwanted sexual connotations in some non-English-speaking countries. The other is the seemingly universal *thumbs-up* gesture, which is extremely offensive in some regions (specifically, "parts of the Middle East, West Africa, Russia, and South America", as mentioned by Danesi, 2016, p. 31). The culture-sensitive characteristic of emoji use was also reported by SwiftKey, which analysed more than one billion pieces of emoji data used by speakers of 16 different languages and regions on both Android and iOS devices between October 2014 and January 2015, and identified that French used "four times as many heart emoji than other languages", and it was the only language where a "smiley" was not the most frequently-used PF (SwiftKey, 2015, p. 1). Scherr et al.'s study (2019) suggests that their 107 participants perceive the Unicode® emoji of Windows 10 (including emoticons as they are termed in my thesis) "in a very homogenous way regarding their sentiments and the emotions" (p. 19). They confess that this may be because "all participants had lived in Western Europe for some time, which might have influenced their view of emojis" (p. 33). Therefore, I align myself with Danesi's argument and contend that PF usage is culture-sensitive.

It seems that PF usage has additional characteristics. For example, it can be *context-sensitive*, which can be regarded as the third characteristic. Danesi argues that context is the guide to interpretation of emoji (2016, p. 41), which has been found consistently in a wide range of studies (e.g., Dresner and Herring 2010, p. 260, and see Dunlap et al. 2015, p. 167 for more studies). The analysis of participants' uses of PFs in my thesis will consider the context of their use.

The possible fourth characteristic is *group-sensitive*. Studies reviewed by Dunlap et al. (2015,

pp. 166-167) suggest that there are group differences in emoticon uses. For example, there are gender differences (e.g., women used emoticons more for humour, whereas men use them more for sarcasm or to be flirty), as reported in the study of Kapidzic and Herring (2011), which investigated teen chat sites and found that girls used more emoticons (especially those representing smiles and laughter) than boys did. But an exception is that Scherr et al.'s (2019) study suggests that males and females perceive emoji (including emoticons as classified in my thesis) similarly (p. 32). In addition to the gender differences, there are ethnic differences. For example, Locke and Daly (2007) found Chinese participants use emoticons more than non-Chinese participants, but they did not provide explanations for such differences, probably because they only had a limited numbers of participants (i.e., three Chinese students and two Pakeha New Zealanders).

On the basis of the above analysis, there seems to be a fifth characteristic: *individually-sensitive*, namely, different user may use them differently. For example, studies have shown that people use emoticons vary because of one's personal preference and experience of using emoticons (see Dunlap, 2015, p. 167 for the relevant studies). My study may offer some hints in this regard.

2.4.2 Functions of PFs in text-based CMC

Studies investigating functions of PFs in text-based CMC have revealed two respects: emotional function (i.e., the emotions that they convey); and the attitudes, intentions, meanings etc. (i.e., communicative function). Next, I review empirical studies concerning the two functions separately.

2.4.2.1 Emotional function

There has been a large body of research which has investigated the emotions that PFs convey in text-based CMC. For example, Dresner and Herring (2010) identified three functions of the emoticons in CMC in terms of their relation to facial expressions. The first one is as emotion indicators, mapped directly onto facial expression (e.g., ":-)" to indicate happiness) (p. 250). Another example is where Novak et al. (2015) investigated 751 emoji in 13 languages (excluding Chinese language) by asking native speakers of the 13 languages to rate the emoji in terms of their sentiment value: positive, negative, or natural. Novak et al.'s (2015) "Emoji Sentiment Ranking" system claimed that it determined the sentiment score (degree of emotivity) of the 751 core emojis, and their study suggested that most emoji were intended to produce a positive sentiment. Similarly, SwiftKey's research (2016) found that 70% of emoji use was to express positive emotion (15% neutral, and the rest of 15%

negative), which indicates that people use emoji to covey happiness, love and joy, and to project that image to others online (slide 12). Danesi (2016, p. 62) claimed that it is not coincidental that the widely used emoji are those standing for the seven basic emotions proposed by Paul Ekman (the seven basic emotions will be discussed in Chapter 3 in introducing the emotion coding system).

However, increasingly more scholars have become aware that some paralinguistic features do not convey emotions, as will be elaborated below.

2.4.2.2 Communicative Function

Lo's study (2008, p. 597) suggested that emoticons "allow receivers to correctly understand the level and direction of emotion, attitude, and attention expression. These results prove that emoticons perform nonverbal communication functions."

Dresner and Herring (2010) argued that the term "emoticon" was overly conceived of as indicators of emotions, and, as a result, tended to ignore some other important uses, as some emoticons did not express any emotion. They argued that "in many typical cases, emoticons indicate the illocutionary force of the text to which they are attached, contributing to its pragmatic meaning, and are thus part and parcel of the linguistic communication channel" (2010, p. 250).

In addition to what was previously mentioned, the first of three functions of the emoticons in CMC in terms of their relation to facial expressions that Dresner and Herring (2010) identified, the other two functions are: 1) indicators of non-emotional meanings, mapped conventionally onto facial expressions. For example, a face with the tongue sticking out emoticon ";-P" to indicate teasing, flirting and sarcasm, which are emotional state, but not emotion per se. Another example is the winking face emoticon ";-)", which is often conceived as joking, but in fact, people may joke either when they are happy or sad. 2) indicators of illocutionary force that do not map conventionally onto a facial expression.[11] Dresner and Herring (2010) then summarised the last two functions as the communicative function of emoticons, although they largely focused on emoticons' illocutionary force and did not investigate emoji. Kelly and Watts cohered with Herring and they contended that "emoji extend the capabilities of emoticons by incorporating a wide array of characters whose

---

[11] Dresner and Herring (2010) offered an example: the message posted in the fibromyalgia support forum that ended with the ":)" emoticon was apparently not to show the poster's happiness about her conditions but to assert or describe her situation rather than complaining (p. 258).

relevance to emotional communication is less clear" (2015, p. Introduction).[12]

Kelly and Watts (2015) argued that "beyond the substitutive role of emoticons for conveying emotional states, emoji appear to have a useful role in either controlling a conversational thread or in encouraging playful behaviour" (p. Introduction). They coined this as "*appropriation*" and argued that *appropriation* had relational values, which "contribute to the maintenance of prosocial bonds between the participants in mediated conversation" (Kelly & Watts, 2015, p. Introduction). Kelly and Watts (2015) reported three categories of *appropriation*: maintaining a conversational connection, permitting play, and creating shared and secret uniqueness.

Kelly and Watts (2015) found that using emoji can serve "as a form of low-cost phatic communication, providing evidence of connectedness via an open channel while indicating that one is thinking about that person, i.e., communicating that they are 'on one's mind'" (p. Findings). Emoji can also be used to end a conversation to signal that the recipient has received a message but has no words left to say in response (Kelly & Watts, 2015). Kelly and Watts concluded: "It is likely that this use of emoji has symbolic relational value through communicating acknowledgement and improving on mere silence, preventing the speaker from 'feeling ignored' due to a lack of response" (2015, p. Findings).

Danesi found that the basic discourse functions of emoji include: *emotive function*, *phatic function*, and *other function* (2016, p. 22). However, he largely focused on the first two functions and did not mention what the "other function" actually consists of.

Danesi (2016, pp. 22-25) maintained that the *emotive function* has two subcategories. The first subcategory is "as substitutes for facial expressions in F2F communication or their corresponding graphic punctuation marks in written communications". From the most common facial emoji that Danesi listed (in pages 23-24) and their corresponding meanings/functions, we can infer that what he meant was: conveying emotions. Such interpretation is consistent with what Danesi claimed later that "emoji became widespread at first as replacements of the graphic emoticons for expressing an emotion that is associated with a specific expression in F2F communication. As such, they originated to represent facial expressions in written text through iconic visual images" (2016, p. 62).

The second subcategory of *emotive function* is "to visually emphasize a point of view"

---

[12] For example, the coloured circles, or some food emoji, like the blue circle ⬤ and the fried shrimp 🍤.

(Danesi 2016, p. 23), which Danesi also referred to as "emotional speech act" (2016, p. 22) and "emotional force" (2016, p. 23). The second function can "convey much more emotional force than would otherwise be possible, while keeping the tone friendly", and "skirt around the more negative emotions that words would elicit", which is apparently consistent with what Dresner and Herring (2010) argued: the communicative function. We can see that the subcategory is in relation to conveying speech act of emoji rather than conveying emotions, which will be discussed together in relation to what Danesi (2016) proposed as the phatic function of emoji under the rubric of communicative function in this thesis.

As for the *phatic function* of emoji, Danesi proposed that there were three most common functions: 1) an emoji can be used as an *utterance opener*. For example, when the smiley emoji is used in place of opening salutations (e.g., "Hello!"), it may allow the sender to convey a positive face and imbue the message with a cheerful tone or mood, which may strengthen or maintain friendly bonds between interlocutors, even though a message has some negativity; 2) an emoji can be used as an *utterance ending* to avoid ending a message abruptly, therefore to avoid the possibilities of rejecting further communication with the receiver. In this regard, emoji can function as the "good-bye" in the interaction, which can convey the sender's willingness of further communication with the receiver; 3) an emoji can be used as *silence avoidance*, that is, to fill the "silence gaps" where the interlocutors feel uncomfortable or awkward (Danesi, 2016, pp. 19-20). The three functions can be perceived to constitute what Danesi postulates as the *punctuation function* of emoji: as "mood breaks" (used in the flow of the text), and "mood finales" (used at the end of messages) (2016, p. 105). So far, we can see that in Danesi's (2016) classification of emoji's the *phatic function* is similar to the first category of *appropriation* reported in Kelly and Watts' study (2015).

Danesi's study (2016) also suggests that emoji have two main *pragmatic functions*: 1) *adding tone*, namely, providing a visual means to convey prosodic meaning (e.g., interjections and intonation); 2) *injecting a positive mood*. Even sadness can be embedded in positivity, considering it is a mood that the sender wishes to share, not deny (which would be negative by default) (pp. 95-96).

Overall, the notions mentioned by Danesi (i.e., the second subcategory of *emotive function*, the *phatic function*, and the *pragmatic functions*) will be categorised as the communicative function of PFs.

My study will draw a comparatively clear distinction between the "emotional function" and "communicative function", although undeniably there may be some overlaps since some PFs

can convey both emotion(s) and speech act(s). Making such distinction enables me to identify PFs' subtle influences on mentor-mentee relationships, social presence and Chinese learning.

For the sake of clarity, I will analyse the communicative function of PFs in relation to three aspects. The first aspect is *conveying speech acts*. Following the *speech act theory,* I will largely focus on PFs that visually emphasise a point of view (namely, *emotional speech*, *emotional force,* or *pragmatic function*, which are all Danesi's terms). Kelly and & Watt's (2015) second category of *appropriation* (i.e., *permitting play*) is also analysed in relation to this aspect. Citing Algoe, Haidt, and Gable's study (2008), Kelly and Watts found that using emoji to engage with the interlocutor in a playful fashion (including "spamming" emoji as a response) was related to "enhanced feelings of intimacy and closeness through demonstrating an understanding of one's partner" (2015, p. Findings). The second aspect is *signaling the opening or completion of one's turns*, which follows the three phatic functions and the punctuation function proposed by Danesi (2016). And the third aspect is *substituting written text to convey conceptual meanings*, which follows the notion of "emoji grammar" proposed by Danesi. The third category of *appropriation* (i.e., *creating shared and secret uniqueness*) reported in Kelly and Watt's study correlates to the third aspect (2015).

Having differentiated the two functions of PFs: emotional function and communicative function, it is necessary to know what kind of communicative function PFs can convey from the perspective of speech act theory.

Austin (1962) elaborated "speech act theory", and he argued that "when one produces an utterance, one typically performs concomitant acts of three types: locutionary, illocutionary and perlocutionary" (as cited in Dresner & Herring, 2010, p. 253), which are related to utterance, intention and effect respectively (McCulloch, 2018, slide 6). Austin's speech act theory concerning illocutionary acts was further developed by Searle (1969; 1979). By analysing the weaknesses in Austin's taxonomy, Searle (1979, pp. 8-20) categorised illocutionary acts into five categories: assertive illocutionary acts (e.g., statements), commissive acts (e.g., promises), directive acts (e.g., commands), expressive acts (e.g., avowals of emotion), and declarative acts (e.g., christenings).[13] And Searle posited: "Any utterance will consist in performing one or more illocutionary acts." (1979, p. 18)

In a study that connected emoticons and speech act theory, Dresner and Herring (2010)

---

[13] The examples given in each category are based on Dresner and Herring (2010, p. 254).

investigated emoticons used in English CMC, with a focus on "Western" culture. They maintained that when emoticons are used to convey illocutionary force, "they help convey an important aspect of the linguistic utterance they are attached to: What the user intends by what he or she types." (2010, pp. 255-256) The caveat from Dresner and Herring is that although emoticons have "expressive, playful, and informal connotations," which result from their resemblance to whimsical line drawings, such connotations are independent of the illocutionary force they are conveying. (2010, p. 261) As for the question raised in Dresner and Herring (2010, p. 254): "How can researchers justify their claims that a given utterance carries this or that force, or that certain illocutionary acts indeed manifest the characteristics they ascribe to them?" They argued that any utterance entails conventional and intentional approaches to illocutionary force, and in fact, the two approaches are consistent with each other (p. 255).

Citing Searle's (1969, p. 12) statement: "[s]peaking a language is engaging in a (highly complex) rule governed form of behavior", Dresner and Herring (2010, p. 254) argued: "We learn these practices in the same way we learn other social conventions, and our having mastered them allows us to justify our judgements with respect to these practices on the basis of out intuitions as language speakers". Meanwhile, they contained that by grounding illocutionary force in intention, it involves human's general abilities "to make context-dependent inferences involving interlocuters' intentions" (2010, p. 255). In line with Dresner and Herring (2010), I assume that being a Chinese native speaker, I am able to identify the illocutionary forces that the PFs convey not only by my intuitions, but by taking account of the communicative contexts, the punctuation marks, sentential moods, and participants' feedback in the interviews.

Having reviewed literature concerning PFs and explained the necessity to investigate PFs' emotional function and communicative function, a question emerges: do they have other function(s) in the context of computer assisted language learning, specifically, on WeChat?

We can see that there are increasing numbers of emoji in different operating systems. Take iOS for an example[14], there are currently eight categories of emoji: smileys and people, animals and nature, food and drink, activity, travel and places, objects, and symbols. Some of them are symbolising animals, nature, food, drink, activity, vehicles, places, objects, symbols, and flags. Therefore, they have embodied lexical meanings to indicate objects, an activity, places, etc. For example, the ring emoji 💍 can be used with the lexical meaning of "ring", the

---

[14] See the emoji series in different operating systems at https://emojipedia.org

dog emoji 🐕 with the meaning of "dog", to name but a few. Will such emojis be used with other function(s) in addition to the existing emotional and communicative function? My thesis may shed some light on this issue.

2.4.4 Negative comments on the roles of PFs in text-based CMC

Although to my knowledge, the majority of studies have confirmed the positive roles of PFs in the text-based CMC, Provine et al. (2007, p. 305) claimed that their roles had been overstated, in that in ancient times, in letter writing, the medium was even leaner than the electronic messaging. They argued that nevertheless, a skilled writer could still make the emotional range and potency of their message approach, if not exceed, that of F2F vocal conversation with keyboard or quill. As a result, Provine et al. (2007, p. 305) asserted:

> Emoticons are an unnecessary and unwelcome intrusion into well-crafted text. But emoticon use is better contrasted with colloquial speech than formal writing or literature. Elegance and precision are not required in text messaging where, as in the case of talking, social contacts are often maintained through the mere act of communicating. Readers seeking the subtleties of irony, paradox, sarcasm, or sweet sorrow had best look elsewhere.

Provine et al. (2007, p. 306) concluded: "However blunt the emoticon may be as a stylistic and linguistic instrument, it is a discrete symbol of defined emotional valence that has a specific locus in text." However, the above literature review concerning PFs' functions indicate that PFs are neither blunt nor discrete symbols of defined emotional valence, which is apparent contrast to Provine et al.'s such conclusion. My investigation of the PFs in Chapter 4 will shed more insights into this point and explore how PFs in particular contribute to the negotiation of social presence in WeChat communication.

2.5 Conclusion

The literature review in this chapter suggests three conclusions: 1) there are seven research gaps in investigating Chinese as an additional language learning on WeChat in informal, international and intercultural contexts, and this study endeavours to address these gaps; 2) the social presence element of the CoI theoretical framework has identified the importance of emotions in online learning, has connections with the dynamic interpersonal relationships, takes account of both situational aspects and communication medium aspects in investigating online learning, but there are still spaces for refinement such as the six research gaps that the present study sets out to fill. My modifications to the latest social

presence element extend it to the specific context of this study to enable the framework to be to be used as a theoretical framework in this thesis; 3) paralinguistic features in text-based computer-mediated communication have important roles. The methodology employed in this thesis (including specific methodological challenges and my resolutions of them) is presented in the next chapter.

Chapter 3: Methodology

3.1 Introduction

This chapter starts with an outline of general methodological challenges reported in studies of mobile learning in order to explain why I need to include multiple data sources in my study. Next, it provides a description of the research design, data sources and data collection processes. Then it explicates the methods of data processing such as the methods employed in analysing text-based computer mediated discourse, anonymisation, transcription, segmentation of chat logs, issues concerning validity and reliability of the data, and methods of coding.

3.2 Methodological considerations in researching computer-mediated learning

In Section 2.2 I argued that in this thesis my focus was investigating WeChat itself rather than where WeChat was used. However, WeChat was first developed by Tencent as a mobile social media tool for use on mobile phones or tablets (that is, WeChat for iOS and Android), before the company developed versions for Windows and Mac as well as for the Web. To access these later versions, users needed to either scan QR code with WeChat for mobile phones, or log in on WeChat on a computer or its Web version but confirm the login with their phones. Additionally, some WeChat's functions (e.g., "Moments") that can be used on the phones cannot be used on WeChat for computers or Web. Further, WeChat chat logs can only be sent or forwarded to others over the mobile phones. Therefore, WeChat clearly connects in important ways with mobile phones, and studies researching language learning on WeChat could largely rely on WeChat used on mobile phones. Hence, the general methodological challenges reported in researching mobile learning also exist in researching WeChat used as a language learning environment regardless of the device being used, and my study should take those challenges into consideration.

For these reasons, I first discuss the general methodological challenges that have become prominent in a sub-section of computer-mediated learning, mobile learning. My rationale is that issues that emerge in this most-intensive version of computer-mediated learning will also emerge in other computer-mediated environments. I then explain my general approach to those challenges. More detailed discussion of some specific methodological challenges

and their resolutions related to the present study will be in Sections 3.3-3.5 (also refer to Xue, 2017).

Scholars have agreed on four challenges of data collection in mobile learning. First and foremost, because mobile learning may take place anywhere (span formal and informal settings) and at any time, it is hard to track and record the learning processes and to identify and assess the unpredictable and uncontrollable learning outcomes (Looi et al., 2009, pp. 8-9; Pachler, 2009, p. 5; Sharples, 2009, pp. 17-18; Trinder et al., 2009, p. 241).

Second, the learning may take place in a private or semi-public sphere, and the data collected may threaten the participants' privacy, therefore, it has particular ethical issues. For instance, how to get permission from all participants to be monitored for research purposes while allowing them the right to choose when to be monitored, and what is to be collected (Looi et al., 2009, p. 9; Sharples, 2009, p. 21; Van't Hooft, 2009, p. 178; Vavoula, 2009; Wali et al., 2009, p. 331; Xue, 2017).

Third, sometimes, the problems of the mobile devices may have negative influences on the collected data, for instance, battery life can impact recordings, the operating systems may change and influence what data appears or how it is stored and the short "lifespan" of a mobile phone can cause loss of data (Trinder et al., 2009, pp. 248-249; Vavoula, 2009, p. 342; Xue, 2017).

Last but not the least, there may be updates of the applications installed on smart phones over the time if research is longitudinal, which may result in the loss of data and require researchers to change methods for both data collection and data analysis. During the current study for instance, the Tencent company updated WeChat versions frequently to provide better service to its users, and sometimes there were changes to specific features without notifying the users in advance.[16] These considerations mean that sources of data will be needed that go beyond the devices themselves and their records.

Questionnaires, interviews, attitude surveys, diaries are introspective and retrospective self-reports (Vavoula, 2009, pp. 341-342). Undeniably, self-reports may enable participants to reflect on their learning and express their experiences. However, using them as the main

---

[16] For example, the Walkie Talkie feature was deleted by WeChat's version update on 15 October 2015 in W-12 before I became aware of it. Although no participants reported they used this feature, it had the potential to cause some inconvenience, as some questions in the first-round interview were designed for this feature.

sources of data would be insufficient because the collected data may not provide sufficient information about the students' activities that happened in various contexts; there is also the possibility that what the students said is not consistent with what they did (Wali et al., 2009, pp. 317-318). For this reason, even though these other data sources are essential, in this study I have prioritised methods that involve observing and analysing participants' chat logs on WeChat.

The data collected from the observations and log files may have an additional advantage and "triangulate student's self-reports to ensure the validity and accuracy of the data collected" (Wali et al., 2009, p. 334). Looi et al. (2009, p. 9) argued that collecting participants' log files can be an authentic, time-efficient means of recording student learning behaviours.

Nonetheless, observations and log files also have their weaknesses and limitations. For observations, students might behave differently from what researchers observe and some activities may not have been observed by researchers or reported by students. In addition, observers can misinterpret what they have observed; researchers might overlook some aspect of the observed behaviour (Wali et al., 2009, p. 331).

Wali et al. (2009, p. 320) argued that a special requirement of mobile learning research is employing multiple methods to collect data. If three types of methods (i.e., participants' self-reports, log files, and researcher's observation) are used together, they may "generate data about the context of learning activities which helped with understanding learning activities and their relationship with context (physical and social)" (Wali et al., 2009, p. 326).

I assume that in interpreting participants' self-reports (such as from questionnaires and interviews) and analysing their chat logs, researchers may ask participants to clarify some ambiguous points, which may take place in a personal communication context, and participants' clarifications also belong to their self-reports. This kind of data was also collected as per participants' consent.

Based on these considerations, my study uses an interpretive approach and includes three types of data collection methods: 1) participants' self-reports, including their responses to the questionnaire and interviews questions, and their clarifications about any ambiguous points (e.g., in their responses to questionnaire and interview questions, and in their chat logs) that took place in my personal communication with specific participants via email or WeChat for the sake of convenience; 2) my observation notes of participants' behavioural

changes on WeChat (such as participants' posts on WeChat "Moments" and changes to their profile pictures); and 3) my primary focus, the chat logs sent to me by the participants.

3.3 Research design

In this section I describe participation criteria for Chinese participants and Australian participants, how the mentors and mentees were matched into pairs, what Chinese language learning activities were conducted on WeChat, who sent the chat logs to me, the potential risks and protective measures, my intervention in the data collection process, as well as the compensation to the participants. All processes described below were approved by the La Trobe University Human Research Ethics Committee as detailed in the statement of authorship.

3.3.1 Participant recruitment

A general participation criterion was that all participants were required to have smart phones capable of installing the WeChat application. There were also specific participant recruitment criteria. For Australian participants (i.e., mentees), they needed to be Australian university learners of Chinese language from three levels of Chinese classes (Level 1, Level 2 and Level 4 henceforward).

Chinese participants had to satisfy three requirements: 1) being born in Mainland China with Mandarin Chinese as their first language and speaking Standard Mandarin fluently; 2) had been or were being educated as a teacher of Chinese as a second language; 3) and had work experience (minimum of six months) of teaching Chinese as a(n) second/ foreign/additional language. The three requirements for Chinese participants were in accordance with the difficulties in learning Chinese with their Chinese native language partners using WeChat that Australian participants reported in Jiang and Li's study (2018, p. 12), such as the language partners' Chinese accents and pacing. As Jiang and Li reported: "Unless a native speaker is a language teacher himself/herself, s/he usually is not considerate enough to accommodate L2 learners' language use." (2018, p. 14)

I chose the two English words "mentor" and "mentee" rather than other words when I recruited my participants in 2015 because of the considerations below.

To start with, in Australian tertiary education, it is normal that there is a class named "tutorial", which usually provides opportunities for students to practise and consolidate

what they have learned in a lecture, and the person who delivers teaching activities in a "tutorial" is called "tutor". A tutor is normally a sessional staff member and is paid for conducting teaching activities in the "tutorial" by the university. There is a formal teacher-student relationship in tutorials. Australian university students would have been familiar with this position and this role. To avoid immediate and direct confusions to Australian participants arising from using the word "tutor", I decided to address Australian participants as "mentee", and its corresponding word "mentor" for Chinese participants, which was to emphasise the informal relationship in an informal learning setting in my study.

As for my Chinese participants, to my knowledge, there is not a Chinese equivalent word that can cover the role of "mentor" in my study. In Chinese, the word "辅导老师" often refers to people who provide learning support after school in private institutions.[18] And the word "家教" (its full name is "家庭教师", literally means "home teacher") particularly refers to a private teacher who provides one-to-one learning support for a student, which usually happens at the student's home. Both "辅导老师" and "家教" receive payment (from an institution and a family respectively) for their teaching activities, whereas my Chinese participants would not be paid for mentoring my Australian participants, therefore, the two words referred to above are not suitable words for my study. Another potential term could have been "语伴", which means "language partner". This term implies an informal teaching and learning relationship in which neither party is paid, but there is a reciprocal purpose in this relationship. By comparison, my Chinese participants' participation in my study was not for the purpose of learning or practising English with Australian participants. Therefore, "语伴" is not suitable for my study either.

As a result, I verbally explained what a "mentor" could mean in my study to my Chinese participants in multiple ways. For example, I told them that the Oxford Advanced Learner's Dictionary defines the word "mentor" as a noun in the 7th edition in Kindle as: "an experienced person who advises and helps sb with less expeience over a period of time" and it is translated as "导师；顾问" in Chinese (Oxford University Press, 2005), but neither of the two words could fully manifest the meanings and the roles of a "mentor" in my study. In Chinese, both the words "导师" and "顾问" indicate a kind of professional but not always someone who offers overt support. This is similar to the role of mentor that I will investigate. Additionally, because a common application of "导师" is "研究生导师"

---

[18] The private after schools are often called "辅导班", "课外班" or "补习 班", and the private teachers working in these institutions are therefore called "辅导(班)老师", "课外班老师" or "补习班老师".

(postgraduate student's supervisor), which my Chinese participants should have been familiar with (because all of them were either postgraduate students or had graduated with a Master degree), and a common application of "顾问" is for "法律顾问" (legal counsel or legal advisor). I used these two titles to let my Chinese participants know that in my study they would provide professional support to their mentees but would not have as much responsibility as implied in "研究生导师" or "法律顾问". And I used a non-technical expression to describe that my Chinese participants would have an informal relationship with their mentees in my study: "顾上了就问，顾不上不问" (somebody will ask/consult the "顾问" if s/he has time; s/he will not ask if s/he does not have time), which indicates: the support provided by the "顾问" is that s/he is always there ready to help but only steps forward when someone requests his/her support.

I also explained to my Chinese participants and emphasised that the word "mentor" was employed to specify the informal nature of Chinese language learning on WeChat and an informal teacher-student relationship compared with the teacher-student relationship in formal learning settings. I also made it explicit to my Chinese participants that: they would not be paid for mentoring their Australian mentees; there were no requirements from mentees' lecturers in their Chinese classes that they achieve any specific goals in their WeChat activities; and the mentors' participation would not be for the purpose of learning or practising English.

3.3.2 Ways of matching the mentors and the mentees

After 15 mentors were recruited in the learning project in June 2015, I organized a group on WeChat (also referred to as "the big group") and invited all mentors to join this group. After each Australian participant signed the Consent Form for the research project, I invited them to join the big group. All mentees were encouraged to choose their own mentor(s) by contacting the Chinese participants in the big group via WeChat since they could see each Chinese participant's profile picture (not necessarily their real personal photos).

The majority of one-to-one mentor-mentee relationships were established by the participants themselves. If a mentee asked me for a recommendation, I generally recommended two or three so that the mentee could make the final decision, and I also informed the mentees that all of the mentors were experienced and friendly. Later in this process my recommendations had to decrease to only one, to take account of a mentor's availability to make sure that no mentor had more than two mentees.

As mentioned in Section 1.2, I set the rule that each Chinese participant would have at least one but no more than two mentees. Once a mentor had accepted a mentee, they were required to inform me, so that I could manage the matching process efficiently. And if a mentor had established agreement with two mentees, I informed the remaining mentees that that mentor was no longer available.

Since all the participants were in the big group, if one participant sent one message in this group, every participant was able to view it and it might be time-consuming for each of the participants (including me) to read them. Moreover, some messages might not be of interest to all participants. For the sake of efficiency in the larger learning project, the participants were divided into three small groups (also referred to as "the small groups"), where there were mentees from the same Chinese class, their own mentors and me. After this division, the big group functioned as a bulletin board mainly used by me to manage the project as a whole, for instance announcing how to input Pinyin with the tones, informing participants about the risks of the XcodeGhost (see Constantin, 2015 and Rossignol, 2015 for more details). This process spared me from sending the same message(s) to every participant one by one. I asked individual participants to send their feedback to me directly in the private chat mode.

As a result of these processes, 22 pairs were established (see Appendix 1). As discussed in Section 1.2, three pairs in Level 4 (i.e., A1-L4 & C11, A2-L4 & C11 and A4-L4 & C13) became my focused participants, therefore, participants selected in this study were based on a purposeful sampling.

3.3.3 Chinese language learning activities on WeChat

All the participants were informed in the Participant Information Statement that they would be expected to communicate with each other in Chinese, but they were informed orally that if they had difficulty in expressing their ideas in Chinese, they could communicate in English.

The communication between mentors and mentees in Level 4 was on the basis of topics not directly related to their formal studies (see Table 4). I mainly announced a new topic on Mondays. The topics mainly focused on the participants' (both mentors' and mentees') local lives. But mentees in Level 4 were also informed that they could chat with their mentors about what they had learned in their formal classes. Taking account of the fact that the

mentor-mentee relationships in the three focused pairs in this study were established at different times, later in Week 1 (A1-L4 & C11 in Week 3, A2-L4 & C11 in Week 2, and A4-L4 & C13 in Week 5), the three pairs were informed that their communication could cover the topics announced in the previous weeks. The topics that I announced are shown in Table 4. All participants were also informed that they could chat whatever they wanted on the condition that they complied with the Rules of Conduct for WeChat Project Participation (see Appendix 4).

Table 4 - Suggested Topics for Level 4 Participants to Chat

Week	Suggested Topic(s)	Week	Suggested Topic(s)
W-1	Hobbies	W-8	Local animals
W-2	Family members	W-9	Local traditional festivals
W-3	University life	W-10	Local recreational activities among youngsters
W-4	Traveling experiences	W-11	Local plants (trees, flowers, etc.)
W-5	Local scenic spots	W-12	Local transportation
W-6	Local delicacies	W-13	Local celebrities
W-7	Local climate	W-14	Ideal jobs after graduation or your current job

3.3.4 Potential risks and protective measures

Using WeChat as a Chinese learning platform in informal, international and intercultural context involves multiple potential risks. To address the possible risks, I took steps to ensure that the participants could limit their risk.

The first risk involves risking participants' privacy in data collection. For all chat logs that I collected, I gave priority to the respective participants' willingness to have the data collected. All participants had the right to discuss with their partners whether any parts of their chat logs should be deleted before being sent to me. Additionally, all participants were informed in the Participant Information Statement that they could ask me to delete specific message(s) even after they had sent their private chat logs to me.

The second risk involves WeChat's feature of "People Nearby", which enables WeChat users to find other WeChat users nearby and add them to WeChat "Contacts" easily, however, this involves chances of contacting with complete strangers as well as disclosing privacy to strangers. Participants were informed in the Participant Information Statement that they must always be cautious if they wanted to add a stranger who was not a participant in the

learning project. And they were also informed how to avoid this risk by disabling the "Location Services" on their phones so that WeChat would not be able to access a participant's location data.

The third risk concerns WeChat's payment functions with WeChat "Wallet". WeChat's "Wallet" makes shopping with WeChat convenient, for instance for booking a taxi or buying movie tickets. However, my participants might not have known how to use these features properly, which might have resulted in legal or financial harm. To avoid such potential risks. I informed my participants in the Participant Information Statement about these potential risks, and that this function would not be used in this research. Moreover, I also informed them that nobody would ask them to use this function as part of this research, and if anyone of the participants did so, they could report it immediately to me.

The fourth risk is about content censorship on WeChat. WeChat is Chinese social media, and most of the Chinese mentors were based in Mainland China (C2 went abroad to teach Chinese in October 2015). Talking about certain political issues could result in some problems for Chinese mentors. To address these potential risks, I designed a set of Rules of Conduct for WeChat Project Participation (see Appendix 4 for more details), which was attached to the Participant Information Statement. The Rules of Conduct for WeChat Project Participation informed participants about what they could do and what they must not do. For example, mentees and mentors were given phrases (in Chinese and English respectively) to sidestep uncomfortable topics of conversation. Moreover, they were informed that if someone raised sensitive topics or issues of abuse in this research project in the private chat, his/her interlocutor had the right and obligation to report it to me; if it happened in group chat or WeChat "Moments", I would be able to respond immediately since I would be present in all WeChat groups and I would be able to advise the participant not to do it again. If it happened again, I would exclude the participant from the research. The Participant Information Statement also included a statement that if the exchanges involved illegal issues, I would report them to the university. In addition to this measure, one more measure was taken to avoid sensitive topics being talked about on WeChat. For participants in Levels 1 and 2, the topics were in accordance with the topics in the Chinese textbooks, and for participants in Level 4, none of the set topics involved sensitive issues.

3.3.5 My intervention

In Week 2, I realized that the mentors with their real picture in their profiles were matched earlier than those who used anonymous pictures and that WeChat users usually set "do not

allow strangers to view pictures posted on WeChat Moments". I recognized that these issues might hinder some mentees having their mentor(s), because a person's profile picture may reveal something about his/her personality or hobbies. Therefore, I invited mentors (including C11) who had not established links with any mentees yet into a temporary WeChat group, and told them about my assumptions. I said that they might decide whether or not to use their real pictures. The temporary WeChat group only functioned as a one-off temporary "venue" where I and the mentors who had not had mentees by then had an "online meeting", and all attendees could leave the group after the virtual "meeting". Being the organizer of this group, I deleted it after the meeting. Three mentors (including C11) changed their profile pictures into their personal pictures during the meeting.

However, I did not intervene in participants' communication in the private chat mode except for sending set topics to both mentors and mentees in Level 4. I was not able to know what participants actually talked about in the private chat mode until I received their chat logs. Moreover, to avoid intervening in the mentee's Chinese language learning experience, most of my communication with the three mentees on WeChat was in English, and most of my announcements such as how to input Pinyin with tones, and how to submit chat logs to me via phones in the big group and the three small groups were also in English except for "xiexie" (Thank you) and "晚上好" (Good evening! wǎn shàng hǎo! Including both English and Pinyin).

3.3.6 Compensation to participants

The communication among participants on WeChat involved costs associated with using their own data plan when they did not have free WiFi connections, so it was necessary to offer them financial compensation. Mentees who were interviewed at the end of the 14 weeks and mentors who were interviewed in my second fieldtrip in 2015 in China were offered either gift cards or gifts (if they were not able to meet me in person). The gift card was $AUD20 each, and the gifts were equivalent of $AUD20.

3.4 Data sources and stages of data collection

As discussed in Section 3.2, the data sources in my study involve a questionnaire, participants' chat logs on WeChat, in-depth interviews, and my observation notes. My data was collected in six stages, which will be explicated in accordance with each type of data source.

3.4.1 Questionnaire

Stage 1: 14-26 June 2015. I recruited the two Chinese mentors C11 and C13 in Beijing by approaching a number of my personal contacts and also inviting them to suggest others who met the recruitment criteria. They were accepted into the project in the order that they responded to the invitation and after they had read the Participant Information Statement and signed the Consent Form. I verbally explained to each potential Chinese mentor the details of the research design, the research aims, data sources, data collection methods, teaching activities, potential benefits, potential risks as well as the associated protective measures in one-on-one meetings. I emphasised that they would be offering help with Chinese learning to their mentee(s) voluntarily rather than learning English from their mentee(s).

Stage 2: 3-7 August 2015 (i.e., Week 2, Semester 2 at the university) and 10-15 August 2015 (i.e., Week 3). Prior to the commencement of the second semester at the university, I obtained verbal approval from the lecturer of Level 4. I verbally introduced the learning project aims and my research aims and data collection methods to the students in Week 2 in Level 4's Chinese class. A1-L4 and A2-L4 volunteered to participate in Week 2, but the mentor-mentee relationship in A1-L4 & C11 was established in Week 3, and for A2-L4 & C11 it was in Week 2. Because A4-L4 had another class which had time clash with his Chinese class, I did not see him until Week 3. I introduced my research project to him in Week 3 and he volunteered to participate and the pair A4-L4 & C13 was established in Week 5.

In Stage 1 and Stage 2, because I was not able to view the communication between a mentor and a mentee that happened in the private chat mode on WeChat in real time, I asked all mentees to submit their chat logs to me on a weekly basis. Also in the two stages, I assured both mentors and mentees that there were no specific requirements for them to communicate with each other either in relation to how many hours every week or over the period of their participation although it would be preferable if they could communicate regularly. I also told them that they could use any of the communication features provided by WeChat (such as text messages, audio messages, pictures, video clips, video calls or voice calls) to communicate with each other provided that they compled with the Rules of Conduct for WeChat Project Participation (see Appendix 4).

A written questionnaire (see Appendix 5) was handed out to Chinese participants and Australian participants immediately after they agreed to participate in the project in Stage 1

and Stage 2 respectively. The questions were mainly investigating their demographic background, mentees' previous Chinese language learning experience, and mentors' educational background and working experience related to teaching Chinese as a second or foreign language, as well as some basic information about their mobile phone and their service providers. The last question was open-ended to elicit participants' expectations of their learning experience on WeChat prior to their participation. Their answers to this question were to be triangulated with their answers in the interviews.

After mentees were recruited and questionnaire data were collected, I provided hands-on instruction about how to use WeChat, such as on how to download, install and use WeChat features (including sending text messages, audio messages, pictures, 8-second video clips, web links, how to input characters by pinyin and by writing, using WeChat "Moments", as well as how to submit chat logs to me) in groups (2 to 4 students each time) or one-to-one. All the mentees were advised that if they had any problems with using any of the features they might ask me via text messages, phone calls, emails, WeChat, or ask me in person.

In the three pairs in Level 4 that this thesis focuses on, the three mentees were all above 18 but under 30, male, and with English as their first language. A1-L4 (the code indicates the first mentee who was in Chinese class Level 4, which was the advanced level Chinese class) and A2-L4 were taking the Chinese class as an elective, but A4-L4 was taking it as a compulsory subject. None of them had Chinese-speaking family members. A1-L4 and A2-L4 mostly spoke English at home, but A4-L4 spoke both English and an Asian language (other than Chinese) at home. All of the three mentees had learned Chinese prior to their participation in this research project (to be specific, A1-L4 had learned Chinese at high school, whereas A2-L4 and A4-L4 had started to learn Chinese at the university). None of them had ever taken a subject on social networking sites or social media or had ever taken any course(s) with mobile devices or thought that the learning hours of Chinese language in the formal classroom settings were sufficient. All of them were motivated to learn Chinese language because they were interested in Chinese culture and Chinese language and viewed it as relevant to their future careers and they would like to travel in China. Additionally, A2-L4 had friends who spoke Chinese.

3.4.2 Chat Logs

Stage three: 3 August -31 October 2015 (i.e., 13 weeks in Semester 2 at the university). The mentor-mentee relationships in the three pairs were established in different weeks: A1-L4 & C11 in Week 3, A2-L4 & C11 in Week 2, and A4-L4 & C13 in Week 5 (refer to Appendices 1-

3). After the mentor-mentee relationships were established, I began to receive their chat logs and I took notes of participants' uses of WeChat.

WeChat has the capacity to record users' log files automatically on WeChat for phones and tablets (excluding WeChat for Mac, for Windows or the WeChat web version), but I did not and I was not able to collect the entire private chat log history of all participants for two reasons, and this remains a methodological limitation of this thesis. In fact, as discussed in Section 3.2, the limitation reflects the common methodological challenges in informal, (computer-mediated) mobile-assisted learning research projects.

The first consideration was ethical. Because the chat logs involved participants' privacy, it was not ethically appropriate to collect everything that the two parties in a pair communicated. Participants were informed that they could decide which messages to send me. Therefore, they were free to choose to exclude some messages which they regarded as impacting their privacy. And even after they had sent those messages to me, they could ask me to delete them.

The second challenge resulted from the technological restrictions of WeChat. As outlined by Xue (2017), I was unable to collect the recordings of all participants' audio messages (66 in A1-L4 & C11, 14 in A2-L4 & C11, and 2 in A4-L4 & C13, as shown in Appendix 9), 82 in total, due to the technological restrictions on WeChat. Although text messages also helped me understand and analyse the communication process between the pairs of interlocutors, the audio messages are important for analysing how the mentors teach the pronunciation of Chinese language (e.g., vowels and consonants, tones and intonations) and how the mentees learned and practised these aspects.

I did not attach the original chat logs generated in the three pairs as appendices, because some content in their chat logs revealed their personal identities. I have an ethical obligation to protect them from being identified. The content containing their chat logs presented in this thesis has been de-identified.

3.4.3 In-depth interviews

The individual, in-depth interviews were conducted at two times, which constitute Stage 4 and Stage 5 in my data collection process.

Stage 4: the first-round interview. I first interviewed the three mentees (20- 31 October

2015, which overlapped with Stage 3, because it took place at the end of Stage 3) in Australia. Then, I interviewed the two mentors in China face to face (2- 20 November 2015). The interviews with the five participants were all one-to-one and audio recorded.

The first-round interview (see Appendix 6 for the interview schedule) covered both mentors and mentees to get their preliminary feedback, which was then used in comparison with their anticipations expressed in the questionnaire. The research questions were anchored in the data collected via the questionnaire, the log files, and my observation notes on WeChat. There were multiple choice questions and open-ended questions.

Stage 5: the second-round interview from October 2016 to March 2017. My research focus was initially to investigate WeChat's pedagogic affordances in the first-round interview, then it was changed to investigate PFs and the mentor-mentee relationships in late 2016 by focusing on only three pairs in Level 4. As a result, I decided to conduct the second-round interview. Since these interviews occured more than one year after the mentees' last communication with their mentors on WeChat in October 2015, to stimulate their recall of what they communicated with their mentors, each of the three mentees was provided with the printed versions of their chat logs prior to the interviews so that they could look through them.

In the second-round interview (see Appendix 7 for the interview schedule) I only interviewed mentees to investigate more about their perspectives. My purpose was to elicit more of their in-depth perceptions regarding specific issues, such as the impact of their mentor's way of using PFs on their Chinese language learning, and their mentor's ways of mentoring them on WeChat .

3.4.4 My observation notes relating to participants' uses of WeChat

I observed and took notes about the five participants' uses of WeChat during the (up to) 13 weeks of mentor-mentee communication on WeChat (3 August-31 October 2015), which was in Stage 3 of my data collection period. Because mentors and mentees had the capacity to delete their posts on WeChat "Moments", I took brief notes of their posts on WeChat "Moments" as per their consent in the Consent Form, and their consent via the WeChat or email communication with me. Additionally, I also took notes of participants' behavioural changes on WeChat, such as changes of their profile pictures and how they introduced themselves in "What's Up" (个性签名) in their profiles.

3.4.5 My personal communication with participants

Stage 6: after the interviews between 2016 and 2017. As I mentioned in Section 3.2, I found there were some ambiguous points in participants' self-reports (i.e., in-depth interviews) and in their chat logs, in order to interpret my data precisely, I had personal communication with the specific participants via email or WeChat because they were the most convenient ways to get their clarifications. Such data was collected with the specific participants' consent expressed via WeChat or email communications with me.

Overall, although there are general methodological challenges in researching both mobile learning and informal learning (as discussed in Section 3.2), and there are methodological challenges specific to the context of this research project, the combined data collection methods and multiple data sources have permitted me to compare multiple data sources in investigating the three research questions.

3.5 Data processing

In this section, I first describe the data analysis methods that I employed, then I introduce the de-identification of participants in this thesis, the transcription of interviews, followed by segmentation of chat logs, criteria for counting messages and issues concerning validity and reliability of my data, finally, I explicate the coding methods.

3.5.1 Data analysis methods

Three methods were employed for data analysis: *computer-mediated discourse analysis* (CMDA) as a general toolkit to analyse the chat logs, the *social presence density calculation* method as a specific method in investigating the indicators of social presence, which reflects a qualitative approach.

3.5.1.1 Computer-mediated discourse analysis

In this section I will explain why I employed the CMDA approach rather than other analytical methods to analyse participants' chat logs, what CMDA is and how it works. I begin with linguistic perspectives on CMC and computer-mediated discourse (CMD)

Linguistic perspectives on CMC and CMD

What is CMD and what is CMDA?

The latest definition of CMD proposed by Herring and Androutsopoulos (2015, p. 127) is:

> *Computer-mediated discourse* (CMD) is the communication produced when human beings interact with one another by transmitting messages via networked or mobile computers, where "computers" are defined broadly to include any digital communication device. The study of CMD is a specialization within the broader interdisciplinary study of computer-mediated communication (CMC), distinguished by its focus on *language and language use* and by its use of methods of *discourse analysis* to address that focus.

The definition of CMD proposed by Herring and Androutsopoulos (2015, p. 127) is different from that proposed by Herring (2001, p. 612) in that mobile devices have been added as alternate devices by which the messages are transmitted. And the elaboration on the nature of CMD has also taken account of the shift in the CMC (from text-based CMC to multimodal CMC), as well as the changes in users' discourses in the social and cultural contexts. I will primarily draw on the definition proposed by Herring and Androutsopoulos (2015), allowing for the technological advancement in the media (i.e., WeChat as an interactive multimodal platform, namely, IMP).

Herring proposed the CMDA approach to research online interactive behaviour, which "views online behavior through the lens of language, and [is designed so that] its interpretations are grounded in observations about language and language use" (2004a, p. 339).

Facets that influence CMD

From a linguistic perspective, Herring (2007) proposed that the discourse usage in CMC was influenced by ten medium (or technological) aspects (e.g., synchronicity, and message transmission:1-way vs. 2-way) and eight situational (or social) aspects (e.g., participation structure, purpose, topic or theme). Herring (2013a, p. 20) proposed to add a linguistic facet, but did not articulate it in more detail, therefore, I will not elaborate more in this regard. Because my investigations in relation to the three research questions embrace the investigations of CMD, it is necessary to take into consideration the ten facets that influence CMD. Although my thesis is largely focusing on providing evidence of Chinese learning and

investigating which situational aspects influenced and how they influenced the learning opportunities for Chinese, I will also mention some influences caused by WeChat medium (i.e., the medium or technological aspects) where necessary.

Characteristics of CMD

Generally speaking, the linguistic characteristics of CMC from the CMDA approach[19] are threefold. First, Herring (2010) argued that although interactive text-based CMC was produced by traditionally written (i.e., typed) means, it shared various characteristics with (informal) spoken conversation, and fulfilled many of the same social functions as spoken conversation (p. 4).

Second, there are two different arrangements (synchronicities) of transmission in text-based CMC: one-way and two-way. In one-way transmission, messages are sent in their entirety or as chunks when the sender presses "send" or "return". The receiver is unable to view the message until s/he receives them unless s/he predicts the message. Consequently, there are possibilities that the two interlocutors are composing two different meanings simultaneously and they did not realise there are overlaps and disruptions resulting from turn adjacencies until they have received the messages (Herring, 1999, p. 2). I found that in addition to the user's lack of awareness, there is one more possibility: the user is aware that the interlocutor is composing a message (on WeChat it is: "Typing...", or in Chinese "对方正在输入…"), but in order to hold the floor or to compete for the floor, the user just ignores the reminder from the system. By comparison, in "two-way" transmission (e.g., ICQ[20]), users may see the interlocutor's messages as they are typed letter by letter (Pasfield-Neofitou, 2012, p. 108) or "keystroke-by-keystroke" (Herring, 2004b, p. 30), which enables the receiver to predict what the sender is sending.

Third, unlike in the F2F communication, where the information is usually transmitted through multiple channels (e.g., visual, auditory, gestural), once the text-based CMC was conceived as a "lean" medium (in contrast to F2F, which is regarded as a "rich" medium) (Daft & Lengel, 1984, as cited in Herring, 2001, p. 614), because the information transmitted in text-based CMC was limited to typed text and perceived mainly through the visual

---

[19] See Cherny (1995, pp. 28-36) for a review and redefinition of the characteristics of CMC from linguistic perspective but not from the CMDA approach.

[20] For more information about ICQ, see https://www.networkworld.com/article/3142451/icq-the-original-instant-messenger-turns-20.html

channel. As a result, CMC was criticized as being "impoverished" and unsuitable for social interaction (Baron, 1984, as cited in Herring, 2001, p. 614).

However, as discussed in Section 2.4, increasingly more studies suggest that users may exploit the affordances of more powerful technologies and employ multiple strategies (such as use of PFs) to make text-based CMC richly expressive. Moreover, as Herring (2015, p. 398) maintains the advancement of CMC from text-based CMC to multimodal CMC has resulted in two emergent phenomena concerning interactive multimodal communication: interactive multimodal platforms (IMP, i.e., Web 2.0 platforms supporting multiple channels or "modes" such as text, audio, video, and images) and robot-mediated communication (i.e., human-human communication mediated by one or more telepresence robots). Thus, textual CMC has been supplemented by graphical, audio, and/ or video channels of communication, and multiple modes of CMC are available on Web 2.0 platforms and smartphones. Figure 3 shows the diverse options in multimodal CMC.
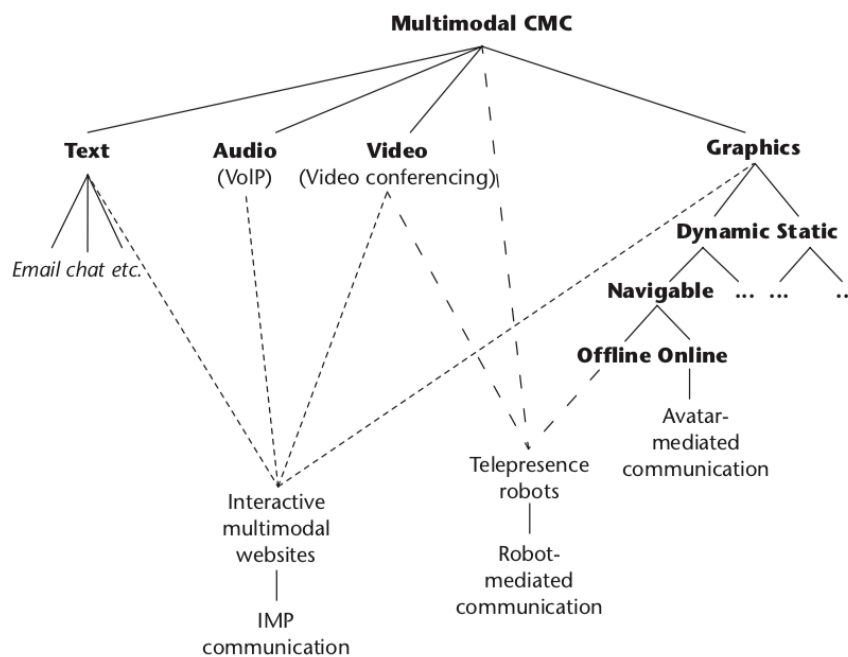
Figure 3 - Multimodal Computer-Mediated Communication (Herring, 2015, p. 399)

Herring (2015, p. 399) maintained that WhatsApp was an example of an interactive multimodal platform (IMP) on a mobile device, in that it enabled users to send text messages, exchange images, video, and audio media messages. Under this classification, I posit that the communication mediated by WeChat is a kind of IMP communication. In line with my discussion in Section 2.4, static emoji and emoticons are categorised as static graphics, whereas the animated emoji belong to dynamic graphics.

Differentiating and redefining synchronicity of CMC

The differentiation of different synchronicities of CMC is crucial to investigate the communication between a mentor and a mentee in a pair, because it manifests in the turn-takings between the interlocutors, the lengths of the text messages, mentor's ways and strategies of teaching Chinese and mentee's learning of Chinese.

In 1991, Oviatt and Cohen divided media systems into synchronous and asynchronous (as cited in Cherny, 1995, pp. 28-29) by characterizing media systems according to whether they are interactive or not, and whether they employ speech or not. It is common that studies researching text-based CMC employ this dyadic classification to refer to the text-based CMC (e.g., Danesi, 2016, pp. 10-11; Herring, 2003; Pasfield-Neofitou, 2012; Thorne, 1999, p. 274). Generally speaking, if interlocutors present in a virtual mediated platform concurrently but are communicating with text-messages in a rapid manner, it is regarded as synchronous communication, if they do not communicate in the platform concurrently it is regarded as asynchronous communication.

However, the validity of the dyadic or binary classification of the synchronicity of CMC has been challenged because it tends to oversimplify the current IMP communication. Two studies did not follow the conventional dyadic classification of the CMC synchronicity: Pasfield-Neofitou (2012) and Wang et al. (2016).

Pasfield-Neofitou (2012) argued that the so-called "asynchronous" email applications could be set to automatically check for incoming email just as frequently as chat applications check for new messages, and the so-called "synchronous" tools like chat applications could send offline messages in an "asynchronous" way, and the hybrid tools (e.g., Facebook) further blurred the distinction between asynchronous and synchronous tools. It suggested that there was not a clear-cut distinction between the so-called "synchronous" and "asynchronous" platforms. On this basis Pasfield-Neofitou maintained that it was the instances of use that should be examined instead of classifying the media merely on the tool types according to the dyadic classification of their synchronicity (2012, pp. 4-6).

I cohere with Pasfield-Neofitou's (2012, pp. 4-6) argument that like Facebook, WeChat also blurred the distinction between dyadic classification (i.e., either synchronous or asynchronous). And I also agree with her argument that participants' instances of use are important, in that my participants used the same WeChat feature (e.g., text-message) with different levels of synchronicity, or used different WeChat features that have different levels

of synchronicity (e.g., it is generally more time consuming to send text messages than to send audio messages) to communicate with their interlocutors. Either of the above patterns could cause the unfolding of different discourse behaviours, that is, interactions with different levels of synchronicity among different pairs, and influence the frequency, quantity, quality of their engagement, which are the key aspects in my investigations of mentees' learning of Chinese and the social presence in the three pairs.

Wang et al.'s (2016) study argued that compared with making voice calls and video calls on WeChat, there was a longer time lag between sending and receiving text messages or audio messages on WeChat although both interlocutors are using WeChat concurrently. They coined a new term *semi-synchronous* to highlight this kind of interaction (p. 18).

I agree with Wang et al.'s (2016) argument. As we can see from Figure 3, the IMPs enable users to employ multiple modes (such as audio, video, and/or graphics) in addition to texting, and some modes (if not all of the modes) have the affordances to enable users to communicate with different degrees of synchronicity.

I assume that the traditional dyadic classification of the synchronicity is largely due to the constraints of the technology, which were not so advanced that they could not guarantee quality live/synchronous audio/video streaming. However, the technology has been well advanced in recent years, and quality synchronous audio and video communication can be implemented on WeChat at least in 2015 during the data collection period of this research project. Each IMP does not merely have one of the two (synchronous or asynchronous) mode, instead, it has multiple modes, which enable their users to use one or more than one modes to communicate with their interlocutors with different levels of synchronicity.

Overall, I classify the synchronicity of participants' WeChat communication into three levels and make clear differentiations between them: *synchronous*, *semi-synchronous*, and *asynchronous* as follows.

WeChat has two features that enable *synchronous* communication: voice call and video call. In such kind of communication, interlocutors can receive audio or video content simultaneously, specifically, the receiver can receive each phonetic signal (e.g., syllables of a word) and word immediately after the sender vocalises it and sends it. As a result, the receiver can predict the meanings or nuances of meaning chronologically judging by the speaker's verbal clues such as tones, intonations, pauses, stress, and the nonverbal clues such as the speaker's body language, just as in F2F oral communication, or just as when

making a phone call or a video call if we ignore the time lag due to the unstable internet connection or system.

Semi-synchronous chat indicates that although the parties involved are using WeChat concurrently, the reception of communication contents is not concurrent. In other words, the message is sent and received as a chunk. Therefore, the receiver will not be able to predict the meaning and the tone until s/he receives it, therefore, there will be disrupted turn adjacencies, which can cause confusions and misinterpretations. Teasing out the disrupted turn adjacencies and identifying the relationships between different messages (which will be named as "e-turns" in Section 3.5.4.2) or their smaller units (which will be named as "Propositions" in Section 3.5.4.2) are critical to interpret the CMD and investigate the three research questions.

In semi-synchronous chat, the interval between the sender tapping "send" button and the recipient receiving the message is longer than that in synchronous chat, in other words, the messages back and forth will be in a frequent manner. The messages include the text-messages, voice (or audio) messages, video clips, web links, pictures, and so on.

As for *the asynchronous chat*, when the sender sends the message, the receiver can be off line, or the receiver reads the messages immediately after receiving them but just does not have time to respond immediately, therefore, the sender might be sending the message as a monologue. As such, the interval between the sending and the responding is the longest compared with that in the *synchronous chat* and *semi-synchronous chat*.

During asynchronous communication, WeChat for Android users have enough time to: 1) compose a text message (which will be named as "e-turn" in Section 3.5.4.2) so that the message can be syntactically correct and lexically appropriate; 2) divide the message into a couple of smaller units (which will be named as "propositions" in Section 3.5.4.2) by tapping the "return" key in the English keyboard (in the Chinese keyboard, the key is "换行") then the chunk will be sent as a whole by tapping the "send" key; [21] and 3) the message in different lines can also be displayed in a visually delimited and aligned manner (see Table 23 for an example).

---

[21] Whether or not WeChat users can divide an e-turn into different propositions depends on the operating system of their phones. In WeChat for iOS, there is not such a key (i.e., the "return" key in English keyboard or the "换行" key in Chinese keyboard), therefore, they will not be able to do so directly. Because there were only two types of operating systems in my research project: iOS and Android, therefore, it is uncertain whether WeChat for other operating systems enabled users to do so.

Levels of CMDA

Over time, CMDA has evolved into a model organized around four levels: structure, meaning, interaction management and social phenomena (Herring, 2013a, pp. 4-5).[22]

In Herring's CMDA approach (2004a; 2013a), the phenomena at the structural level are concerned with the phenomena of English language (or more broadly, Indo-European languages), in particular, morphology, orthography, and syntax. However, Chinese language differs from English in at least four respects: phonology, vocabulary, syntax and writing system. Specifically, Chinese has a monosyllabic structure, it is a tonal language, and it has flexible wording structure. As for the Chinese language's writing system, a large number of Chinese characters are ideographic symbols, which is unlike alphabetic writing systems such as English (Lee, 1998. See Huang & Liao, 2017, pp. 6-8 for more details). The four structural features of Chinese language should be manifested in teaching and learning of Chinese as a foreign language (Lv, 1983, pp. 16-17). But because the audio data was not available to me, in Chapter 4 the investigation of the mentees' learning patterns at the structure level will only cover vocabulary, grammar and Chinese characters, which draws upon what Herring proposed for the structural levels of English language but takes into consideration the structural features of Chinese. This is to foreground that my study investigates Chinese rather than English as an additional language, and the investigation of the evidence of mentees' learning of Chinese will be based on the three structural features of Chinese language (i.e., vocabulary, grammar and Chinese characters).

The development from text-based CMC to multimodal CMC (including the interactive multimodal platforms and robot-mediated communication) has posed challenges for the CMDA approach (see more on these new issues in Herring, 2013a, pp. 5-6; and Herring & Androutsopoulos, 2015, pp. 130-131) and has called for refinement of the earlier CMDA approach put forth by Herring (2004) that had been "devised for spoken or written/typed language, but not for nonverbal communication in video, graphics, music, etc.". In multimodal CMC, "different modes or channels of communication often co-occur (and co-construct meaning) on the same platform, in the same interaction, and even in the same message" (Herring, 2015, p. 401). Herring proposed a tentative level: "multimodal communication" level to incorporate the multimodal discourse into the existing four-level CMDA approach (2013a, p. 20).

---

[22] Refer to Herring (2013b) for detailed analyses of the structural properties of CMD.

I found that the chronological development of the CMDA approach does not take account of the phonetic phenomena at the structural level (i.e., the first level) in Herring (2004a), in the latter adapted version (Herring, 2013a, 2013b) and in the latest version Herring and Androutsopoulos (2015). This absence appears to be a limitation.

WeChat enables users to send audio messages and make phone calls or video calls, but actually none of the participants in my larger learning project (including the five participants in this study) made phone calls or video calls. For the audio messages, the technological restrictions meant that the audio messages were not available to me, but the information including who sent the audio messages at what time was available. I also had access to the participants' reflections and self-reports concerning their learning or teaching experiences related to using audio messages. Thus, it is still practicable to include phonetic phenomena as part of the analysis of discourse structure. I will take advantage of this capacity to analyse the level of participation in investigating the last two research questions.

I acknowledge the value of the additional level in the CMDA proposed by Herring (2013a, p. 20), multimodal communication. The issues and phenomena will be analysed in relation to the level of participation by taking account of participants' uses of WeChat features (e.g., text messages, audio messages, pictures, etc.), which will be particularly important to investigate the last two research questions.

3.5.1.2 Social presence density calculation

Previous studies have used two methods to measure the levels of social presence. One method uses semantic differential techniques. For example, Short et al. (1976, p. 66) used a series of seven-point, bipolar scales. Gunawardena (1995) and Gunawardena and Zittle (1997) measured social presence using a five-point, bipolar scale. The other method is the social presence density calculation method that Rourke et al.'s study (1999) employed.

The social presence density calculation method proposed by Rourke et al. (1999) is a quantitative method. The "social presence density" referred to the total number of social presence indicators coded in transcript or the total number of words in the transcript (Rourke et al., 1999, p. 65). Rourke et al. proposed that low frequencies could indicate that the social environment in the online learning was cold and impersonal, whereas high frequencies suggested that the environment was warm and collegial (1999, pp. 59-60).

The social presence density calculation method applied equal weighting to the 12 indicators

of social presence in investigating the degrees of social presence. However, Rourke et al. (1999) posited that two indicators, *using the reply feature to post messages, quoting from the transcript*, can be provided by the medium, therefore, they seemed to be superficial rather than definitive indicators of social presence. In contrast, the other indicators were more labour-intensive (such as, *referring to other students by name and referring explicitly to the contents of another's message*), as a result, they could manifest the users' consciousness, willingness and efforts to interact with their interlocutors, namely, the degree of social presence. Rourke et al. proposed that the 12 indicators should have different valences in the future studies (1999, p.67).

My study employs the social presence density calculation method, but I assume that it is not enough to only use such quantitative method. Taking participants' uses of PFs as an example, if we just count the numbers and find that a mentee used 3 emojis, the number cannot reveal deeper meanings and influences on the levels of social presence. For example, if the 3 emojis involve different images, for instance, a mixture of 1 smiley face emoji (😊), 1 winking eye and tongue-sticking-out emoji (😜), and 1 nose-picking emoji (🤭) (e.g., the emoji syntagm " 😊 😜 🤭 "), it will not be convincing to argue that the three different images of emoji have the same influences on the levels of social presence as three smiley face emoji have (e.g., the emoji syntagm " 😊 😊 😊 "). One more example is that, we cannot simply count how many times a participant made a self-disclosure and conclude that the more self-disclosure, the better for the levels of social presence. I assume that it is not necessarily the more the better, because it is possible that some self-disclosure may undermine the levels of social presence, meanwhile, we should also look into what the participant disclosed and how or in what way it influenced the mentor-mentee relationship and Chinese learning. Therefore, I assume that qualitative methods must also be employed.

3.5.1.3 Qualitative method

I used qualitative methods in two ways. First, in addition to counting the numbers of PFs, I used the CMDA approach as a toolkit to analyse: 1) the forms in which the indicators of social presence appeared, that is, the writing style of a participant's message: the PFs in relation to the textual message (i.e., pure text messages, pure PF[s], or mixed textual messages) and the linguistic clues (e.g., with[out] punctuation marks, with[out] modal particles, with[out] interjections, and with[out] adverbs to indicate degrees [such as "真的", *really*; "非常", *very*]); 2) what the mentor and the mentee did through an indicator of social

presence and how they did; and 3) what effects resulted from their actions in maintaining the mentor-mentee relationships and shaping the opportunities for Chinese learning. For example, I investigated what participants disclosed and how they disclosed their personal information.

Second, in order to provide an overview of the degrees of social presence in each indicator in the three pairs in Level 4, I also combined the social presence density calculation method and the qualitative method. To reduce possible biasing of the result through my personal interpretation, I consulted about my interpretations with two experienced scholars. One scholar was born in Australia (Anglo-Saxon) and has experiences more like those of two of the mentees (A1-L4 and A2-L4, in relation to the culture involved); the other is Chinese Australian (born in Mainland China) and has experiences more like those of the two mentors and one mentee (i.e., A4-L4, who is from an Asian background). Both of the two scholars have been working at an Australian university for more than 20 years. By combining these perceptions, I obtained the final value of each indicator in each participant and in each pair (as will be shown in Table 54).

Garrison (2017) identifies the important role of emotion in online learning but he also points out that the limited access to emotional cues in such settings calls for further studies (p. 40). Overall, in this thesis, the CMDA approach enables me to know more about the participants' discourse behaviours on WeChat. With this approach as a toolkit and with the social presence density calculation method and some qualitative methods, I had more access to the emotional cues implied in the computer mediated communication between mentors and mentees, as a result, I was able to tease out what indicators influenced and how they influenced the maintenance of the mentor-mentee relationships, degrees of social presence and the associated Chinese language learning.

3.5.2 Anonymisation

In addition to using pseudonyms to indicate mentors and mentees, information that could have potentially identified any participant was removed or changed as much as possible and presented in this thesis vaguely. For example, the city where the three mentees were was presented as "**" in the Chinese text messages and as "CITY" in the English translation of text messages.

3.5.3 Transcription

The interviews with mentees were conducted and transcribed in English, whereas those with mentors were conducted and transcribed in Chinese.

Because English is not my first language and the Australian participants had various accents, in order to fully understand participants' perspectives expressed in the first-round interview, I downloaded an application called "AudSC" (变速 MP3, *Biànsù MP3*), which enables users to adjust the speed of the audio files. The slowest speed is 0.6, which means the file can be played at 0.6 times of the original speed. For some specific points in the recordings that I was not able to understand I included an audit trail for transcriptions.

The second-round interview did not include an audit trail for transcriptions, because all the five participants spoke standard Australian English, which I was able to handle, and I was also able to ask the participants about the uncertain points via emails or WeChat.

3.5.4 Segmentation of chat logs

The chat logs in my data set were segmented by time, and they were also particularly analysed in relation to four units: conversation, turn, e-turn, and proposition.

3.5.4.1 By time

Because the city where the mentees were employs Australian Eastern Standard Time (AEST time), the time and date in the chat logs were analysed according to the AEST time, rather than Beijing Time (i.e., GMT+8). The 24 hours in a day refers to 0.00 am -0.00am (the next day). Therefore, communication in a pair after 0.00am (AEST time) were classified as happening on a new day. Similarly, if the time involves changes of weeks, the weeks were tallied according to the AEST time.

Analysing participants' communication by time is important because it can reveal many things: the density of their communication within a certain period of time, for example, how many messages each party sent within one minute. Judging by the frequency or density of their communication I will be able to know in which level of synchronicity they were communicating: asynchronous, semi-synchronous or synchronous. And I can also know how long their communication lasted, when their communication paused and resumed, which are all important aspects for me to gauge the sustained mentor-mentee relationship.

3.5.4.2 The units for analysing participants' chat logs

For the analysis of CMC, Thorne (1999, p. 149) proposed the notion of *e-turn* as a unit of analysis of text-based CMC and Pasfield-Neofitou defined it as "a free-standing communicative unit, taking its form from the way the program receives and orders input, and the form and content of the message, as typed by the user" (p. 35). Thorne (1999, pp. 153-154) listed six features of *e-turns*:

1) E-turns are the result of a message typed by a human and the communication software's recast of this message to relevant parties.

2) E-turns are the final linguistic products as they appear in log file records or transcripts of on-line interaction.

3) E-turns take their length, orthography, grammatical features, and stylistic content from the user who typed in the message.

4) E-turns that relate to one another may not be linearly sequenced or adjacent to one another. Other e-turns relating to other conversational strands may intervene.

5) In conversation analysis, the sequential position of an utterance can evoke certain interpretations. With e-turns, sequentiality is constructed after the fact by participants.

6) E-turns can represent both 1st person and 3rd person utterances. 3rd person utterances can reflect non-verbal actions ("Isabelle stares longingly into the blue sky"), or 3rd person narratives ("Isabelle wishes her work were done for the day").[23]

Pasfield-Neofitou (2012) used three levels to analyse participants' chat logs, namely: *e-turn* at the micro-level, *turn* at the meso-level, and *conversation* at the macro-level. As for the unit *turn*, one turn consists of one or more than one e-turn. Pasfield-Neofitou considered a series of e-turns from one sender as a turn (2012, p. 107).

Pasfield-Neofitou (2012, pp.107-108) argued that while an individual user might decide when or at what point to complete an e-turn by clicking the "send" key, technological and interpersonal aspects may also influence the construction of e-turns. For example, due to the medium aspects, the number of characters of an e-turn may force users to take multiple e-turns to complete a turn. Due to the interpersonal aspects, in the fast-paced text-based CMC,

---

[23] The sixth feature does not apply to my data, because there are not such kind of descriptions on WeChat.

a user may deliberately divide a turn into a couple of e-turns to avoid spending too much time typing a reply in a one e-turn, to let the interlocutor know that he/she is working on a longer contribution, and he/she does not want to be interrupted. Pasfield-Neofitou (2012, p. 108) maintained that one reason for this is because of the one-way communication (see Section 3.5.1.1 for the differences between synchronicities in text-based CMC: one-way and two-way).

Herring (2003) used the term *proposition*, which is "typically a single message, expressed as a single sentence or sentence fragment" (p. 4). She further stated that in synchronous CMC (it is semi-synchronous CMC according to the terminology in this thesis, as discussed earlier in this chapter), each message typically contained only one proposition, whereas in asynchronous CMC, a single message might contain many propositions (p. 14). Data in my research project is in line with Herring's (2003) such statement, as shown in Table 5 below. In this example, a chunk of message, that is, an e-turn, was received by WeChat system at 15:29, and this e-turn has five propositions, including responses (P1, P2) to the mentor's previous e-turns (44-46), and statements of different cuisines in Australia (P3, P4) which were responding to C13's e-turn 46, and in the China town in CITY (P5).

Table 5 - Example of One E-turn Has More Than One Propositions

Message Excerpt		Translation
A4-L4 15:29		
P1	我也觉得! (对不对? 我想说: I think so too!)	I think so too! (Is it correct? I would like to say: I think so too!)
P2	好啊!	Good!
P3	澳大利亚是多元文化。所以有很多美食。	Australia has multi culture. So (it) has many cuisines.
P4	比如,意大利菜,日本菜,越南菜和当然中国菜。 我觉得中国菜最有名。特别四川菜和上海菜。	For example, Italian cuisine, Japanese Cuisine, Vietnamese cuisine and of course Chinese cuisine. I think Chinese cuisine is the most famous. Particularly Sichuan cuisine and Shanghai cuisine.
P5	在 CITY 有中国城。但是我感觉它是小一点。	There is a China town in CITY. But I think it is a bit small.

This thesis uses proposition as the smallest unit. As such, the number of messages sent by both mentors and mentees in the three pairs (see Appendices 8 and 9) amounts to 1,634 e-turns, but there are more than 1,634 propositions because some e-turns contain more than

one proposition.

In analysing text-based CMC, Pasfield-Neofitou (2012) employed the term *conversation* as the top-level unit. She listed six criteria to determine the boundaries of a conversation, taking account of the medium aspects and situational aspects in her study (see more in pp. 111-112). She proposed that there was no need for all criteria to be present to determine the boundaries of a conversation, instead, the presence of more than one criterion can help strengthen the identification.

Drawing on Pasfield-Neofitou's (2012) criteria of the unit of *conversation* and taking account of the medium (or technological) aspects and social (or situational) aspects of my study, the top unit of the CMDA in this thesis is *conversation*, and one conversation consists of at least two turns. The criterion mainly depends on the content of their communication.

Although the participants in Level 4 were not required to chat strictly following the weekly topics released by me, and there were topic digressions in each *conversation*, there were clear boundaries, namely, a clear general topic in their communication. The apparent clues were the first messages on the dates when they had communications, as they could indicate whether it was a new initiation or a response to the interlocutor's previous messages. Table 6 shows two example conversations in A2-L4 & C11 on the basis of this criterion. In this regard, we can see that on 9 August, C11 initiated the first conversation, and on 16 August A2-L4 initiated the second conversation, whereas C11's first messages on 17 and 19 August were responses to the mentee's previous messages. It is worth mentioning that one topic could be chatted about for a couple of days, therefore, the unit of conversation does not take temporal aspects into account.

Table 6 - Examples of the Unit "Conversation"

Conversation	Date and Week	Contents of communication	Initiated by
1	9 August (W-2)	Self-introduction	C11
2	16 August (W-3)	A2-L4 asked questions about two sentences.	A2-L4
	17 August (W-4)	C11 answered the mentee's questions and expressed apology for replying late. In Beijing time, it was still on 16 August.	
	19 August (W-4)	A2-L4 expressed appreciation and told the mentor about his upcoming in-country study tour. He heard of kid's noise and guessed if it was the mentor's kid.	
	20 August (W-4)	C11 explained it was other's kid. In Beijing time, it was still on 19 August.	

To conclude, the four units are in ascending order: proposition, e-turn, turn, and conversation. The relationships between the four units is shown in Table 7. The four units help me analyse the turn-taking, turn adjacency, cohesion, topic development of the chat logs.

Table 7 - Relationship between the Four Units in Analysing the Chat Logs

I have not used screenshots to provide more information about participants' exchanges because each screenshot could only include a couple of messages. Being able to only see such a limited number of messages would not provide sufficient context to demonstrate a phenomenon because one phenomenon sincecould be interleaved with other phenomena and could last a long period of time or scatter over a couple of days. One or a couple of screenshots would not be enough but using too many screenshots would be space comsuming and inefficient. Similar to Sung and Poole (2017), I provided excerpts of participants chat logs using tables, and omitted material not relevant to the specific analysis by omitting their e-turn numbers or proposition numbers.

3.5.5 Criteria for counting messages and issues of validity and reliability

Two criteria were employed in counting participants' messages. First, after a mentor accepted a mentee's friend request message, the mentee would receive a message sent by WeChat system: "I've accepted your friend request. Now let's chat!" This message only indicates that the mentor-mentee relationship has been established, it does not reveal differences amongst different pairs, therefore, it is regarded as neither the mentor's e-turn nor the mentee's e-turn and is not counted. Consequently, my message count began with the first message after this WeChat-generated message.

Second, as in the examples shown in Table 8 below, a message that contains at least one Chinese character or word no matter whether it has a punctuation or not and no matter whether there are combinations of character(s) and PFs, is counted as a text message. A single PF (irrespective of emoticon or emoji and regardless of whether it is a still emoji or an animated emoji) sent as an independent message is counted as a text message. A picture, or an audio message, or a web link, as long as it is sent and received by WeChat system as an independent message, is counted as one e-turn.

Table 8 - Examples of One E-turn

Possibilities of the textuality of one e-turn	Examples			
	E-turn number	**Sender**	**Message Excerpt**	**Translation or Notes**
Text message+ PF(s)	156	A4-L4	谢谢您 😁 ✌	thank you 😁 ✌
Text message +emoticon	161	A4-L4	你好! :)	Hello! :)
A single emoji	528	C11	🤣	🤣
A single emoticon	392	C11	? ? ?	*An emoticon*
A Chinese character or a word, or an English word	366	C11	对	yes
	56	A2-L4	is*	*He indicated the mistake in his previous message.*
A picture	114	A1-L4	[Images: 357f8298e8d35f32998b 1aa819416b80.jpg (View in attachment)]	*It is one of pictures and it is attached to the email sent to me*
An audio message	592	C11	[Voice]	*It is an audio message*
A web link	148	A1-L4	https://youtu.be/JalxW ZgwRmo	*It's a video about Australian football (Top 10 Marks of the Year - AFL 2013)*

Due to the technological restrictions imposed by WeChat, the recordings of users' audio messages cannot be forwarded to other users. As a result, my participants were not able to send the recordings of their audio messages to me. Although none of the three mentees sent audio messages to their mentors, and only C11 and C13 sent a total of 82 audio messages (see Appendix 9), I was not able to hear the recordings of the 82 audio messages. However, the information including who sent the audio messages at what time was available in their chat logs (see two examples in Table 29), and I could partially know what they said in the audio messages because the two mentors C11 and C13 sent text scripts of the audio messages, as they reported in the interviews. Additionally, I could infer what the two mentors talked about in the audio messages from the context of their chat logs. Furthermore I had access to the participants' reflections and self-reports concerning their learning or teaching experiences related to using audio messages. Thus, it is still plausible to include phonetic phenomena as part of the analysis of discourse structure.

There have been some technology-induced data losses. All photos (23) and one video clip (see Appendices 8 and 9) in A1-L4 & C11 were once viewable to me and I could open them in the emails sent by A1-L4. I thought that since I had saved the text-based chat logs in my computer and I would not delete the emails containing the chat logs and attachments (including pictures and the video clip), then the data from this pair would be safe enough. I talked about the video clip and the pictures with A1-L4 and C11 in the first-round interview, because at that time I was still able to view the pictures and the video clip. However, one day in late 2016 or early 2017, I found that I could no longer view them and I could not open them (the reason reported by my computer was: the files were corrupt) due to unexpected and unknown technological problem.[24] Because it had been more than one year since the first-round interview and both the mentor and the mentee had lost or changed their mobile phones, it was no longer possible to get the original pictures or the video clip. In the second-round interview, I interviewed only mentees. At that time I did not anticipate that it would be necessary or important to investigate what the exact pictures and the video clip were about, because my focus at that time was on the paralinguistic features and mentor-mentee relationships. Despite these losses, I have still considered this data in my analysis since I can infer what the photos were about by: 1) the text messages in the chat logs because they talked about the photos; 2) both the mentor's and the mentee's self-reports in the interviews; and 3) my observation notes. The three methods can triangulate the validity of my data concerning the absence of the video message and the pictures.

There are possibilities that some messages were missing, which resonates with the sixth and the eighth suggestions for "Research 2.0" proposed by McAndrew et al. (2009). There are two possible reasons that the messages were missing. One is because when participants send their chat logs via email from their phones, they had to tick all the messages one by one, and each time they could send no more than 100 messages. In the face of this tedious task, it might have happened that when they were ticking the messages, some of the messages were not ticked successfully so that they were missed out accidentally. The other possible cause of the missing messages is that the sender of the chat logs (the mentee or the mentor) did not choose specific messages to protect his/her or their privacy. Any such missing messages were not counted since I had no way of knowing how many messages were missing.

---

[24] A possible cause of this problem is: WeChat set restrictions that only allow users to forward chat logs to others by mobile phones (for the data collection method of this study, it means that A1-L4 sent the chat logs to me from his mobile phone, including the pictures and video clip that were sent as attachments). The attachments were saved in the server of the mentee's email, but there were upgrades or other technological problems of the server, which resulted in the damage of the attachments.

We can infer that one or two messages were missing as a result of features in the turn taking. Table 9 (below). In this example, the mentor's e-turn 178 is the first message on that day and it is not a response to the mentee's messages sent the day before. Taking account of the mentor's self-report in the interview that once she took a photo of grape skin and grape seeds and sent it to the mentee, it is plausible to infer that she started a new conversation by sending a photo of grape skin and grape seeds to the mentee, and therefore, it is likely that at least one message that included a photo was not sent to me.

Table 9 - Example of the Possibly Missing Messages

Date & Week	E-turn	Sender & time Message Excerpt	Translation or notes
3-9 (W-6)	178	**C11 12:06 am** 是葡萄	[They are] Grapes
	179	**A2-L4 12:18 am** 在中文怎么说？	What [is it] in Chinese?
	180	**C11 12:18 am** 葡萄	葡萄

Note: Some irrelevant messages in the excerpts of chat logs in the tables in this thesis are not presented to save the space. The serial numbers of e-turns and propositions may indicate whether some e-turns or propositions are consecutive or have been omitted.

There were also unresolved methodological challenges concerning a certain number of Unicode® emoji and animated emoji in the chat logs. The detailed descriptions and my resolutions were reported in Xue (2017).

I tried to contact the three mentees after I decided to conduct the second-round interview more than one year after I finished the first-round interview. However, because after my first-round interview, A1-L4 and A2-L4 had left the university and gone abroad for about one year, they were not contactable until I met A2-L4 accidently on campus, who helped me contact A1-L4. A4-L4 graduated after my first-round interview and he was contacted earlier than the other two mentees. Unfortunately, all the three mentees had either lost or changed their mobile phones that they used in communicating with their mentors after the first-round interview. Furthermore, the two mentors cleared their chat logs with their mentees because they and I believed that I had received the chat logs from the mentees. And C11 also changed her phone that she used in communicating with A1-L4 and A2-L4 after she graduated in June 2016. As a consequence, it became impossible to verify the non-

interpretable PFs with the original chat logs.

As I elaborated in Xue (2017), although I resolved some methodological challenges so that I was able to interpret QQ emoji, a limited number of Unicode® emoji and one animated emoji, I still could not reliably interpret 12 PFs obtained from the three pairs (8 in A1-L4 & C11, 2 in A2-L4 & C11, and 2 in A4-L4 & C13, see Appendices 14-16), because these PFs involved different emoji coding systems (e.g., Unicode® emoji, WeChat QQ emoji and WeChat default Unicode® emoji) and it was impossible for me to address this issue. As will be elaborated in Chapter 4, none of the five participants in the three pairs reported in the interviews any experiences with the interlocutor's uses of PFs to be offensive or uncomfortable. Hence it appears less likely that the non-interpretable PFs would have influenced participants' Chinese language learning or teaching experiences or the outcomes in the three pairs. However, the possibilities of miscommunication resulting from the uncertain PFs still exist. This calls for revisions of data collection methods in the future studies (see the suggestions in Xue, 2017).

Overall, despite the occasional and sporadic missing messages in the chat logs available to me, their content/meaning was inferable with either the mentor's or the mentee's self-report, or the both parties' self-reports in the interviews, together with my observation notes and my communication with the mentor and mentee. Most of the chat logs reliably reveal the e-turns and turns in each pair and they are coherent in understanding their meanings. Therefore, it is valid to use the chat logs in the data set to answer the research questions in this study.

3.5.6 Coding

Two coding methods were employed in this thesis: CMDA (as reviewed in Section 3.5.1.1) and thematic analysis.

According to Braun and Clarke, thematic analysis "is a method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set" (2012, p. 57). Thematic analysis is a flexible method, because by focusing on meaning, it enables researchers to identify and make legitimate interpretation of "collective or shared meanings and experiences" across a data set (Braun & Clarke, 2012, p. 57). Thematic analysis also enables researchers to "examine one particular aspect of a phenomenon in depth" (Braun & Clarke, 2012, p. 58). Braun and Clarke (2012) proposed six phases to conduct thematic analysis: familiarizing yourself with the data, generating initial codes, searching for themes,

reviewing potential themes, defining and naming themes, and producing the report.

For the first research question, I used a combination of both CMDA and thematic analysis. At first, by following the CMDA approach, the indicative learning patterns of mentees' Chinese language learning at the structural level, I coded three themes (i.e., vocabulary, grammar, and Chinese characters) from participants' chat logs. Then with the thematic analysis, I identified learning patterns and coded them with two themes: learning moments (which involved static segments of learning) and learning trajectories (which involved dynamics of learning). Next, with the thematic analysis I identified four Chinese language learning patterns in the three pairs in analysing their static learning moments. After that, still with the thematic analysis, I found that among the four learning patterns, the first three did not involve mentees' awareness of particular Chinese linguistic phenomena whereas the fourth pattern embraces such kind of awareness (i.e., noticing). Then, the thematic analysis enabled me to find that for the two sub-patterns of Pattern 4, which occured after a mentee noticed a particular Chinese linguistic phenomenon and involved whether or not he took the initiative to seek mentor's clarification. In investigating this research question, I mainly used the inductive (or a bottom-up) approach to data coding and analysis. In addressing this research question, my investigations were largely based on participants' chat logs and supplemented by their reports in the interviews.

For the second research question, I still employed the thematic analysis method, which mainly involved the deductive approach to data coding and analysis, because I investigated aspects that influenced and how they influenced mentor-mentee relationships and Chinese language learning by examining the nine indicators of social presence that I proposed in Table 3. To address this research question, I used multiple data sources in my dataset: still mainly relying on participants' chat logs, together with their-self-reports in the questionnaire, interviews, my observation notes and my personal communication with specific participants to interpret some points that they intended to convey.

And for the last research question, I used the inductive approach of thematic analysis, synthesized common or shared opinions reported by the five participants in their interviews, integrated my analyses across my data set (i.e., questionnaire, interview scripts, chat logs and my observation notes), and findings about the second research question, and identified PFs as the distinctive and specific features of text-based communication on WeChat that impacted the mentor-mentee relationships and Chinese language learning. Because the investigation of this research question was in tandem with the investigation of

the second research question, the data sources that I used were the same.

As for the coding of emotions that PFs conveyed, I used a specific method. There are different categories of the basic emotions, with numbers ranging from 3 to 11 (see Plutchik, 2003, pp. 69-72 for more of the categorisations). Scherr et al. argue that the categories of emotions vary in the ways of classifications and in their level of detail (2019, p. 23).

Friesen and Ekman (1983) categorised seven basic emotions (happiness, anger, contempt, disgust, fear, sadness, and surprise), which is known as the Emotional Facial Action Coding System (EMFACS), "is widely used in behavioral psychology as an objective and reliable tool to measure every movement in the face" (Kim et al. 2014, p. 226). The seven basic emotions "activate the same microexpression patterns across the world, within statistically predictable variation" (Danesi, 2016, p. 62). I use the broadly acknowledged category of Paul Ekman's seven basic emotions, to investigate the emotions conveyed in participants' PFs on WeChat.

3.6 Conclusion

Because this study involved collecting data from mobile phones, it involved common methodological challenges that have been highlighted in the mobile learning literature (e.g., the ethical considerations regarding participants' privacy) and also encountered challenges specific to WeChat (e.g., the technological restriction set by WeChat that disabled the collection of participants' audio messages), and the loss of data (e.g., the 23 pictures and one video clip sent in the communication of A1-L4 and C11). These challenges underline the necessity of obtaining multiple sources of data, so that the validity and reliability of data could be ensured. For the data analysis method, it is also necessary to use combined methods to analyse multiple sources of data, such as using CMDA as a general toolkit to analysis chat logs, and using both quantitative and qualitative methods to analyse participants' subtle emotional exchanges, the dynamic degrees of social presence and the learning process, finally to find out what aspects influenced and how they influenced the three variables. This work has created the foundation for the analysis of the data in relation to the three research questions in the next chapter.

Chapter 4: Results and Findings

4.1 Introduction

As mentioned in Chapter 1, the first research question of this thesis is whether there is evidence of Chinese learning on WeChat, and the second research question investigates what aspects influenced and how they influenced the mentor-mentee relationships and Chinese language learning. Therefore, I need to explore the connections between mentor-mentee relationships and Chinese learning. The resolution is to provide a broad characterisation of the participants' reflections on their experiences of their mentor-mentee relationships and the Chinese mentoring on WeChat (in Section 4.2). This will confirm that the participants perceived the learning relationship as an informal one. In the next step, I provide evidence of learning in the three focused mentees' Chinese learning patterns (in Section 4.3). Then on the basis of my refinement of the social presence element of the Community of Inquiry theoretical framework to take account of the characteristics of Chinese language, Chinese culture, and the specific context of this study (i.e., informal, international and intercultural), in Section 4.4, I document the nine indicators of social presence that I proposed in Table 3 influenced (i.e., supported or inhibited) and how they influenced the mentor-mentee relationships and the opportunities for Chinese learning, and I then demonstrate that PFs (in particular, emoji) are the specific feature of text-based communication on WeChat that impacted the mentor-mentee relationships and Chinese language learning.

4.2 Participants' reflections

4.2.1 Participants' reflections on their mentor-mentee relationships and informal learning

When I asked the three mentees in the first-round interview whether they thought that the mentor was a teacher (or a mentor) or friend or something else, A1-L4 said:

> So it would be a bit of both. There's no clear line. So we have none of the conversations where professional or strict or anything like that. So there are very friendly conversations. But at the same time, she is teaching me as well. Without going out of her way to teach, we were just having conversations. And it was the best way of learning.
>
> (16'04''-16'32'', the first-round interview)

Likewise, A2-L4 reported that C11 was "sort of being a mentor" (43'14'') and "sort of like a

friend as well" (43'34''). A4-L4 reported: "Sometimes like my friend, … but mainly most of the time she will, her role is like a teacher." (1:08:41-1:08:56) Then he said it was "both-both", that is, both a teacher and a friend: when they talked about their personal lives, he felt like he was talking with a friend. He further explained that "… once you feel comfortable with your mentor, learning Chinese is much more… easier, and more fun as well." (1:09:12-1:09:22, the first-round interview). It is clear from these comments that a formal teacher-student relationship was not the dominant one from the perspective of the mentees.

And despite the differences between them, this informality also characterized the perceptions of the mentors. Mentor C11's reflections on the mentor-mentee relationships with her two mentees were different. Her impression of the relationship with A1-L4 was: "我不知道 A1-L4 的具体的性格，因为那个人，就是通过微信我觉得摸不透。[26]" (I have no idea of A1-L4's personality, because that person, I can't figure him out on WeChat) (8'00''-8'06'', File C). However, she said her impression of the relationship with A2-L4 was:

> "有时候可能……就是看着那个 A2-L4 从*** [a place where the mentee was working in W-12]发来一张照片，诶，我突然感觉像个小弟弟。有这样一种感觉。……有时候可能当成一个家庭成员来和他聊天。有时候是这样的。"
>
> (Sometimes possibly… seeing the photo that [A2-L4] sent from *** [where the mentee was working], oh, I could suddenly feel like he is my younger brother. … Sometimes I chatted with him like I was chatting with one of my family members. Sometimes it was like this.)
>
> (15'56''-16'11'', File C)

C13's reflection on her role in communicating with A4-L4 was:

> 因为我觉得作为一个老师，你还得在那儿端着。你必须保证我传授的都是积极的，不是随随便便跟你聊。但是我既然要跟你聊，我必须把自己放低，因为我跟你微信聊天儿我还那么端着，那就没有必要再聊下去了，对吧？
>
> (Because I think being a teacher, you [I] should keep [my] profile [as a teacher]. You [I] must make sure what I teach is positive instead of just chatting with you [mentee] randomly. But since I am chatting with you [my mentee], I must lower my profile, because I am chatting with you [my mentee] on WeChat, if I am still putting on airs then it won't be necessary to chat more, right?)
>
> (13'50''-14'06'', File C)

---

[26] In Chinese, "摸不透" is a negative comment on a person, because it indicates that the person is unpredictable, and it is not possible to know what kind of person he is.

C13 divided the balance in her role between being a teacher and a friend at sixty-forty, as she said:

C13: 因为我得……你作为一个老师你得保证[A4-L4]想继续学下去，如果你五十五十了，那么你们就完全平等了，就是他会觉得你这个老师是不是没有那么多东西，没有那个水平，对不对？完全聊开了…而且你得控制……

R：你得引导。

C13：对。我得控制他。他是学习的，不是来跟我闲聊的。我要完全放开了，那就成闲聊天儿了。那他还学什么呢？

(C13: Because I must… Being a teacher, you [I] must make sure that [A4-L4] would like to continue learning. If you [the percentage] go fifty-fifty, then you [the mentor and the mentee] would be fully equal, then he [the mentee] might feel like you [the mentor] do not have enough stuff, do not have enough expertise, right? [If we] chat completely freely… also you [I] should control…

R: you should guide [the learning process].

C13: Yes. I should control him. He is learning, rather than come to chat with me randomly. If I give free rein, then it would be just chatting randomly. Then what will he be learning?)[27]

(15'05''-15'34'', File C)

On the whole, we can see that A1-L4 and A2-L4 had similar perceptions of the relationship with C11: both a teacher and a friend. But it is apparent that C11's perceptions of the two mentees were different: the relationship with A1-L4 was not so close as that with A2-L4, and there was an obvious discrepancy between the mentor's and the mentee's perception of the relationship. But in A4-L4 & C13, the two parties had the same perception: the teacher-student relationship outweighed the friend-friend relationship. In the next section, my analysis of participants' reflections on their experiences of Chinese language mentoring on WeChat may provide some insights into the differences and similarities in the perceptions in the three pairs. However, these different perceptions do not challenge the fundamentally shared perception of the informality of the mentor-mentee relationship.

---

[27] In this thesis, for mentors' reports in Chinese, the in-text translations are in the round brackets: "( )". The notes and the implied or understood contents that I added are in the square brackets: "[ ]".

4.2.2 Participants' reflections on their experiences of Chinese language mentoring on WeChat

In the first-round individual interviews, three questions were designed to elicit participants' reflections on their experiences of their Chinese language mentoring on WeChat. The first question asked them to list five adjectives to describe their overall experience (I informed them that if they could not find out proper adjectives, then nouns or phrases were also acceptable). The second one asked whether the mentees' Chinese language mentoring experiences on WeChat were as they had expected or imagined before their communication with their mentor. For the mentors, the second question was about the changes in their perceptions of their mentoring experiences. The third question was about what aspects hindered them from communicating with each other. The five participants' responses to the first question can be seen in Table 10.

Table 10 - Participants' Keywords in Describing Their Chinese Language Mentoring Experiences in the Three Pairs

Participants	Keywords
A1-L4	inspiring, motivating, very interesting, very insightful, just relaxing
A2-L4[28]	helpful, interesting, fun
A4-L4	simple, convenient, engaging, comfortable, flexible,
C11	快乐、教学相长、紧张、焦虑、反思
	(happy, teaching and learning helps each other, nervous, anxious, reflection)
C13	新鲜、方便、亲切、多元、丰富
	(novel, convenient, amiable, multiple, abundant)

Overall, the three mentees' comments on their learning experiences all appear positive. But for the two mentors, there are differences. For C11, the first word that she reported "快乐"(happy) can be inferred from the words that she used in answering the second question (see below): "很好玩儿" (so fun), and "越来越有趣" (more and more fun). By "教学相长" (teaching and learning helps each other), C11 said that by mentoring the two mentees' learning of Chinese on WeChat, not only did she understand WeChat's "教学潜能" (pedagogic potential), but she came to know Australian "风土人情" (local conditions and customs) (8'20''-8'40'', File A). The two words suggest her positive experiences.

C11 also reported two potentially negative experiences (e.g., "紧张" (nervous) and "焦虑") (anxious), she explained:

---

[28] A2-L4 contended that it was difficult to think of five adjectives to describe his experience, therefore, he only listed three.

紧张就是比如说，他们不联系我的时候。上个月聊得好，上周聊得好好的，诶，这周一个星期没有联系我，我觉得我会紧张。焦虑，就是在想：诶，是不是上周哪些话说得有问题啊。或者是他们是不是觉得慢慢和我聊得或者和我今天一起学习没有意思了？就会反思。

(Nervous is like, when they [the two mentees] didn't contact me. We chatted very well last month, last week [we] also chatted very well, um, but if they didn't contact me this week, [then] I would feel nervous. For anxious, I would think: "um, is it because what I said last week was problematic, or do they [the two mentees] think it was not interesting to chat with me or study with me?" [I] would reflect on it.)

(11'52''-12'17'', File C)

The word "反思" (reflection) is a neutral word but it resulted from the potentially negative experiences manifested by the two words "紧张" (nervous) and "焦虑" (anxious). From C11's self-report above we can see that C11 used thesomewhat impersonal word "他们" (they, or the two mentees) to refer to her two mentees. However, the context also reveals that these feelings were temporary and appear to have been outweighed by other more positive reactions.

There were two breaks in her communication with each of her two mentees (refer to Appendices 1, 2 and 8 for the dates and weeks). In communication with A1-L4, there were 18 consecutive days in the first break (15 August – 1 September) and 43 consecutive days in the second (18 September-30 October). In communication with A2-L4, there were 10 consecutive days in the first break (3-12 October) and 18 consecutive days in the second (14-31 October). We can see that the breaks in A1-L4 & C11 were far longer than those in A2-L4 & C11. Additionally, as mentioned previously, A2-L4 sent his personal picture taken when he was working in Week 12, in the interval between the two breaks, which made C11 feel like she was communicating with a younger brother. Therefore, taking account of these findings, it is reasonable for me to presume that her negative emotions could have been mainly connected with her communication with A1-L4. More findings and elaborations in the investigations of the nine proposed indicators of social presence in Section 4.4 will provide more evidence to support this presumption.

Compared with C11's experience, C13 only provided positive adjectives, which were consistent with her response to the question concerning whether she would like to keep in touch with A4-L4 in the future: "当然愿意" (sure) (0'11'', File A), and she reported that her experience was "特别爽" (particularly awesome) (7'27'', File A) and "特别愉快" (particularly

102

happy) (6'54-7'00'', File A), which will be explicated further shortly.

C13 also elaborated on the last three adjectives. By "亲切" (amiable), she explained that it was easy for mentors to be connected with their mentees, and unlike the teacher-student relationship in the formal classroom settings, where students might fear their teacher, the mentor-mentee relationship on WeChat was more amiable, for example, a mentor might send some cute emoji then the mentee would find that she was not strict (9'40''-10'04'', File C). She said that she seldom sent "特别可爱的" (particularly cute) emoji to her classroom students, because "我得保持我这个班主任的形象" (I must keep my profile as the classroom teacher). (10'18''-10'22'', File C). But she said that if she felt that she had a good relationship with a student, then sending a smiley face, or sending a sarcastic emoji[29] to banter with the student would be fine (10'25''-10'52'', File C).

In reference to "多元" (multiple), C13 explained that WeChat was multiple-featured, so that the teaching could be conducted by means of its multiple features. And for her, "丰富" (abundant) indicated the richness of the learning materials. She reported that she could share many things with the mentee not just being restricted to Chinese language itself, but could include Chinese people's lives, how to go shopping, some history and culture. She said that these things could be inconvenient and quite time-consuming to find out, prepare, download and present in the classroom. In contrast, she felt that it seemed quite easy to obtain these resources from other colleagues or friends who posted or reposted them on WeChat Moments, so that she could just forward or repost them to share with her mentee (11'25''-12'20'', File C). This is exemplified by the pictures of traditional Chinese clothing that she sent to A4-L4 on 15 October (W-12).

From C13's explication of her mentoring experience we can see that four words (i.e., "新鲜" [novel], "方便" [convenient], "多元" [multiple], and "丰富" [abundant]) were related to the pedagogic affordances of WeChat, whereas the word "亲切" (amiable) was her reflection on the mentor-mentee relationship on WeChat, and she particularly mentioned the influences of emoji on this relationship.

In relation to the second question, the three mentees all maintained that their learning experiences were better than they had expected. As A1-L4 said: "It's pretty similar to how I

---

[29] C13 explained that it was like the QQ emoji 😆 . (Personal communication on WeChat on 12 November 2017 with WeChat)

imagined but maybe better." (14'20''-14'49'', File C, the first-round interview) And A2-L4 said: "I think it turned out to be better than what I thought it would be. ... Like maybe more... more helpful." (42'08''-42'30'', the first-round interview) And in A4-L4's words: "I can say it's better than I expected. ... Exceeded my expectations in a way." (1:06:45-1:07:30, the first-round interview). A4-L4 further explicated:

> Cos I thought WeChat is... I don't know how to say that... WeChat... Because it also may be... learning a language via social media is a bit weird? But then... but then the thing is... It's not really... not weird. ... Because there're a lot of functions that you can use to learn Chinese. Like messaging, photos, video, audio messages, and... It has the potentials. Yeah.
>
> (1:07:36-1:08:12, the first-round interview)

C11's report of the change in her perceptions of her experiences was: "我不知道这个变化可以归结到哪里。 我觉得，我和澳大利亚学生的关系好像近了。"(I don't know where this change originates. I think the relationships between the Australian students and me are getting closer.) (6'30''-6'38'', File A) C11 said that because her two mentees not only asked her some questions concerning Chinese language learning, they also showed her some pictures of their life (e.g., A1-L4 sent her pictures of rooms in his home, and a video clip of a koala), which aroused positive feelings for her: "我突然感觉到澳大利亚离我好近，看着离我好近，感觉特别近。" (Suddenly I felt Australia was so close to me, it looked so close to me, felt so close) (7'25''- 7'31'', File A) She also said: "我觉得很好玩儿。原来觉得……可能觉得应该就是上学嘛，聊一聊我觉得他们可能过一点儿时间就觉得没兴趣了。但是后来慢慢发现越来越有趣。" (I feel it's so much fun. Initially... [I] thought probably it could be like just learning at the uni, after chatting for a certain period of time they [the two mentees] might lose their interest. But [I] found [it] was getting more and more interesting.) (8'22''-8'33'', File A)

However, in addition to her positive feedback about her experiences, as mentioned above, she also reported potentially negative aspects (i.e., being anxious and nervous, see Table 10).

C13 did not report any special changes in perceptions during her communication with A4-L4. She said: "我一直都挺高兴的." (6'31''-6'33'', File A) She further explained to me:

> C13：因为 A4-L4 是个特别可爱的孩子嘛。一开始跟他聊天儿，可能稍微一开始，前两次感觉稍微有点儿陌生。但他并不是说…… 他也可能比较害羞，有点儿内向，

并不是因为内向他就不跟你交流了， 他主要跟你问问题。而他这种求知的这种状态是一直持续下来了。

R：对对对

C13：所以就是没有什么特别的变化。

R：那说明你在这个过程中你一直都比较愉快？

C13：对对对，特别愉快。

(C13: Because A4-L4 is a very lovely boy. When [I] started to chat with him, probably at the very beginning, [we] had sort of sense of strangeness. But he was not… he was probably quite shy, and was sort of introverted, [but] he did not stop communicating with you [me] because he was introverted, he mainly asked you [me] questions. And his state of seeking knowledge was sustained.

R: yes yes yes

C13: So there were no special changes [in my perception].

R: Then does it mean you have been always pretty happy?

C13: Yes yes yes, particularly happy.)

(6'34''-7'01'', File A)

I told C13 that some mentors had told me that they were excited and looking forward to helping their mentee(s) on WeChat at the start, but then they felt disappointed when their mentee(s) did not ask them questions and the mentoring did not continue, I added that it sounded to me like those mentors felt "挺不愉快的" (quite unhappy), "挺不爽的" (quite bad) or "挺不舒服的" (quite uncomfortable). In response, C13 said her experience was "特别爽的" (particularly awesome) (7'27'', File A).

As for the hindrances, two aspects inhibited A1-L4 from communicating with his mentor: the reception problems with his phone, and it took time for him to understand and grasp something new that he learned from his previous chats with C11. As he said:

And sometimes I'll write these sentences down and translate, and keep note of that sentence, because I'm learning something new, so that's the only time I can… I haven't made time for chats sometimes, because I know that I have to think and I have to think more.

(6'46''-7'04'', File 2, the first-round interview)

The hindrances for A2-L4 focused on three aspects: he had a lot of assignments to complete and had to work, additionally, his family was moving during the 13 weeks so he had household responsibilities. A4-L4 also had academic and work pressure. He faced

competition between his compulsory subjects and his voluntary jobs. He said: "Sometimes I have to prioritize other stuff before Chinese." (57'58''-58'04'', the first-round interview)

The objective hindrances for C11 were threefold: the mobile internet was not good enough when she was on a train; her thesis writing took time and her wedding ceremony demanded attention. The subjective aspects also consisted of two respects: in addition to the pressure from her thesis writing and the chores in relation to her wedding ceremony, an important factor that she experienced was in relation to A1-L4, as she had no idea of his personality and she could not figure him out on WeChat ("摸不透") as mentioned in Section 4.2.1. (8'00''-8'06'', File C)

Compared with C11, C13 reported that the objective aspects were not real hindrances for her, for example, she did not have problems with inputting Pinyin with tones; the telecom service might not have been good enough when she was away from home, but she could communicate with the mentee after she got stable WiFi connections; the time difference was not a problem for her if it was asynchronous communication. She did not report that her work and personal life, inhibited her from communicating with A4-L4. She said because of being a teacher, her life and work were mixed together, since she would prepare for her classes after work. For the subjective aspects, she reported that none of the choices that I listed were inhibitors for her. In relation to her work, she said that communicating with the mentee A4-L4 was beneficial to her existing work, because what she was doing was teaching Chinese language to international students at a university, and as a result of communicating with the mentee she not only knew more about Australia but knew more about WeChat's pedagogic potentials. (8'01''- 8'38'', File C)

Among the 15 mentors, only C13 reported that she had particularly pleasant ("特别愉快") and particularly awesome ("特别爽") communication with her mentee A4-L4, and her reflection was in line with A4-L4's. As discussed previously, despite the challenges that C11 confronted in mentoring A1-L4, she felt her experience was "很好玩儿" (so much fun) and found it "越来越有趣" (more and more interesting) although she was also "焦虑" (anxious) and "紧张" (nervous) at times. And both C11's and A2-L4's reflections on their mentoring experience were consistently good, although probably not so good as that of A4-L4 & C13 because of the two pauses (28 days in total). However, there was an apparent discrepancy between C11's levels of satisfaction and A1-L4's. Specifically, C11 said she could not figure out what kind of person A1-L4 was, as mentioned previously.

These comments indicate that the relationships in the three pairs were different even though they were all informal. They contained teaching episodes but did not follow in any rigid manner any of the suggested topics of conversation. So, despite having moments of uncertainty and issues in getting to know one another, they were positively academically oriented while simultaneously embracing the individual and spontaneous issues and learning points that emerged in unplanned ways.

Nevertheless, the differences between in the three pairs concerning their interpretations of their mentoring experiences indicate the varying degrees of social presence in the three pairs in the following sequence from lowest to highest: A1-L4 & C11, A2-L4 & C11, and A4-L4 & C13. The same sequence also appears in the quantities of messages that the three pairs sent (as shown in Figure 1). The consistency in the two differences motivated me to find out what aspects influenced the different degrees of social presence and the different opportunities for Chinese learning in the three pairs.

As discussed in Chapter 1, this study is about informal Chinese learning. In this section, I have established that the mentor-mentee pairs did not focus on a prescribed teaching schedule. The differences concerning mentors' and mentees' interpretations of their mentoring experiences reflected the differences in the mentor-mentee relationships in the pairs. This means that any learning that occurred must have resulted from how the participants negotiated their relationships. So, the first issue is whether learning did take place in the three pairs, which involves the answer to the first research question and will be elaborated in the next section.

As mentioned in Chapter 1, I reported that 14 out of the 15 mentors in the learning project reported that the fundamental factor that hindered them from communicating with their mentee(s) was related to the lack of emotional exchanges or they felt they were not acquainted with their mentees. Some mentors reported that they did not use synchronous communication modes (i.e., video calls and voice calls) to communicate with their mentees because of their lack of acquaintance.

Similarly, none of the three mentees sent audio messages to their mentors although they received asynchronous or semi-synchronous audio messages from their mentors. They provided different reasons in the second-round interview. A1-L4 said it was because his phone had a broken microphone so that he could not send audio messages (3'21''-3'26''). A2-L4 said it was because he "was not so confident" and he "wasn't good at speaking" at that

time (2'30''-2'43''). A4-L4 explained the reasons: "I feel like because I don't feel that comfortable" (4'43''- 4'46'') and "Because I have never met this person before, unless if it's a teacher that I've met before, then I think I will feel more comfortable." (4'56''-5'06'')

From mentors' reports with the word "不熟" (not acquainted) and A4-L4's report "didn't feel that comfortable" and "because I have never met this person before", we can see that their perceptions of social presence inhibited their communication with their mentees/mentors, which hindered them from using WeChat features with high levels of synchronicity. Asynchronous text messages require the lowest level of synchronicity and social presence; asynchronous or semi-synchronous audio messages require medium level of synchronicity and social presence; and synchronous video calls require the highest level of synchronicity and social presence. Therefore, what mode(s) (or "features") of WeChat the participants have used and their levels of synchronicity should be considered in the social presence element.

The above discussion, again, raises the necessity of differentiating three levels of synchronicity in the mentors' and mentees' uses of WeChat's modes (or features) in Chinese learning (see my previous discussion in Section 3.5.1.1). However, I did not propose any indicators or their definitions to be included (see Table 3) to investigate how social presence is influenced by participants' uses of WeChat's modes (or "features") with different levels of synchronicity. This omission was because the two reasons discussed in Section 3.4.2 (i.e., ethical considerations and technological restrictions set by WeChat) resulted in insufficient data so that I was not able to investigate this issue in depth. Nevertheless, I will take account of the three levels of synchronicity in analysing participants' discourse behaviours on WeChat.

4.3 Chinese language learning on WeChat

This section illustrates indicative evidence of the three mentees' Chinese learning. It first shows the learning moments concerning specific Chinese language features (Section 4.3.1), which consists of static segments of learning. Then it depicts the mentees' learning trajectories over time (Section 4.3.2), which reveals the dynamics of learning. In investigating mentees' learning evidence, I followed the CMDA approach discussed in Section 3.5.1 and identified mentees' learning at the structural level of Chinese language (i.e., vocabulary, grammar, and Chinese characters). However, whether or not mentees understood explicitly what is implied in the patterns of learning involves further assessment

of learning outcomes, which is beyond the scope of my thesis as I explained in Section 1.3.

4.3.1 Learning moments

The indicative evidence of the three mentees' Chinese learning on WeChat can be classified into four patterns. The first three patterns (Sections 4.3.1.1-4.3.1.3) are based on my analysis of the chat logs. The fourth pattern (Section 4.3.1.4) has two sub-patterns: the first sub-pattern was identified by the mentee A1-L4 himself (i.e., he reported it to me) based on his own stimulated recall, and the second one was based on my analysis of the chat logs. The four patterns can be classified into two groups: the first three patterns do not involve mentees' awareness of a particular Chinese linguistic phenomenon, whereas the fourth pattern embraces such awareness.

An overview of the patterns in the three mentees' Chinese learning can be seen in Appendices 10-12. For the sake of space, I did not provide English translations of the text messages in Chinese in the three appendices. Further, in the three appendices, in seeking to be clear in describing how the learning occurred, I added or adapted some of the punctuation in the descriptions of the e-turns and propositions. The original punctuation is retained in the tables that provide the examples of the learning patterns in this thesis.

4.3.1.1 The mentee made an error, then the mentor gave corrective feedback.

This pattern can be exemplified by A1-L4's learning of a particular expression "我也是" (me too), as seen in Table 11. The context of the excerpt of chat logs in Table 11 was: On 2 September (W-6), A1-L4 initiated a new conversation by sending a picture of his iced coffee to C11 (e-turn 161) and said that iced coffee was very popular in Australia (e-turn 166) and it was his favourite drink (e-turn 167). Then he asked C11 whether she liked drinking coffee (e-turn 174). C11 replied that she liked drinking iced coffee but did not like coffee that was too sweet. A1-L4 made an error in e-turn 182, and C11 provided corrective feedback in e-turn 183.

Table 11 - A1-L4's Learning of the Word "我也是" (me too)

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
2-9 (W-6)	174	**A1-L4 18:26** 你喜欢不喜欢咖啡	you like or not [drinking] coffee
	175	**C11 18:34** 喜欢的	like
	176	**C11 18:34** 不要太甜	not too sweet
	177	**C11 18:34** 我不喜欢特别甜的东西！	I don't like very sweet food!
	178	**A1-L4 18:36** 我不喜欢糖的热咖啡。	I don't like sugar [sweet] hot coffee.
	179	**A1-L4 18:37** 只冰的	only [like] iced [coffee]
	180	**C11 18:37** 对！	Yes!
	181	**C11 18:38** 我喜欢冰的加一点糖的咖啡	I like iced [,] with a bit of sugar coffee
	182	**A1-L4 18:41** 我觉得同样的	I feel same
	183	**C11 18:42** 你应该说 me too! 我也是！	You should say [: "] me too! 我也是! ["]
	184	**C11 18:43** [Images: 14512e75ea57779484902fe78d5e bba6.jpg (View in attachment)]	*It was one of the pictures that attached to the email sent to me.*[30]
	185	**A1-L4 18:43** 对。 我不聪明	Right. I'm not clever

Note: See Text Extract Presentation Conventions after List of Appendices.

What A1-L4 was trying to express in this excerpt of a chat log was: I think that both you and I like iced and not too sweet coffee; we have the same ideas. A1-L4's error in e-turn 182 ("我觉得同样的") lies in a grammatical problem after "我觉得" (I think). Because there should be a clause after "我觉得": the subject of the clause can be two independent sub-subjectives: "my ideas" (A) and "your ideas" (B), or inclusive sub-subjective "我们的想法" (our ideas). One more problem is that "同样的" is formal so that it is not often used in colloquial language. It is often replaced by "一样的" in colloquial language. Therefore, if he would like to use the structure "我觉得同样的", a correct sentence could be:

---

[30] From the subsequent e-turns (186-194) we can establish that she sent a picture of yak meat in this e-turn.

"我 觉得　　　我的想法　和　　你的想法　　是　　一样的。"

I　think that　<u>my ideas</u>　　and　　<u>your ideas</u>　　are　　the same.

This sentence can be simpler as below:

"我　觉得　　　我的想法　和　　你的想法　　一样。"

I　think that　my ideas　and　　your ideas　the same.

or "我　　觉得　　　我们的想法　是　一样的。"

I　　think that　　<u>our ideas</u>　　are　　the same.

This sentence can be even simpler as below:

"我　觉得　　　我们的想法　一样。"

I　think that　our ideas　　　(are) the same.

We can see that there are a variety of correct sentences with the same meaning. However, C11 did not provide corrections of this kind. In e-turn 183, she provided an alternative that would be simpler and perhaps a more colloquial and conventional expression: "我也是", which has semantic meaning, degree of simplicity and formality similar to "me too" in English. More importantly, it can be learned as a unit, therefore, it can be remembered as a "whole" without bothering to use complicated grammar. In e-turn 185, A1-L4 responded to C11's corrective feedback by saying "[You're] Right [I should say "我也是"]" followed by his admission of making the error by saying "我不聪明" (I'm not clever). More examples of this pattern can be seen in Appendices 10-12.

The above examples suggest that the mentor C11 took the initiative to give corrective feedback after she noticed the error, and A1-L4 was positioned as the responder. In his response, A1-L4 demonstrated that he had learned from the feedback although he had not taken the initiative to obtain this feedback.

4.3.1.2 The mentee initiated a question regarding a Chinese language expression that he wanted to use.

This pattern is different from the previous one because, most often, the mentee asked a question in English in order to gain feedback. An example from A2-L4 can be seen in Table 12 (see more examples of this pattern in Appendices 10-12). Overall, this kind of learning mainly involves mentees taking the initiative to ask the mentors about an expression and

expecting to get feedback from the mentors directly, which did not involve generating output by themselves. Therefore, it is an approach to learning where the mentor develops a "whole" and the mentee only needs to accept or reject that "whole". The mentee's initiative is stronger than that in the first pattern and he obtained the example of the expression that he was seeking.

Table 12 - A2-L4's Learning of "Every evening I walk my dog"

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
7-9 (W-7)	232	**A2-L4 12:51pm** How do I say. Every evening I walk my dog?	NA
	233	**C11 1.28pm** 每天晚上，我都去遛狗	Every night, I walk dog *The answer to the mentee's question.*
	234	**C11 1:28 pm** [Son]	*"Son" is French, and "[Son]" indicates that the message in this e-turn is an audio message. [31]*
	235	**C11 1:30 pm** or you can say 我和我的狗一起去散步	or you can say: "I walk with my dog"
	236	**C11 1:31 pm** 但是两种说法意思不太一样	But these two expressions have different meanings.
	237	**C11 1:36 pm** if you say "我去遛狗"，this means the relationship between you and your dog is master and servant .	NA
	238	**C11 1:39 pm** if you say "我和我的狗一起去散步", this means you two have a good relationship, just like friends	NA
	239	**C11 1:41 pm** however，"我去遛狗"is more popular	NA
	240	**A2-L4 3:15 pm** 很好！谢谢	Very good! Thank you

4.3.1.3 The mentee attempted an expression in Chinese and sought explicit feedback from the mentor, then the mentor provided corrective feedback.

This pattern also involves the mentee taking deliberate action (or initiation) to obtain feedback. It occurs when the mentee was not sure whether an expression in Chinese was correct, but he gave it a try and expected to get feedback from his mentor. It also includes

---

[31] Because the chat logs were submitted by A2-L4, and the language for his mobile phone or WeChat was set to French, there was the indicator "[Son]" in their chat logs. If the language in the person's phone (who submitted the chat logs) had been English, then it might have appeared as "[Voice]", similarly, if it was Chinese, the indicator might have appeared as "[语音]". point was based on my analysis of my dataset, which is limited. This point was based on my analysis of the chat logs in my data set.

that the mentee was asking about the classification of a group of Chinese words. Examples of this pattern can be seen in the excerpts from the three mentees in Tables 13-15 respectively.

In Table 13, the exclamation mark in e-turn 625 shows that A1-L4 was rather confident that his expression in e-turn 624 was correct but actually it was wrong. C11 gave him corrective feedback in e-turn 626 but she missed a character "之" so that the model was still incorrect. However, she gave a complete and correct version immediately in e-turn 627e-turn. In this example, A1-L4 gained C11's corrective feedback regarding an expression that he had previously been confident of was wrong.

Table 13 - Example of A1-L4's Attempted Expression and C11's Corrective Feedback

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
11-9 (W- 7)	624	**A1-L4 16:54** 99 百分都有车	99 per cent [Australian people] have cars
	625	**A1-L4 16:54** 我认识这是对!	I know this is correct!
	626	**C11 16:55** 百分 99，99％	*A character "之" after "百分" was missing, so the mentor's expression is not correct either.*
	627	**C11 16:55** 百分之九十九	*This is the correct expression of "99%" in Chinese.*
	628	**A1-L4 16:57** 哦耶	oh yes
	629	**A1-L4 16:58** 谢谢	Thanks

Table 14 shows an example of this pattern in A2-L4 & C11, and Table 15 shows an example in A4-L4& C13. It is clear that A2-L4's learning of Chinese in this example involves lexical items.

Table 14 - Example of A2-L4's Attempted Expression and C11's Corrective Feedback

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
23-8 (W-4)	83	**A2-L4 11:16pm** 几个卫生	NA
	84	**A2-L4 11:16pm** Is the correct way of saying 'several toilets'?	*NA*
	85	**A2-L4 11:16pm** this*	*He corrected the English error in the e-turn 84: "the" should be "this".*
24-8 (W-5)	86	**C11 12:23 am** 🤣	🤣
	87	**A2-L4 12:23am** 卫生间*	*He further corrected the Chinese error in his e-turn 83: "卫生" should be "卫生间".*
	88	**C11 12:24 am** 几个卫生间	*She confirmed that "几个卫生间" was correct.* *"卫生间" (wèishēngjiān, toilet).*
	89	**C11 12:24 am** 对	Right
	90	**C11 12:24 am** 几个洗手间	*Several toilets* *She offered one more expression of "toilet": "洗手间"(Xǐshǒujiān)*
	91	**C11 12:24 am** 我们也说厕所	We also say 厕所 *She offered the third expression for "toilet" (the Pinyin is "cèsuǒ")*
	92	**C11 12:24 am** 一般比较文明的说法是卫生间，或者洗手间	Generally speaking, the 114ivilized expressions are "卫生间" or "洗手间"
	93	**A2-L4 12:26am** 真的好， 谢谢！	Really good, thanks!

Table 15 - Example of A4-L4's Attempted Expression and C13's Corrective Feedback

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
7-9 (W-7)	77	**A4-L4 16:14** 我不能唱歌！😭 但是我喜欢成唱歌唱很好。(对不对？我不知道)	I am not able to sing songs! 😭 But I like to sing songs sing well. (Is it correct? I don't know)
	81	**A4-L4 16:25** 我没有从不看雪。(对吗？)	I didn't have never seen snow. (Correct?)
8-9 (W-7)	85	**C13 16:33** 我唱歌唱得不好，但是我希望我能唱好。	I can't sing songs well, but I hope I can sing well.
	89	**C13 16:44** 我从来没有看过雪。（从来没有 cónglái，never）（Verb+过，means your experience in the past, 比如：2008 年，我去过北京。）	I've never seen snow. (从来没有 cónglái，never) (Verb+过，means your experience in the past, for example, 2008 年，我去过北京。) *The translation of the example is: I've been to Beijing in 2008.)*
10-9 (W-7)	94	**A4-L4 23:59** **P1** 啊！我知道了。谢谢*老师！	Ah! I see. Thank you * Laoshi! *"* Laoshi" is a Chinese way to address a teacher: the person's given name +Laoshi, which literally means "Teacher *".*

In Table 15, A4-L4's error in "我不能唱歌" means "I am not able to sing songs", which involves a kind of capability. But since singing songs is a kind of intrinsic human capability (except for people with disabilities), the issue is more about how well someone sings. Therefore, what A4-L4 wanted to express was: "我唱歌唱得不好" (I can't sing songs well), as in the first part of C13's corrective feedback in e-turn 85. The structure is:

我　　唱　　歌　　唱　　得　　　　　　　　　不好

S　　V₁　　O　　V₂　　structural auxiliary word　　complement of state

But what A4-L4 intended to express in "但是我喜欢成唱歌唱很好"[32] was "But I hope that I can sing them well", then C13's corrective feedback was: "但是我希望我能唱好", which involves a simple clause:

但是　　　　　　我　　希望　　我　　能　　　　　　唱　　好。

But　　　　　　I　　hope　　I　　can　　　　　　sing　　well.

Conjunctive　　S₁　　V₁　　S₂　　auxiliary verb　　V₂　　complement of result

In Table 15, A4-L4's error in e-turn 81 was that he mixed two structures that indicate conflicting temporal relations in a single sentence. In Chinese, "没有" is used to express the

---

[32] "喜欢" (xǐhuān, *to like*) is a lexical error and it could be "希望" (xīwàng, *to hope*); "成" (chéng, *to become*) is an unnecessary character here.

past tense and to indicate that something did not happen; "从来没有" is used to express the present perfect aspect and to indicate that something has never happened so far. In C13's feedback in "我从来没有看过雪" there was only one single aspect: present perfect. But she also explained the past tense structure in the brackets, "Verb+过", and provided an example. As a result of A4-L4's initiative in e-turn 81, he received the information about the pattern that he was seeking to produce in e-turn 89.

Because this kind of "attempt" or "test" by a mentee reveals a certain degree of initiative and involves retrieving their existing knowledge and generating output although the output is not necessarily correct, the degree of initiative in this pattern is higher than that in the previous two patterns discussed in Sections 4.3.1.1 and 4.3.1.2. But there are still differences between the three mentees: for this pattern, unlike A1-L4 and A2-L4, A4-L4 tried to work out the related Chinese grammar by himself rather than just receive the needed "whole" answer from C13.

4.3.1.4 The mentee noticed a Chinese language phenomenon in the mentor's messages, which was different from what he had previously encountered in Chinese.

This pattern has two subcategories: whether or not the mentee took the initiative to ask for clarification after he noticed the new phenomenon.

A mentee noticed the new phenomenon but did not take the initiative to ask for clarification.

In the second-round interview, for the question "Did you like your Chinese mentor's way of using WeChat? Why (not)?" A1-L4 said that C11's way of mentoring on WeChat was "very good". However, as we can see in Appendices 10-12, C11 did not correct her two mentees' errors as often as C13 did, and the numbers of characters in C11's e-turns were generally fewer than in C13's. Therefore, in response to A1-L4's answer, I asked him a further question about the most unforgettable or impressive, or useful thing that he had learned from C11. After looking through the chat logs, A1-L4 said it was the characters that C11 had used as Chinese modal particles and interjections with the radical "口" (kǒu) (e.g., "嗯", "喽", "啊", and "哇". 32'12''-34'36'' in the second-round interview). The size and position of the radical "口" in a new character can vary, but for "嗯", "喽", "啊", and "哇", it is on the left side of the characters. Below is detailed analysis of C11's uses of Chinese modal particles and interjections with the radical "口" (kǒu).

Modal particles

In modern Chinese language, modal particles can express four types of moods: indicative mood, interrogative mood, imperative mood, and exclamatory mood (陈述, 疑问, 祈使, 感叹. See more in Huang & Liao, 2017, pp. 31-32). Table 16 shows the modal particles used by A1-L4 & C11 in their communication.

Table 16 - Modal Particles Used by C11 and A1-L4

Participants	Modal Particles	Moods			
		Indicative	Interrogative	Imperative	Exclamatory
C11	啊 (a)	4	0	0	3
	诶 (ei)	1	0	0	0
	啦 (la)	4	1	0	0
	哒 (da)	1	0	0	0
	喽 (lou)	1	0	0	0
	吧 (ba)	3	1	0	0
	吗 (ma)	N/A	21	N/A	N/A
	么 (me)		1		
A1-L4	啊 (a)	2 correct	0	0	0
	呢 (ne)	0	1 correct	0	0
	吗 (ma)		9 (6 correct, 3 over uses)[33]		

Interjections

In modern Chinese, the interjections can convey an *exclamation, call or response* (感叹, 呼唤, 应答, see Huang & Liao, 2017, p. 24). They are grammatically independent, which is different from modal particles. They can be used individually as a sentence with a punctuation mark (period, question mark, exclamation mark etc.). Table 17 shows the interjections that C11 and A1-L4 used.

---

[33] Note: Modal particle "吗" can only be used to convey interrogative mood. One of the three incorrect sentences is: "剪头发多少钱吗？(The correct sentence should be: "剪头发多少钱？"*How much is it to have a haircut?*)

Table 17 - Interjections Used by C11 and A1-L4

Functions	Interjections		C11	A1-L4	Note
Exclamation	哇 (wa)		2	0	
	哇哦 (wa o)		2	0	"哇哦" is the transliteration of "wow"
	啊	ā	0	0	
		á	2		
		ǎ	0	0	
		à	0	0	
Calling	0		0	0	
	0		0	0	
Responding	哦 (o)		0	4	The mentee used "哦" first.
	哦哦 (o o)		0	0	
	哦哦哦 (o o o)		0	1	
	噢噢 (o o)		3	0	
	嗯 (ǹg)		3	0	
	嗯嗯 (ǹg ǹg)		1	0	

Overall, from Tables 16 and 17 we can see that C11 used a wide variety of modal particles and interjections. A1-L4 noticed these phenomena, and still recognized them one year later in the second-round interview. But he did not ask C11 for further clarification regarding these words in their communication on WeChat. His lack of questioning was probably because the meaning was clear for him and the sounds of the modal particles and interjections appear in a number of different languages with similar meaning.

After the mentee noticed a difference, he sought feedback.

Table 18 shows that when C11 was communicating with both A1-L4 and A2-L4, she used the character "修",[34] where a short vertical line was missing compared with the officially acknowledged standard character in Mainland China "修" (xiū). It is not possible to know whether the mentee A2-L4 knew the meaning of the character "修" before, but his response in e-turn 389 ("修?") suggested his confusion or his query. C11 provided feedback that included a synonym of "修", "建". A2-L4's response in e-turn 392 indicated that he was satisfied with C11's feedback. This example indicated A2-L4's recognition of new information, but whether or not he grasped the full significance of the two Chinese

---

[34] Although "修" is indicated as a variant of "修" in Mainland China, it has been officially regarded as a non-standard character in the Mainland Chinese context. In The General Purpose Normalized List of Chinese Characters (《通用规范汉字表》was enacted by State Language Commission, Ministry of Education of the People's Republic of China and in 2013), an official documentation in Mainland China, "修" is officially regarded as the standard character (its serial number in this list is 1560) and it does not officially take "修" as its variant (visit http://www.jwc.fudan.edu.cn/_upload/article/24/b8/26b261c644d59c571feb9dcdeb15/347348f7-ab66-49c7-bd76-f2a5df517d35.pdf). By investigating the causes from the technological perspective, I found that it was unlikely that C11 used Pinyin IME and chose the character "修". It is highly likely that she used Handwriting IME, but the corpus of the characters in the Handwriting IME include both simplified characters and traditional characters, and C11 chose the traditional one.

characters is beyond the scope of this study. In the second-round interview in February 2017, the mentee's self-report suggested that he still did not know that "俢" was wrong, and he still did not know its meaning. He said: "I just copied her message and just deleted the rest." (the second-round interview: 32'23''-32'29'').

Table 18 - A2-L4's Learning of the Chinese Character "俢" (xiū)

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
		In A1-L4 & C11	
11-9 (W-7)	620	**C11 16:51** 有么有在俢高铁？	Is high-speed train being constructed [in your city]?
		In A2-L4 & C11	
13-10 (W-12)	388	**C11 3:58 pm** 俢高铁这个工作有潜力	Constructing high speed train has great potential
	389	**A2-L4 4:02 pm** 俢？	俢?
	390	**C11 4:17 pm** 嗯	Mhm
	391	**C11 4:17 pm** 建	to construct *C11 provides a synonym of "俢".*
	392	**A2-L4 4:23 pm** 好！	Good!

One further example lies in A4-L4's learning of "很晴天" on 23 September (W-9) (see Table 41 or the 6th evidence in Sub-pattern 2, Pattern 4, Appendix 12). In e-turn 194, A4-L4 made an error, then in e-turn 205, C13 corrected his error by giving him a correct answer. But in e-turn 211, A4-L4 questioned C13's correction and he did not think that he made an error because he thought that his classroom learning experience justified this. Then the mentor gave him two correct sentences with two different syntactic structures.[35] Finally, the mentee understood the differences and responded to the mentor in e-turn 215 followed by a smiley emoji in e-turn 216. A4-L4's questioning of the input from the mentor and accepting the new knowledge involve high levels of critical thinking and learning.

Another example can be seen in A4-L4's question concerning "看起来" on 21 October (W-13) (in Table 42 and in the 10th example in Sub-pattern 2, Pattern 4 in Appendix 12). This example involves the learning process: noticing the language phenomenon, then retrieving the existing knowledge, reorganizing the knowledge and generating output.

---

[35] "今天天很晴" is a "Topic- Comment" sentence: "今天" is the "Topic" and "天很晴" is the "Comment". In the "Comment", there is a "S+adv+adj" structure, and the "adv+adj" is used as the predict. "今天是晴天" is a typical "S+V+O" structure. Therefore, both "今天天很晴" and "今天是晴天" are correct sentences, but "今天很晴天" is wrong.

An overview of my static analyses of the three mentees' Chinese learning moments is shown in Table 19. For Pattern 1, we can see that A4-L4 had much more corrective feedback (26 instances) from C13 than A1-L4 (8 instances) and A2-L4 (1 instance) from C11. For Pattern 2, unlike A2-L4 and A4-L4, A1-L4 did not initiate a question regarding a Chinese language expression that he did not know. As for Pattern 3, A1-L4 only used this pattern once (the fewest amongst the three mentees), but all three mentees sought explicit feedback on a feature of their Chinese. When it comes to Pattern 4, although A1-L4 identified one Chinese linguistic phenomenon (the characters with the radical "□") in C11's textual messages, unlike A2-L4 and A4-L4, he did not take the initiative to request clarification. Overall, we can see that the three mentees had different amounts of Chinese learning evidence (i.e., from A1-L4, A2-L4 to A4-L4, in ascending order).

Table 19 - Patterns in the Three Mentees' Learning of Chinese

Mentees	Pattern 1	Pattern 2	Pattern 3	Pattern 4		Total
				(1)	(2)	
A1-L4	8	0	1	1	0	10
A2-L4	1	2	4	0	6	13
A4-L4	26	3	6	0	10	45

From this table we can also see that apparently A4-L4 had more opportunities for learning Chinese not only because the mentor C13 noticed the errors that he made and gave him corrective feedback (Pattern 1), but because he also learned actively by initiating a question regarding a Chinese language expression that he did not know (Pattern 2), attempting expressions and seeking explicit feedback from the mentor C13 (Pattern 3), and remaining sensitive to the unfamiliar, unknown or different Chinese linguistic features in C13's textual messages as well as asking deeper and broader questions (the second sub-pattern of Pattern 4, which will be further investigated in Section 4.3.2). Such awareness is less apparent in A2-L4 and is the least apparent in A1-L4. Meanwhile, the total numbers in Table 19 also suggest that both A4-L4 and C13 worked together to create and used more opportunities (45 in total) for learning than the other two pairs (10 and 13).

The majority of A1-L4's and A2-L4's learning of Chinese with the mentor C11 were learning moments which were fragmented in nature. Consistent with this fragmented approach, their learning did not develop comprehensively. In contrast, we can see a clear learning trajectory in A4-L4's learning of Chinese language with C13. Closer analysis is presented in the next section.

4.3.2 Learning trajectories

Among the three mentees, only A4-L4 had obvious and trackable learning trajectories over time, therefore, the dynamic analysis in this section will only focus on A4-L4 & C13. Because the four patterns that appeared in the static analysis of learning moments also appeared in the learning trajectories in A4-L4 & C13 and have been counted in, as a result, no new learning patterns will be presented in this section. Instead, I will mainly describe how the learning developed dynamically.

A4-L4's has two noticeable learning trajectories, which involve his learning of two groups of Chinese words: "好啊" (hǎo a) and "好吧" (hǎo ba) (both meaning "all right", "ok"), "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr). His learning trajectory of "好啊" (hǎo a) and "好吧" (hǎo ba) is shown in Table 20.

Table 20 - A4-L4's Learning Trajectory Associated with "好啊" (hǎo a) and "好吧" (hǎo ba)

Steps	Descriptions
1	On 1 September (W-6, in Proposition 2, e-turn47), the mentee responded with "好啊" (hǎo a) to the mentor's suggestion that they could introduce local delicacies that they were both familiar with.
2	On 2 September (W-6), the mentee apologised for being too busy in doing his assignments to chat with the mentor. The mentor said: "没关系，你忙吧" (That's all right, just go ahead [and do your assignments]). Then the mentee asked why the mentor used "吧" (ba, *a modal particle*). C13 answered in e-turns 65-66 [NB: This is an example of Sub-pattern 2, Pattern 4]. But because in C13's example sentence in e-turn 66 she used "好吧", then in e-turn 67, the mentee asked if "啊" (a, another modal particle) and "吧" (ba) were identical, especially in "好啊" (hǎo a) and "好吧" (hǎo ba) [NB: This is an example of Sub-pattern 2, Pattern 4].
3	On 3 and 5 September (W-6), the mentor gave more examples to differentiate "好啊" (hǎo a) and "好吧" (hǎo ba) in e-turns 68-71.
4	On 7 September (W-7), after the mentee answered the mentor's questions about local delicacies and his hobbies, then in e-turn 79 he further asked whether "好啊" (hǎo a) was more polite than "好吧" (hǎo ba) [NB: This is A4-L4's noticing, which is related to the Sub-pattern 2, Pattern 4]. But there was an error when he used the comparative structure "A 比 B + adjective" in the sentence "好啊' 比 '好吗' 很客气吗？" ("Is 'hǎo a' politer than 'hǎo ma''? [NB: This is related to Pattern 1] In this structure, we can see that the mentee wanted to know the degrees of politeness of the two words.
5	On 8 September (W-7), the mentor answered that "好啊" was more polite than "好吧" (hǎo ba) [NB: This is C13's feedback, which is related to the Sub-pattern 2, Pattern 4], and corrected the error that A4-L4 made in e-turn 79 in the comparative structure, and in e-turn 93, she provided two kinds of examples: merely comparison (e.g., 我比他高 [I am taller than him]), and comparison with levels of difference (e.g., 我比他高很多 [I am much taller than him])[36] [NB: This is related to Pattern 1].

---

[36] "好啊' 比 '好吗' 客气吗？ " (Correct. It is a question.)

Steps	Descriptions
6	On 10 September (W-7), the mentee thanked the mentor for differentiating "好啊" (hǎo a) and "好吧" (hǎo ba).
7	On 11 September (W-7), the mentee asked questions on Chinese words with the meaning of "good" at varying degrees, like 很好 (hěn hǎo, very good), 太好了(tài hǎo le, too good), 真的好(zhēn de hǎo, really good), 那么好(nà me hǎo, so good). This expression was followed by "我不知道", which means 'I don't know', to indicate that he did not know the translation of this expression), 非常好(fēi cháng hǎo, very good. This expression was followed by a question mark to indicate that he did not know the translation), 极好 (jí hǎo, extremely good), etc. Then the mentor explained with examples in e-turns 104-112 [NB: This is an example of Pattern 3].

We can see that A4-L4's learning unfolded both in depth and in breadth over time: starting with asking about the differences between "好啊" (hǎo a) and "好吧" (hǎo ba), through to a further noticing (whether the former is more polite than the latter), to the final question involving different degrees of strength of different expressions of "好" (good). This example shows us that the learning and teaching were going deeper and wider. It involves both parties' efforts and noticings.

One more interesting example involves A4-L4's learning trajectory associated with particular features of Chinese syntax "有点儿" (yǒu diǎnr) and "一点儿" (yì diǎnr). The differences between "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr) are shown in Table 21, followed by the excerpts from the chat logs demonstrating this learning trajectory (Table 22). Both expressions can be used to indicate degrees. "有点儿" (yǒu diǎnr) can be followed by an adjective or a verb (i.e., 有点儿+ adjective/verb), whereas "一点儿" (yì diǎnr) is preceded by an adjective (i.e., adjective + 一点儿) to indicate comparison, or can be used before a noun (i.e., 一点儿 + noun) to indicate a limited amount of something. The "儿" (er) in both "有点儿" (yǒu diǎnr) and "一点儿" (yì diǎnr) can be omitted.

"好啊' 比 '好吗' 客气得多/很多。 (Correct. It is a statement.)
"好啊' 比 '好吗'更客气。 (Correct. It is a statement.)
But:
A 比 B 很+ adj. (Wrong)
A 比 B 很+ adj. 吗？ (Wrong)

Table 21 - Differences between "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr)

	Syntactical structure	Semantic meaning
一点(儿)	adjective + 一点儿	to indicate degree, but it is used in comparison with something else (see the examples in Table 22)
	一点儿 + noun	to indicate a limited amount of something (see the examples in Table 22)
有点(儿)	有点儿+ adjective	to indicate degree (e.g., 有点儿慢, a bit slow)
	有点儿+ verb	to indicate degree (e.g., 我有点儿喜欢猫, I sort of like cats.)

Table 22 - A4-L4's Learning Trajectory Associated with "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr)

Date & Week	E-turn	Sender & Time Message Excerpt		Translation or Notes
1-9 (W-6)	47	**A4-L4 15:29**		
		Ps1-4	...	
		P5	在**有中国城。但是我感觉它是小一点。	There is a Chinese town in CITY. But I feel it is small a bit.
14 -9 (W-8)	140	**A4-L4 09:15** 我们的天气预报有时错		Our weather forecasts are sometimes wrong
	141	**A4-L4 09:15** 我感觉麻烦一点 😊		I feel that it is troubling a bit 😊
	142	**C13 14:49** 我感觉有点麻烦 😊		I feel that it is a bit troubling 😊 *E-turns 141-142 is an example of Pattern 1.*
	143	**A4-L4 15:08** 为什么?		Why?
	144	**C13 15:10** a little in Chinese "有点儿" and "一点儿"		a little in Chinese [can be] "有点儿" and "一点儿"
	145	**A4-L4 15:11** Why do you need to put 点 before the adjective?		
	146	**A4-L4 15:11** But not after?		*E-turns 143, 145, 146 is an example of Sub pattern 2 Pattern 4.*
	147	**C13 15:33** 有点儿+adj：有点儿饿，有点儿累，有点儿不高兴（用"有点儿"的时候，常常是你觉得不太好）		有点儿+adj: A bit hungry, a bit tired, a bit unhappy (you use "有点儿" usually when you do not feel well)
	148	**A4-L4 15:35** 我明白了! 谢谢您		Got it! Thank you *"您" is more polite version of "you" than "你" in Chinese. See more in Section 4.4.3.1.*
	149	**C13 15:35** adj+一点儿：我比哥哥高一点儿。（我和哥哥）哥哥高一点儿。a little taller， this pattern is used when you compare A and B.		adj+一点儿: I am a little taller than my elder brother. (My elder brother and me) My elder brother is a little taller.
	150	**A4-L4 15:36** 啊!		Ah!

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
	151	**A4-L4 15:36** Adj + 一点儿 : for comparing?	
	152	**C13 15:36** 对	yes
	153	**C13 15:37** （我和弟弟）我高一点儿，弟弟矮一点儿。	(Me and my younger brother) I am taller a bit, younger brother is shorter a bit.
	154	**A4-L4 15:37** 啊啊啊啊! 我懂容易	Ahahahah! I understand [it's] easy
	155	**C13 15:37** （我的日语和汉语）我的日语好一点儿。 😳	(My Japanese and Chinese) My Japanese is a bit better. 😳
	156	**A4-L4 15:39** 谢谢您😁 ✌	thank you 😁 ✌
	157	**C13 15:43** 一点儿+noun：我想喝一点儿咖啡。我有一点儿时间。	一点儿+noun：I want to drink some coffee. I have some time.
	158	**A4-L4 15:44** 我知道这个语法。	I know this grammar.
27-9 (W-9)	230	**A4-L4 17:31** 我喜欢足球一点。我不打足球我只喜欢看在电视。	I like soccer a bit. I don't play soccer I only like watching [soccer games] on TV.
	234	**C13 17:33** 应该说"我不是特别喜欢足球	[You] should say "I don't like soccer very much" *E-turns 230 and 234 is an example of Pattern 1.*
11-10 (W- 11)	297	**A4-L4 23:21** 我不可以拍照片因为我的手机没有电池😭	I can't take photos because my phone is running out of battery 😭
	298	**A4-L4 23:21** [Video: *****.mp4 (View in attachment)]	*This is a video message.*
	299	**A4-L4 23:23** 但是我有一点视讯。	But I have a bit of a video clip.
12-10 (W-12)	312	**C13 19:53** 我有一点视频（shìpín）/录像（lùxiàng）。资讯的意思是新闻（news）	I have a bit of 视频（shìpín）/录像（lùxiàng）。资讯 means 新闻（news）. *Both "视频" and "录像" can mean "video".* *E-turns 299 and 312 is an example of Pattern 1.*
17-10 (W- 12)	348	**A4-L4 01:12**	Now [it's] late a bit. So I will tell you about Australian flowers! I think Australian (flowers) are very beautiful.
		P1	现在晚一点儿。	
		P2	所以我会告诉您澳大利亚的花! 我觉得澳大利亚的很漂亮。	
	352	**C13 21:21** 现在有点儿晚。我会告诉您澳大利亚的花，我觉得澳大利亚的很漂亮	It's a bit late now. I will tell you about Australian flowers, I think Australian [flowers] are very beautiful *E-turns 348 and 352 is an example of Pattern 1.*

Table 22 shows the dynamic Chinese learning trajectory of A4-L4. From this trajectory we can see that the previously mentioned learning patterns (e.g., Pattern 1 in e-turns 141-142, 230 and 234; 348 and 352; Sub-pattern 2, Pattern 4 in e-turns 143, 145-147; 150-156) identified in the momentary learning were mingled together in this example.

We can also see that although in e-turn 157, C13 provided an additional use of "一点儿", namely, "一点儿+noun", and although A4-L4 said he already knew this (e-turn 158) and he had correctly used it in "一点视讯" in e-turn 299, he made an error in the noun "视讯" (shìxùn, video, which is not a standard word in Mainland China), then in e-turn 312, C13 provided a sentence containing "一点", which confirmed A4-L4's correct use of "一点+noun", but she also provided the standard word for "video" in Chinese (视频 [shìpín]/录像 [lùxiàng]). It is apparent that C13 used what A4-L4 had grasped "一点儿+noun" as a scaffold, to support him to learn new lexical items (not only "视频", shìpín and "录像", lùxiàng, both meaning "video", but "资讯", zīxùn, which means "news").

The learning process may involve regression, which means that although A4-L4 said in e-turn 148 that he had understood how to use "有点儿+adjective", he made an error in Proposition 1, e-turn 348. In this instance, C13 provided corrective feedback again in e-turn 352. This example demonstrates that C13's support is constant and continuing.

The analyses of A4-L4's learning trajectories of "好啊" (hǎo a) and "好吧" (hǎo ba) (Table 20), and "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr) (Table 22) show us that A4-L4's learning of these two groups of expressions was also accompanied by learning of other expressions, for example, his learning of "好啊" (hǎo a) and "好吧" (hǎo ba) was interleaved by his two questions: "我不能唱歌！ 😭 但是我喜欢成唱歌唱很好 (对不对？我不知道)" (I can't sing songs! 😭 But I wish I could sing songs well [Is that correct? I don't know]) in e-turn 77 (W-7); and "我没有从不看雪(对吗？)" (I've never seen snow [Is it correct?]) in e-turn 81 (W-7) (see Table 15). Although the learning of a specific linguistic phenomenon is not necessarily constant (i.e., it could be intermittent or sporadic), there are subtle connections and they are integrated rather than just momentary or discrete. "Being not just momentary or discrete" means that learning is developing both in breadth and in depth, which I assume is more valuable than sporadic discrete learning. Therefore, these examples indicate that fragmented Chinese learning was accompanied by comprehensive learning.

Having analysed the evidence of Chinese learning, in Section 4.3.3, I outline mentees' comments on their mentors' mentoring, because their self-reports can provide additional insights into the first research question and connections to the last two research questions.

4.3.3 The three mentees' comments on their mentors' mentoring

In the second-round interview, for the question whether or not the mentees liked their mentor's way of mentoring on WeChat, both A1-L4 and A2-L4 commented that C11's way of mentoring on WeChat was good (for A1-L4, it was "very good", and for A2-L4 it was "really good"). However, as we can see in Appendices 10-12, C11 did not correct her two mentees' errors as often as C13 did, and the numbers of characters in C11's e-turns were generally fewer than in C13's. Therefore, in response to their answers, I asked both of them a further question: what is more important for you: (1) to chat more with her in Chinese on WeChat, so it doesn't matter if you made some mistakes and she did not correct you frequently; (2) to learn and to speak Chinese language correctly on WeChat, not necessarily to chat with her much; (3) neither (1) nor (2), because I have other opinions. Both of the mentees chose the first option.

A1-L4 explained that it was important that C11 corrected his errors sometimes, but it was more important that they talked more, covering more topics, then he could not only "learn about the culture" but also "the natural way of speaking" (19'13''-19'29'', the second-round interview). He further explained:

> Whereas in the textbooks, you learn about the grammar, and that would eventually come, but you… if you just learn textbook the whole time, I'll become a master of all the HSK and all the textbooks, I still won't be able to speak Chinese because you haven't had natural conversation before.
>
> (20'17''-20'35'', the second-round interview)

A2-L4's comments were similar to A1-L4's in terms of the natural conversations with C11. He also said that C11 answered his questions both in English and Chinese in an in-depth way, which was really helpful (17'21''-17'43'', File A, the second-round interview).

As for A4-L4, he said that he "definitely" liked C13's ways of mentoring using WeChat. For example, the pictures and audio messages that she sent were useful for him to learn better, and:

> … it's much more engaging, cos for me I am a visual learner, so when I see things, when

I see like visual stuff, such as pictures, videos, I learn… I'm much more engaged that way. So when I just see like a big bunch of texts, I just… I don't feel that as much engaging as when I see pictures and videos.

<div align="right">(after 14'44''-15'14'', the second-round interview)</div>

A4-L4 specifically commented on C13's ways of presenting her text messages, especially when she presented lexical or syntactical structures. He said: "The format is very clear. It's really organized as well, and it doesn't stay clumped up." (16'22''- 16'27'', the second-round interview) An example of C13 uses of delimiting and aligning strategies is in Table 23.

Table 23 - C13's Delimiting and Aligning Strategies in Presenting Chinese Words and Grammars

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
31-8 (W-6)	25	C13 20:32 Subject+在 place+Verb 我 在 **机场　 工作 我 在 学校　　 学习	Subject+在 +place　　　　+Verb I　　　 at CITY airport to work I　　　 at school　　　 to study

As discussed in Section 3.5.1.1 when I elaborated the necessity of differentiating and redefining sychronicity of CMC, I mentioned that in asynchronous communication, WeChat for Android users were able to have time to compose text messages and make the messages syntactically correct and lexically appropriate; they could divide the message into a couple of smaller units (i.e., propositions) by tapping the "return" key in the English keyboard (in the Chinese keyboard, the key is "换行") then the chunk would be sent as a whole by tapping the "send" key, and they were also able to delimit and align the message in different lines. C13 could do the delimitation and alignment of her text messages because her mobile phone had an Android operating system. Because delimiting and aligning text messages would take more time, text messages with this strategy indicated her effort and willingness to keep the communication open and make the Chinese learning more professional than just sending a chunk of text message.

In the second-round interview, there was a question concerning the ways the mentors' mentoring on WeChat influenced the mentees' learning. Overall, A1-L4 & C11 produced more short messages and frequent, disrupted turn-adjacencies than did A2-L4 & C11 and A4-L4 & C13. Examples can be seen in the excerpts of chat logs in the tables in Sections 4.3.1-4.3.2. After I showed A1-L4 his chat logs with C11, he contended that sometimes C11's short messages and the disrupted turn-adjacencies made him confused, and he might lose

track of the conversation, but he said: "I feel like that's the best way." (23'55''-23'58'', the second-round interview) He explained:

> Because it's just a natural conversation. If you talk to other people, that's how they send a message, like one word, maybe one or two sentences at most. Just to keep the conversation flowing and this sort of thing, instead of running big blocks.
>
> (23'58''- 24'14'', the second-round interview)

A1-L4 did not think that it was problematic if there were overlapped topics or threads in his communication with C11:

> Because it's just… that's like building up a friendship or a better conversation almost, because then you can go back to something else she was talking about before, instead of this straight line, boring conversation.
>
> (25'32''-25'45'', the second-round interview)

A1-L4's comments echoed Herring's (1999) findings that "some users exploit the potential of loosened coherence for the purposes of play and to enjoy intensified interactivity, especially in synchronous modes" (p. 11). And such "disjointed effects actually appear to attract users and enhance their enjoyment of the communication" (Herring, 1999, p. 1).

A2-L4 said that C11's ways of talking to him was "in [a] respectful manner", and it was more of "friend-and-friend", more "personal", and "informal yet professional" conversation (19'02''-19'53'', the second-round interview). And the influences on him was, as he said:

> The way she talked also encouraged me to reply. And it just spurred sort of more conversations. So for example, so if I'm talking to, like I'm emailing * Laoshi [the mentor's Chinese class teacher], often it won't be like lots of lots of emails together. It sort of through the use of WeChat and emojis, it sort of makes the conversation flow a bit more sort of friend-and-friend sort of thing.
>
> (20'01''- 20'34'', File A, the second-round interview)

The influences of C13's ways of mentoring Chinese language using WeChat on A4-L4's use of WeChat and learning was, as A4-L4 said:

> Because the teacher always uses emojis, and always sending pictures and videos, and also like constructive examples as well, I feel much more engaged and always I feel more encouraged to ask more questions and talk to her more.
>
> (18'50''-19'09'', the second-round interview)

The findings of the static analysis of the learning moments shown in Table 19 indicate that there was the most learning evidence in A4-L4 & C13 (45), A2-L4 & C11 ranked second, and A1-L4 & C11 had the least. Meanwhile, if we synthesise Table 19 with the analysis of the five participants' initiative to create the opportunities for Chinese learning, then in Table 24 we can see clearly that the two members in A4-L4 & C13 also took the most initiative and created the most opportunities (45), A2-L4 & C11 ranked second, and A1-L4 & C11 had the least. This finding reveals that if both parties in a pair take initiative it is possible to create more learning opportunities.

Table 24 - The Three Pairs' Learning Patterns and the Initiative that Each Pair Took to Create Opportunities for Chinese Learning

Types of Analysis	Patterns of Learning	Who Took the Initiative		The Times that (S)He Took the Initiative					
		Mentee	Mentor	A1-L4 & C11		A2-L4 & C11		A4-L4 & C13	
				A1-L4	C11	A2-L4	C11	A4-L4	C13
Learning moments (static analysis)	1. The mentee made an error, then the mentor gave corrective feedback.	_	+	0	8	0	1	0	26
	2. The mentee initiated a question regarding a Chinese language expression that he wanted to use, then the mentor gave feedback.	+	_	0	0	2	0	3	0
	3. The mentee attempted an expression and sought explicit feedback on a feature of their Chinese, then the mentor gave corrective feedback.	+	_	1	0	4	0	6	0
	4. (1) The mentee noticed the new phenomenon but did not take the initiative to ask for clarification.	+	NA	1	0	0	0	0	0
	(2) The mentee noticed a difference, then he sought mentor's feedback.	+	_	0	0	6	0	10	0
				Total:2	Total:8	Total:12	Total:1	Total:19	Total:26
				Total: 10		Total: 13		Total: 45	
Learning trajectories (dynamic analysis)	The four patterns appeared in the learning moments also appeared in the learning trajectories in A4-L4 & C13 and have been counted in.	+	+	NA	NA	NA	NA	NA	NA

The evidence of Chinese learning of the three mentees identified in Section 4.3 reveals three aspects. 1) The findings suggest the existence of opportunities for Chinese learning on WeChat, but the quantity of such opportunities varies in the three pairs (i.e., in the three pairs, A1-L4 & C11, A2-L4 & C11, A4-L4 & C13, the quantity of this opportunity for Chinese learning is ascending). 2) From Table 19 and Table 24 we can see the mentor and the mentee in the same pair took the initiative and worked collaboratively to create opportunities for Chinese learning on WeChat, but both parties in A4-L4 & C13 took stronger initiative than the two parties did in A1-L4 & C11, and in A2-L4 & C11. This finding raises the necessity for the both parties in the same pair to take strong initiative to create opportunities for Chinese learning. 3) The learning patterns of the three pairs, namely, the evidence of Chinese learning of the three mentees, were different in quantity, breadth, depth and form. The differences in the total numbers of the three mentees' learning patterns (namely, the different numbers of learning opportunities) in Table 19 are in line with the differences in their report of the mentor-mentee relationships (Section 4.2.1) and the mentoring itself (Sections 4.2.2 and 4.3.3).

Next, I will use the CMDA, the social presence density calculation as a quantitative method and the qualitative method as mentioned in Section 3.5.1, to investigate whether the proposed nine indicators of social presence (Table 3) influenced the mentor-mentee relationships and in what way they influenced the opportunities for Chinese learning in the three pairs, which is to answer the last two research questions.

4.4 Indicators of social presence that influenced mentor-mentee relationships and Chinese language learning

In this section, I first investigate three categories of the social presence element: affective communication, open communication, and cohesive responses in the three pairs. Then I provide an overview of the influences of the proposed nine indicators on the mentor-mentee relationships and the establishment of social presence in the three pairs.

4.4.1 Affective communication

4.4.1.1 Participants' use of paralinguistic features

This section starts with both quantitative and qualitative analyses of participants' uses of PFs in the three mentor-mentee pairs, followed by their functions in maintaining the mentor-mentee relationships and sustaining the opportunities for Chinese language

teaching and learning. I then turn to the aspects that influenced mentees' use of PFs.

Quantitative analysis

Appendices 13-16 document PFs other than emoji and emoji that the three pairs used separately. The analysis in this section focuses on the three Level 4 pairs' uses of PFs (in particular, emoji).

Table 25 shows the total number of emoji and then PFs other than emoji followed by the total number of PFs, first for each mentee and then for each matched mentor. The numbers of emoji, PFs other than emoji and hence the totals vary substantially (also refer to Appendices 13-16). However, two broad patterns apply within the pairs: either the mentor dominates (in A1-L4 & C11) or each member of the pair makes an equivalent contribution (in A2-L4 & C11 and A4-L4 & C13).

However, for the quantity of emoji, in A1-L4 & C11 and A4-L4 & C13, the two mentors used more emoji than the two mentees in terms of quantity (A1-L4: 8; C11: 57; A4-L4: 48, C13: 69), whereas in A2-L4 & C11, they used the same quantity of emoji (both used 22). All the five participants used more emoji than other PFs.

Table 25 - Participants' Use of PFs in the Three Pairs

Pair	Mentee			Mentor		
	Emoji	PFs other than emoji	Total	Emoji	PFs other than emoji	Total
A1-L4 & C11	8	1	9	57	13	70
A2-L4 & C11	22	3	25	22	3	25
A4-L4 & C13	48	22	70	69	1	70

Appendices 14-16 record what types of emoji (by investigating the exact images) that the mentor and the mentee in in each of the three pairs used, and how many times that each type of emoji was used.

Table 26 presents a summary of the identifiable emojis documented in Appendices 14-16. It demonstrates that the 8 emojis used by A1-L4 (Table 25) consisted of 8 different emoji (Table 26) and that the 57 emojis produced by C11 in this pair were made up of 15 different images. For A2-L4 the 22 emojis in Table 25 are made up of 4 different images and for C11 in this pairing the 22 emojis were made up of 8 different emoji. A4-L4's 48 emoji were made up of 11 different images while C13's 69 emojis were made up of 17 different images. This result indicates that both A4-L4 and C13 used wider ranges of emojis than the mentors and

mentees in the other two pairs.

Table 26 - Numbers of the Different Identifiable Images of Emoji that the Three Pairs Used

Pair	Mentee	Mentor
A1-L4 & C11	8: 😊 👍 😡 😂 😎 🍚 🎁 😩	15: 😊 👍 ❤️ 😇 😁 🤣 😛 😆 😳 😱 😍 🤓 😮 🥺 😭
A2-L4 & C11	4: 😊 🤭 🌞 😶	8: 😊 😇 🤭 😵 😆 😭 😁 👍
A4-L4 & C13	11: 😭 😊 😁 🤧 🥰 😍 ✌️ 😊 😛 ❤️ 🤭	17: 😊 😁 😛 🤭 👍 🤧 😵 👌 🤭 😎 😂 👍 🐨 🍁 🍎 🔭 🙏

Note: The seven emojis that have green shading were specifically used by C13 with pedagogic functions, which will be elucidated shortly.

Having finished the quantitative analysis of the PFs that the three pairs used, next I will present qualitative analysis and investigate the functions of the five participants' uses of PFs, mentees' retrospections about the mentors' uses of PFs, and the aspects that influenced mentees' uses of PFs. But because the overwhelming majority of the PFs are emoji, the focus will be on emoji.

Functions of PFs in establishing social presence

Emotional function

As discussed in Section 2.4.2.2, the emotional function may be overlapped with other functions (e.g., the communicative function). In this section, the analysis of the emotional nuances that emoji convey will be my focus, and my analysis starts with the emotions that an individual emoji conveys followed by the meaning that more than one emoji conveys.

For the emotions that individual emojis convey, an important example is C11's uses of the eyebrow-raising emoji (😮). Table 27 is an excerpt of chat logs that took place on 11 September (W-7).

Table 27 - Example of C11's Use of the 🤯 *QQ Emoji*

E-turn	Sender & Time Message Excerpt	Translation or Notes
536	**A1-L4 00:38** 对，可是我去上海明年	Yes, but I'll go to Shanghai next year
537	**A1-L4 00:40** 从一月至六月，那么北京从七月至十一月	From January to June, then Beijing from July to November.
538	**C11 00:43** 哈哈	Haha
539	**C11 00:43** 我明年在上海	I'll be in Shanghai next year
540	**C11 00:43** 你可以来找我	You can come and see me
541	**C11 00:43** 从一月至六月，那么北京从七月至十一月？	From January to June, then Beijing from July to November?
542	**C11 00:43** 什么意思	What does it mean
543	**C11 00:43** 没懂	Don't understand
544	**A1-L4 00:45** 在上海春季学期，后在北京秋季学期	[I'll be in] Shanghai in the spring semester, then Beijing in the autumn semester
545	**C11 00:48** 明年一月到六月在上海学习？	Will you study in Shanghai from Jan. to June next year?
546	**C11 00:48** 七月到十一月在北京学习？	Will [you] study in Beijing from July to Nov.?
547	**C11 00:49** 🤯	🤯
548	**C11 00:49** 为什么不反过来，一月到六月在北京，七月到十一在上海！	Why isn't it the opposite, from Jan. to June in Beijing, from July to Nov. in Shanghai!
549	**C11 00:50** 我明年六月毕业，就离开北京了	I graduate next June, then [I'll] leave Beijing [for Shanghai]

The QQ emoji 🤯 here conveyed C11's surprise and disappointment and her emotional changes: from being happy to being disappointed. Because in e-turn 538 she expressed her happiness by "haha" and asked the mentee to see her in Shanghai, then she realised that it was just the opposite, which meant she would not have an opportunity to see him. The pure written text messages in e-turns 545 and 546 were both followed by question marks, which reflected her surprise and disappointment, and the following eyebrow-raising emoji (🤯) helped convey her emotion: surprise and sadness. The following two e-turns (548 and 549) confirmed this emotion. A1-L4 was interviewed to elicit his perceptions of the mentor's use of the eyebrow-raising emoji (🤯) and his perceptions will be presented in my analysis of the PF's communicative function in the next section.

Let us turn to some examples of C13's use of individual emoji to convey emotions. An

example of C13's uses of the 😁 emoji conveyed her happiness when she and A4-L4 were talking about Australian animals. She said she really loved koalas and she thought that koalas looked very cute, which will be presented shortly (see e-turn 186 in Table 37).

Like the two mentors, the three mentees also used individual emoji to convey emotions. For example, A1-L4 used 😭 to convey his sadness when he told C11 that he had seen a dead kangaroo one day when he was running (see Table 38).

For the emotions that more than one emoji conveys, an example of C11's use of emoji syntagm is shown in Table 28. C11 really loved dogs, which she told me in the interview, and she was eager to see whether she could see a picture of A1-L4's dog by asking similar questions in three e-turns (192, 193, and 195). When she was not able to see A2-L4's dog in the picture, she expressed her sadness with the two QQ emoji.

Table 28 - C11's Emoji Syntagm in A2-L4 & C11

E-turn	Sender & Time Message Excerpt	Translation or Notes
190	**A2-L4 6:40 am** Image1(Voir dans la pièce jointe)	*The mentee sends a picture.*
191	**A2-L4 6:40 am** 我的狗**	My dog ** (the name of his dog)
192	**C11 12:05 pm** 在哪里？	Where (is it)?
193	**C11 12:06 pm** 你的狗在哪里	Where is your dog
194	**C11 12:06 pm** 图片是你的家吗？	Is the picture your place?
195	**C11 12:18 pm** **在图片里吗？	Is ** in the picture? *"**" is the dog's name.*
196	**C11 12: 18pm** 没找到啊！😫 😭	Didn't find it (the dog)!

The emoji syntagm "😫 😭" shows different configurations of the eyebrow positions (the eyebrows' position is lower in the first emoji than that in the second emoji) and of the representations of crying (the first one has two drops whereas the second one has a cascade of tears), each entails visual effects with different degrees of sadness: the second one seems to be conveying stronger sadness. When the two emoji were put together, they suggested an emotional progression: an increase in the degree of C11's sadness for not being able to see the mentee's dog in the picture. The emoji syntagm reflects what Danesi termed "emoji

grammar", and the effect of the conjunction of the emoji is *pragmatic (*2016, p. 78*)* or *reinforcing* (i.e., can be used to reinforce some verbally indicated meaning) (2016, p. 87). As a result, C11's emoji syntagm "   " conveys strong sadness and it was used after the textual message "没找到啊！" to reinforce the emotion.

A4-L4 also used emoji syntagms to convey his emotions. For example, A4-L4 used three crying emojis (containing two drops of tears) ( ) in e-turn 72 (Proposition 2) when he said that he would be very busy on the weekend because he had voluntary work to do in Week 6 (refer to Appendix 17). In Proposition 10 e-turn 366, he used three crying emojis (containing downpour tears) ( ) when he said that he had difficulty to explain the differences between Simplified Chinese characters, Traditional Chinese characters and Japanese Kanji. The repetition of such emoji visually conveys a stronger degree of sadness than one single emoji does: he was very sad that he would be very busy on weekend, and he was really frustrated when attempting to explain the differences between the three writing systems.

Appendix 17 shows the three pairs' uses of PFs chronologically and they depict the dynamic changes in their uses of PFs. In each of the three pairs, the mentors used emoji first. It appears that there is a general trend that the three mentees A1-L4 and A4-L4 used an increasingly wider range of emoji over time, but it is not so obvious for A2-L4. This finding can shed some light on the question proposed by Dunlap et al. (2015, p. 176): How does emoticon use change over time in online course and online programs?[38] And this finding also implies the influence of the mentors' uses of emoji first on the mentees' uses of emoji, which will be investigated shortly.

Communicative function

Dresner and Herring (2010) reported that emoticons could not only convey emotions but could convey speech acts. As discussed in Chapter 2, I analyse this function from three perspectives: conveying speech acts, signalling the opening or completion of one's turns, and substituting for written text to convey conceptual meanings.

---

[38] As discussed in Chapter 2, what Dunlap et al., 2015 referred to as an "emoticon" is considered within the broader category of "emoji" in this thesis.

(1) Conveying speech acts

In this section I analyse how the two mentors use emojis in response to the mentees' errors or semantic obscurity, and how these emojis worked in establishing social presence. Both C11 and C13 used single emoji to convey speech acts. I demonstrate C11's uses of four emojis in Tables 29-32, and C13's uses of two emojis in Tables 33-34. C11 also used emoji syntagm to convey speech acts, which is demonstrated in Table 35.

C11's uses of two QQ emojis (i.e., the winking and tongue-sticking-out emoji [ ], and the nose-picking emoji [ ]) in A1-L4 & C11 are shown in Table 29.

Table 29 - C11's Uses of Two Emojis (and) to Convey Speech Acts in A1-L4 & C11

E-turn	Sender & Time Message Excerpt	Translation or Notes
590	**A1-L4 16:27** **没有地铁	There is no subway in CITY
591	**C11 16:27** 从最近开始就要给你练习听力了	[I'm] going to start giving you opportunities to practise your listening skills
592	**C11 16:28** [Voice]	*A voice message*
593	**A1-L4 16:28** 是的。我觉得最好练习	Yes. I think it's better to practise
594	**C11 16:29** [Voice]	*A voice message.*
595	**A1-L4 16:31** **有一些，但两个城市都有火车	There are [subways] in CITY, but the two cities have trains
600	**A1-L4 16:35** 在**只有三个地铁站	There are only three subway stations in CITY
601	**C11 16:35** **不是没有地铁么[39]	(Didn't you say) CITY doesn't have a subway
602	**A1-L4 16:38** 坐火车到**八小时	It takes 8 hours to go to CITY by train

The communication in Table 29 took place on 11 September 2015 (W-7) when A1-L4 and C11 were talking about local transportation. C11 sent the winking and tongue-sticking-out emoji ( ) in e-turn 591 after she stated that she would start to help the mentee practise his listening skills soon. The mentee commented that his listening skills were "pretty bad" (between 3'06''and 3'40'' in the second -round interview) when he was communicating with his mentor on WeChat. This comment suggested that it would have been challenging for him

---

[39] "不是……吗？" or "不是……么?" (both mean: *Isn't …?*. "么" is often used as the substitute for the interrogative particle "吗") As a result, what C11 has 'asked' is a rhetorical question, which actually expresses her assertion: "是……" (*It is…*). The assertion contained is, therefore, "You said CITY had subway". The intonation of such a sentence structure is downwards.

to interpret the mentor's audio messages on WeChat. And being a postgraduate student majoring in CFL, C11 knew it would be challenging for the mentee. By using this emoji, she was conveying informally that: practising your listening skills will be challenging (assertive speech act); Are you ready to accept the challenges? Although we do not know what C11 said in the audio message sent in e-turn 592, we can make the inference from the mentee's response "Yes. I think it's better to practise". Then the winking and tongue-sticking-out emoji (😜) had perlocutionary force (see Section 2.4.2.2 for the three types of speech acts, and see more discussions about speech acts in Dresner & Herring, 2010), because "I think it's better to practise" is a response to the mentor's announcement of her initiative, which suggested that he would like to accept the challenge.

In addition to this perlocutionary force, in this context, the winking and tongue-sticking-out emoji (😜) was also conveying the mentor's playfulness and friendliness by hinting at teasing, just as we may wink at our close friends when they are facing challenges and say: "Are you ready to accept the challenge?" As the Chinese textual codes of this QQ emoji (i.e., "[调皮]" and "/调皮", which mean "naughty" or "mischievous"; it's English textual code is "[Tongue]") suggest, the QQ emoji was designed to convey the meaning of "being naughty" (see Xue, 2017 for more textual codes of QQ emoji).

Now let us turn to C11's use of the nose-picking QQ emoji 😜 in Table 29. A1-L4 first said that there was no subway in the CITY (in e-turn 590), then he said that there were subways in another Australian city (e-turn 595); however, shortly after that (i.e., in e-turn 600) he said that there were three subway stations in the CITY, which made the mentor confused. In the following e-turn, C11 commented with an assertive sentence but with rhetorical sentence mood: "**不是没有地铁么 😜" ([Didn't you say] that CITY didn't have a subway 😜".

As mentioned in Section 2.4.2.2, Dresner and Herring (2010, p. 252) argued that the emoticon ";-P" (a face with a tongue sticking out) conveyed emotional states rather than emotions per se. Similarly, this emoji 😜 might not convey a specific kind of emotion, instead, it could convey the mentor's illocutionary force: I am confused because I think that you have made mistakes somewhere in your sentences about the CITY's subway. The rhetorical sentence structure in the preceding sentence "**不是没有地铁么" ([Didn't you say] CITY doesn't have subway) is the linguistic clue about the illocutionary force conveyed

by the emoji. Therefore, it is possible that this nose picking emoji helped the preceding sentence convey illocutionary force, which was an assertive act, and expressed the mentor's statement: You made mistakes in your sentences about CITY's subway. At the same time, the use of this emoji introduced a light-hearted tone to the assertion.

A1-L4 suggested that he felt "[I]t's just playful or whatever" (14'12''-14'15'', the second-round interview). He believed that his Chinese was not good enough to explain that the CITY did not really have a subway, but there were a couple of underground stations. He maintained that he did not explain it well, "so then she thought that I contradicted myself" (14'50''-14'53'', the second-round interview), and he understood what she was conveying at that time. Therefore, this nose-picking emoji (🤭) can be seen as an indicator of the existence of close relationship and mutual trust between them.

C11's use of the eyebrow-raising emoji (🙄) is shown in Table 30. In this example, A1-L4 wanted to see a Chinese movie because he would have a Chinese examination the next day. In e-turn 759, he asked C11 to recommend a Chinese movie to him. But he made an error in e-turn 759 in "给我一个推介". The Pinyin of "推介" is "tuījiè", and the Pinyin for "推荐" is "tuījiàn". The two Pinyins are similar, so the mentor was not sure whether A1-L4 had just entered the wrong Pinyin, so she used the question mark to indicate her uncertainty. In e-turn 763, A1-L4 used three "哦"s to confirm C11's correction and added that the error was due to his "not good" Chinese listening skills. In this example, C11's use of the eyebrow-raising emoji (🙄) conveyed illocutionary force: I am sure that you made an error in your sentences in e-turn 759, but I am not quite sure whether what you meant to use is actually "推荐".

Table 30 - C11's the 😳 *Emoji to Convey Speech Acts in A1-L4 & C11*

E-turn	Sender & Time Message Excerpt	Translation or Notes
751	**A1-L4 20:01** 明天有中文听力考试	[I] have a Chinese listening exam tomorrow
753	**A1-L4 20:02** 所以我想看一个中文电影	So I would like to see a Chinese movie
754	**C11 20:02** [Voice]	*An audio message.*
755	**C11 20:02** [Voice]	*An audio message.*
756	**A1-L4 20:03** 这是第一考试	This is the first examination
757	**A1-L4 20:04** 我可能不错	I can do it well
758	**C11 20:07** [Voice]	*An audio message.*
759	**A1-L4 20:08** 哈哈。给我一个推介。我不值得	Haha. Give me a 推介. I'm not worth it. *Haha. Give me a recommendation. I don't know [Chinese movies]*
760	**C11 20:10** 😳	😳
761	**C11 20:10** 给你推荐一个？	Recommend one to you?
763	**A1-L4 20:12** 哦哦哦。😡 我不听力好	Oh oh oh. 😡 My listening skills are not good

The emotional function of the eyebrow-raising emoji (😳) has been investigated earlier. Its communicative function has been described here. In the second-round interview, I asked A1-L4 about his perceptions of C11's uses of the emoji. He generally interpreted the eyebrow-raising emoji (😳) as an indicator of someone being angry, as he reported: "because of the eyebrows", and he believed "because always in English or Australia, with the eyebrows like that, it means angry" (17'37''-17'42'', the second-round interview). But he did not think that this use of that emoji suggested that his mentor was angry at that time. He only interpreted it as the result of misunderstanding. And he also explained: "I don't jump to conclusions with these things and think 'oh, no, she is angry at me or anything', I'm just like my Chinese is bad, so maybe…" (17'22''-17'31'', the second-round interview).

C11used the chuckling emoji (🤭) to convey speech acts to respond to her two mentees' linguistic errors, as shown in Tables 31-32. In Table 31, the chuckling emoji (🤭) was used after C11 indirectly gave the mentee corrective feedback by asking him a question (in e-turn 578) to confirm his meaning. By comparison, in e-turn 650, the emoji was used more directly after reminding the mentee of the error (in e-turn 648).

Table 31 - C11's Use of the 🤭 Emoji to Convey Speech Acts in A1-L4 & C11

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
11-9 (W-7)	572	**C11 16:10** 你打算以后做商人？	Are you going to be a businessman?
	575	**A1-L4 16:12** 我想做商用了汉语	I would like to do commercial 了 Chinese
	578	**C11 16:15** 你想用汉语做生意？	Would you like to do business in Chinese?
	579	**C11 16:15** 🤭	🤭
17-9 (W-8)	648	**A1-L4 12:09** 没问题。这个星期我会做聊天很小	No problem. This week I will do chat very small
	649	**C11 12:11** 什么叫聊天很小	What did you mean by 聊天很小
	650	**C11 12:11** 🤭	🤭

C11 also used the chuckling emoji (🤭) in giving corrective feedback to A2-L4, which took place on 19 August (W-4), as shown in Table 32. The chuckling emoji (🤭) in e-turn 58 confirmed the mentee's speculation in e-turn 55 by giving him the correct sentence directly.

Table 32 - C11's Use of the Chuckling Emoji (🤭) to Convey Speech Acts in A2-L4 & C11

E-turn	Sender & Time Message Excerpt	Translation or Notes
55	**A2-L4 12:20 am** 不客气！谢谢你帮我，我觉得你真的有用！我很抱歉回复你真么晚。如果你觉得我可以写某勿办法更好，请告诉我。(if you think that i could say something in a better way, please tell me). I'm pretty sure that last sentence of mine in incorrect haha. Thanks for all your help so far!	*The mentee translated the last Chinese sentence into English by himself.* *The first three Chinese sentences in this message can be translated into:* You are welcome! Thank you for helping me, I think you are really supportive! I'm so sorry for replying to you so late.
56	**A2-L4 12:20 am** is*	*The mentee points out the "in" in the previous e-turn is a typo, and it should have been "is".*
57	**C11 12:25 am** 告诉我最合适的说法	Tell me the most suitable expression
58	**C11 12:25 am** 🤭	🤭

On the basis of the above analysis, it is possible to conclude that the three QQ emojis 😳 and 🥵 can be used to convey nuances of negative emotions. A1-L4's understanding of 😳 as a light-hearted symbol of anger because of the eyebrows meant that he did not think the

mentor's use of 😝 emoji was offensive. Therefore, we may conclude that these examples indicate that the mentor C11 was confident to express her emotions: she was confident that they had established a close relationship, and that her use of these emoji would not cause misunderstandings. Moreover, neither A1-L4 nor A2-L4 thought that C11 had used any offensive or rude emoji, which also confirmed that they understood what C11 was trying to convey with those emoji, which suggested that they also thought that they had established a close relationship with C11.

Tables 33 -34 demonstrate C13's use of two individual QQ emoji: 😊 and 😛 . In Table 33, in this excerpt of chat logs, C13 used three smiley face emojis (😊) in responding to A4-L4's linguistic errors. If the first smiley face emoji (😊) sent in e-turn 24 suggested that she was happy to know something that A4-L4 told her about himself in the previous e-turns, then it would be implausible to interpret the second smiley face emoji (😊) sent in e-turn 26 as indicating her happiness about the same point, especially since she had just corrected the mentee's mistake. Instead, it is plausible to interpret this emoji as an indicator of mitigation of her assertive illocutionary act: "You (the mentee) made a mistake. Here is the correct sentence structure." It conveys a meaning something like 'I'm not angry' or 'Don't be upset'. In addition to this, this smiley face emoji also functions as the signal of the completion of her turn, and her giving the floor to the mentee. This resonates with Herring's (1999) argument about the "turn-change signals", which was one user strategy to adapt to the medium (the other three strategies can be seen in Herring 1999, p. 7-8).

Table 33 - C13's Uses of the 🤪 Emoji and the 😊 emoji to Convey Speech Acts (Part 1)

Date & Week	E-turn	Sender & Time Message Excerpt		Translation or Notes
31-8 (W-6)	23	**A4-L4 20:27**		
		P3	...	...
			我喜欢做工作在**飞机场。我要 说很多语言!	I would like to work at CITY Airport. I want to speak many languages!
		P4	...	...
	24	**C13 20:30** 是这样，知道了。😊 有句话不对，应该是："我喜欢在**飞机场工作" 🤪		OK, got it. 😊 One sentence is wrong, it should be: "我喜欢在**飞机场工作" 🤪
	25	**C13 20:32** Subject+在 place+Verb 我 在**机场 工作 我 在 学校 学习		Subject+在 place+Verb 我 在 CITY 机场 工作 我 在 学校 学习
	26	**C13 20:33** 😊		😊
	27	**A4-L4 20:44** 啊! 谢谢您! 我怎么说"I understand now" ?		Oh! Thank you! How can I say "I understand now"?
	28	**C13 20:44** 我知道了。or 我明白了。		我知道了。 or 我明白了。
	29	**A4-L4 20:45** 谢谢您!		Thank you!
	30	**A4-L4 20:45** 我可以叫您*老师吗?		Can I address you as *老师？[* Laoshi/teacher.]
	31	**C13 20:46** 不客气，我就是帮助你学习汉语的，你想知道的都可以问我😊		You're welcome, I'm here to help you with Chinese language learning, you may ask me whatever you want to know 😊
	32	**C13 20:46** 当然可以		Sure
	33	**C13 20:46** 👋		👋
	34	**A4-L4 20:48**		
		P1	我很高兴!	I am so happy!
		P2	我想问你一个问题。	I want to ask you a question.
		P3	你喜欢什么爱好?	You like what hobbies?
	35	**C13 20:50** 应该说："你喜欢什么" or "你有什么爱好" 🤪		It should be: "你喜欢什么" or "你有什么爱好" 🤪

And the third smiley face emoji (😊) in e-turn 31 was following her response to the mentee's expression of appreciation for her explanation (in e-turn 29) and reinforced her willingness to help him with Chinese language learning and her friendliness, which is a commissive act: I promise to help you with Chinese language learning, and you can ask me

questions concerning Chinese language learning. However, it may also be interpreted to be conveying her happiness (emotional function): I am happy to help you with Chinese language learning. That is, it can be interpreted to be conveying illocutionary force, conveying emotion "happiness" while also signalling the completion of her turn.

As for C13's use of the winking eyes and tongue sticking out emoji (😜) in Table 33, she used this emoji twice in different e-turns (24 and 35), but both of them were used after she offered corrective feedback. The first error reflected the wrong word order, and the second reflected the wrong combination of two sentences with the same meaning. Because "What are your hobbies?" is more appropriately expressed in Chinese as: either "你喜欢做什么？" (What do you like to do?) or "你有什么爱好？" (What are your hobbies?) rather than "你喜欢什么爱好？" (literally, "You like what hobbies?")

C13 used the winking eyes and tongue sticking out emoji (😜) twice after she corrected the mentee's two errors (e-turns 24 and 35). The textual codes for the emoji 😜 are "[Tongue]", "[调皮]" and "/调皮" (tiáo pí, naughty or mischievous) (see Xue, 2017 for textual codes of more QQ emoji). It is highly unlikely that she was suggesting that she was naughty in such a context. And the English textual "[Tongue]" has been conventionally regarded as indicating meanings of teasing, flirting and sarcasm. Unlike C11, who used the QQ emoji 🤣 , 😋 and 😜 in similar settings, C13's uses of 😜 indicate some of the individual differences associated with using emoji, which confirms my assumption mentioned in Chapter 2: the use of PFs is individual-sensitive.

Taking account of the context that the mentor was correcting the mentee's errors in two sentences, for an adult university student, it is potentially embarrassing if someone pointed out your mistakes in your additional language. The two winking eyes and tongue sticking out emojis (😜) may have been intended to help mitigate the threat to the mentee's face, as they have the potential to downgrade the utterance to a less face-threatening speech act, which is in line with what Dresner and Herring (2010, p. 257) argue in relation to the winking emoticon.

Another example of C13's use of the winking eyes and tongue sticking out emoji (😜) can be seen in e-turn 404, Table 34. On 28 October, she took the initiative to contact the mentee

after they had not chatted for one week (their previous communication had taken place on 21 October). The emoji was used after she explained that she had been so busy that she had not chatted with him for a while, and she apologised for it. In the first-round interview, she reported that it was fine for a mentor to take the initiative to contact his/her mentee if they had not chatted for a while, and that this could convey her care for the mentee (see her feedback in Section 4.4.2.3).

Table 34 - C13's Use of the 🤪 *Emoji to Convey Speech Acts (Part 2)*

E-turn	Sender & Time Message Excerpt	Translation or Notes
404	**C13 20:59** **，最近是不是很忙啊？我最近工作比较忙，没有跟你聊天儿，不好意思 🤪	**, have you been very busy recently? I've been pretty busy, so I haven't chatted with you, sorry 🤪 *(** is the mentee's Chinese given name)*

Considering the fact that C13 was helping the mentee with Chinese language learning voluntarily although she was working at a university and she was busy, it is understandable that she had not chatted with the mentee for some time, but she assumed the responsibility and apologised to the mentee first, which indicates an informal (supportive) relationship and her willingness to carry on the communication. This was confirmed in her communication with me in November 2017 (see more of her feedback in Section 4.4.2.3).

However, "不好意思" (bù hǎoyìsi, *sorry*) in this e-turn should not be viewed as seriously conveying apology. As studies (Sun, 2011; Yi, 2005) concerning Chinese apology expressions suggest, there is a tendency that "不好意思" is replacing part of what "对不起" (duìbùqǐ, *sorry*) conveys, and the former conveys a lighter tone of apology than the latter. This change results from changes in Chinese people's values: Chinese people now tend to use more neutral and egalitarian expressions: when "对不起" (duìbùqǐ, *sorry*) is used to express apology, it reflects hierarchical differences between the interlocutors, and mirrors the speaker's timidity and sense of inferiority. Currently people, in particular, young people, in China prefer to use "不好意思" (bù hǎoyìsi, *sorry*) to express apology and politeness (Refer to Li & Du, 2012; and Yi, 2005 for different opinions in relation to this tendency).

The emoji (🤪) seems not to indicate that she was teasing or flirting with the mentee, instead, by using this emoji, she had downgraded the utterance to a less face-threatening speech act, by indicating that it was not the mentee's fault and he did not need to feel guilty for not having chatted with her for a long time (one week). She was even suggesting that it

was her fault. As Dresner and Herring argued, because emoticons convey a nuance of playfulness, even what appears to be the illocutionary force of the emoticon should not be taken seriously (2010, p. 260). We can see that C13's use of the 😜 emoji also had illocutionary force: for the mentee not to take her apology seriously, which not only echoed the lighter tone of apology conveyed by the written characters "不好意思" (bù hǎoyìsi, *sorry*), but even further alleviated the seriousness and formality of her apology compared to it had been only expressed as a text message "不好意思" (bù hǎoyìsi, *sorry*). The findings regarding C13's uses of both "不好意思" and the 😜 emoji in e-turn 404 resonate with the position of Li and Du (2012) in relation to the tendency in Chinese people's expressions of apology.

In addition to the single use of individual emoji to convey speech acts, C11 also used different collocations of emoji, that is, *emoji syntagms* to convey speech acts. An example is shown in Table 35. In e-turn 13, the emoji syntagm involves four QQ emoji. The thumbs-up emoji (👍) was used repeatedly to convey her praise for him: "You know such a professional term, which indicates that your Chinese proficiency is good". And the red heart emoji was conveying her happiness about having a student with good Chinese language proficiency. It is noteworthy that both the thumbs-up emoji (👍) and the red heart emoji (❤️) have the same cultural connotations in Australia and China, to be more specific, the mentee A1-L4 is an Anglo-Australian, and the mentor is Chinese, therefore, there is no risk of cultural-specific misinterpretation between them, unlike the case that Danesi (2016, p. 31) specifies where the thumbs-up emoji is hideously offensive in some regions (i.e., "parts of the Middle East, West Africa, Russia, and South America"), which I referred to in Chapter 2.

Table 35 - C11's Use of Emoji Syntagm to Convey Speech Acts

E-turn	Sender & Time Message Excerpt	Translation or Notes
10	**A1-L4 19:21** 这是从英文直译。	This is from English literal translation.
11	**C11 19:22** 哇哦！	Wow!
12	**C11 19:22** 你好棒！	Well done!
13	**C11 19:23** 竟然知道这么专业的词语『直译』。👍👍👍❤️	(It's unbelievable) that you know such a professional term "literal translation".

(2) Signal the opening or completion of one's turns

Text-based CMC has been claimed to be incoherent, fragmented, agrammatical, and interactionally disjointed, which tends to be more apparent in the intensive semi-synchronous text-based chats (Herring, 1999; Pasfield-Neofitou, 2011, p. 105). However, it appears that PFs can function as indicators of turn-taking and help indicate the thread of the topic and avoid such disruption and decay.

For example, in Table 33, the stand-alone emoji, such as the smiley face (😊) in e-turn 26 and the OK emoji (🖖) in e-turn 33 indicated that C13 had completed her turns and was giving the floor to A4-L4. This function resonates with Danesi's notion of emoji's "punctuation function", which consists of "mood breaks" in the flow of the text and "mood finales" used at the end of messages (2016, p. 105).

Moreover, the OK emoji (🖖) in e-turn 33 in Table 33 was preceded by "当然可以" (*Sure*) in e-turn 32, a response to the A4-L4's enquiry about whether he could call C13 "* Laoshi". As Cherny (1995) reported, backchannels were used so frequently that the MUD[41] participants devised a set of programming 'shortcuts' to type some of them, such as "nods", "laughs", "giggles" and "waves", and these "shortcuts" can be used repeatedly, such as "nodsnods", "waveswaveswaves" and "laughslaughs" (pp. 162-164). Therefore, the OK emoji (🖖) in Table 33 also functioned as the backchannel of the "nods" shortcut that the MUD participants devised in Cherny's study (1995), and there it signaled listenership, the completion of her turn, passed the floor to A4-L4 and encouraged the mentee to start a new turn, which is a representative of PFs' communicative function. In e-turn 34 in Table 33, we can see that A4-L4 did start a new turn with three prepositions.

(3) Substitute for written text to convey conceptual meanings

The configuration of a bowl of rice and a pair of chopsticks emoji (🍚)[42] in Table 36 has the connotative meaning of Chinese, or in a more general sense, Asian food. It also refers to the mentor's lunch although her lunch was noodles rather than rice.

---

[41] MUD: multi-user dimension, which refers to the internet forum that involved text-based CMC. See more in Cherny (1995, Abstract).
[42] This QQ emoji has been removed from WeChat's default emoji set, how it was reconstructed can be seen in Xue (2017).

Table 36 - A1-L4's Substitutive Use of Emoji

E-turn	Sender & Time Message Excerpt	Translation or Notes
358	**C11 20:28** 我的饭来了	Here is my lunch
359	**C11 20:29** 吃完饭再聊 😊	Will chat with you after having my lunch
360	**A1-L4 20:30** 对不起	Sorry
361	**C11 20:34** [Images:@@.jpg(View in attachment)]	*A picture of her lunch*
362	**A1-L4 20:36** 看起来好吃	It looks tasty
363	**A1-L4 20:37** 我最爱白菜	My favourite is Chinese cabbage
364	**A1-L4 20:38** 面条	Noodle
365	**C11 21:39** 吃起来也好！	It also tastes good
366	**C11 21:40** 对	Yes
367	**C11 21:40** 这美食的名字叫 西红柿鸡蛋面	The name of this gourmet dish is: tomato and egg noodles
368	**A1-L4 22:05** 🍚👍	*The first QQ emoji is actually a bowl of rice, instead of noodles.*
369	**A1-L4 22:05** 我也喜欢鸡蛋	I also love [eating] eggs

The emoji syntagm in e-turn 368 is: a bowl of rice + thumbs up. This syntagm completely replaced the written text and conveyed the conceptual meaning visually, which can be conveyed in English and in Chinese:

🍚   👍

<u>Your lunch</u>   (is)   <u>good</u>

Subject   (Linking Verb)   (Subject Complement)

<u>你的午饭</u>   <u>很好</u>

Topic   Comment

As discussed in Section 2.4.1.2, this example has a conceptual syntactic structure and the layout of the two emoji mirrors both English grammar (Subject+ Linking Verb+ Subject Complement) and Chinese grammar (Topic+ Comment). "But such kind of mirroring is not an emoji-for-word one, but rather a pictorial-concept-for-word one." (Danesi, 2106, p. 79) This example is the only emoji syntagm in the dataset that has the conceptual-iconic grammar that is consistent with Chinese syntax. More QQ emojis' communicative functions

will be elaborated in later sections in investigating other indicators of social presence.

Pedagogic function

As mentioned in Section 2.4.2, I assume that probably in addition to the emotional function and communicative function, PFs could have other function(s). In Table 37 we can see that five emoji were used with a new function that is different from the emotional function or communicative function, therefore it can be categorised as the third function, which reflects on C13's approach to Chinese language teaching: I refer to it as the "pedagogic function".

Table 37 - Pedagogic Use of Emoji in A4-L4 & C13

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
11-9 (W-7)	95	**C13 00:05** 不是穿面具，是戴 dài 口罩 (kǒuzhào)	It's not 穿面具, but 戴 dài 口罩 (kǒuzhào) It is not "put on mask", but "wear face mask"
	96	**C13 00:05** 口罩😁	*She is illustrating meaning and giving corrective feedback.*
19-9 (W-8)	186	**C13 16:43** 澳大利亚有很多特有的动物，非常有名，比如袋鼠（dàshǔ），鸸鹋（ěrmiáo），鸭嘴兽（yāzuǐshòu）。我非常喜欢考拉（kǎolā）🐨，它的样子特别可爱。😁	There are many distinctive and famous animals, such as kangaroo, emu and platypus. I love koala🐨 very much, it looks very cute. 😁 *She is illustrating meaning.*
15-10 (W-12)	336	**C13 14:24** P1 我喜欢红的苹果🍎 P2 🍎我喜欢红的	*She is modelling grammar.* I like red apples 🍎 🍎 I love red
21-10 (W-13)	396	**C13 16:16** 上下班时间，北京堵车很严重，我住的地方离学校不远，所以我不坐车，我每天骑自行车🚲😎	There are heavy traffic jams in the peak hours in Beijing, I live not far from the uni, so I don't take vehicles, I ride a bicycle every day. 🚲😎 *She is Illustrating meaning.*
9-10 (W-11)	288	**C13 02:34** 红叶也是人们喜欢看的，比如枫叶🍁，秋天的时候山上很多树都红了，看上去整座山颜色鲜艳，漂亮	People also enjoying the sightseeing of red leaves, like maple leaves 🍁, many trees turn red in the mountains in the autumn, and the whole mountain is brightly coloured, gorgeous. *She is illustrating meaning.*

In Table 37, we can see that C13 provided both the characters and the *pinyin* "口罩 (kǒuzhào) of the word when she was correcting the mentee's error "穿面具" (chuān miànjù, put on mask), then she used the wearing face mask emoji (😁) to connect the characters

and pinyin with an image. The same effect applies to her use of the koala emoji (🐨) when she was telling the mentee that she loved koalas. Although she did not provide the *pinyin* of "枫叶" (fēngyè, maple leaf), she utilized the maple leaf emoji (🍁) to indicate the meaning of this word. This practice similarly applied to the red apple emoji (🍎) in Proposition 1 e-turn 336 and the bicycle emoji (🚲) in e-turn 288.

The five QQ emoji mentioned above were used pedagogically to demonstrate the meaning of the corresponding words, which she assumed to be new for the mentee. However, if we take account of the A4-L4's level, the fourth level in the Chinese program at the university, he had probably learnt "苹果" (píngguǒ, apple) and "自行车" (zìxíngchē, bicycle) before and might have known their meanings and could recognise the characters, as a result, the pedagogic function of the emoji 🍎 and 🚲 was much weaker than with the remaining three emoji: 😂, 🐨 and 🍁. Nonetheless, they could still help remind her mentee of the characters in the two words and help connect the characters with the images. In other words, the mentor used these emoji to help her demonstrate what the characters referred to. As such, these emoji were used as realia and had lexical meanings.

Drawing on Danesi's (2016) notions concerning the emoji and their corresponding written texts (i.e., either adjunctively or as substitutes on their own, or in a mixed textuality), the emoji in Table 37 (excluding the second red apple emoji) were used adjunctively with the written text. Below is a detailed analysis of the two red-apple emojis.

In the sentence "我喜欢红的苹果🍎," the syntactic structure is:

我	喜欢	红的	苹果🍎
I	like	red	apple
Subject	Verb	Attributive	Objective

In this proposition, the emoji was used as a visual supplement of the word "苹果", to facilitate the presence of the grammatical structure "adjective + 的+ 苹果". In contrast, in the following proposition "🍎我喜欢红的", the red apple emoji was used instead of the noun "苹果" (píngguǒ, apple), to be specific, it was used as the topic in the topic-comment sentence, and it was endowed with lexical meaning and assumed the syntactical role in this sentence.

This finding is in line with Nicholas and Starks, who argued that the "heart" image can be used as a verb to express "to love" when it is placed between "I" and "NY" in the sequence of "I ❤️ NY", which can be read aloud as "I love New York" (2014, p. 9).

🍎   我喜欢红的

(Apple)   I like red

Topic   Comment

S (苹果, Píngguǒ, *Apple*)   s + v + "的"(de) phrase

Although the above analysis reflects that the mentor C13's use of the five emoji has pedagogic values, the mentee A4-L4 did not think they were helpful for his Chinese language learning. As he said: "It's more of the relationship between the student and the teacher." And "I don't think it helps me learn Chinese much more better." (10'35''-10'53'', the second-round interview)

A4-L4's feedback suggests that the pedagogic function of emoji was not prominent for him. A possible reason is that C13 used some emoji as realia to help him understand some words or characters, but he had previously grasped those words or characters. C13's explanation of her uses of examples is consistent with A4-L4's feedback:

> ……我可能……因为我教的级别可能比**还要低，所以我可能给他的例子反而是比**的水平可能更低一点。其实我并不是特别了解他的水平。
>
> (… probably I… because the levels that I am teaching [in the classroom settings] are lower than **'s [the mentee's Chinese given name] level, so the examples that I gave him may be lower than **'s [the mentee's Chinese given name] level. Actually, I don't know his proficiency very well.)
>
> (6'08''-6'20'', File D)

So far, I have documented the quantitative findings of participants' use of PFs in the three pairs and the two functions of participants' use of PFs in establishing social presence (i.e., emotional function and communicative function) and identifies an undocumented function (i.e., the pedagogic function) of PFs. The next section will bring forth mentees' comments on the influences of their mentor's uses of PFs.

Mentees' comments on the influences of mentors' uses of PFs

In the second-round interview, the five mentees' responses to the questions regarding

whether the mentors' uses of PFs were helpful/useful, and how the mentor's use of PFs influenced their communication can be summarized in five aspects.

First, mentors' uses of PFs helped build and sustain the mentor-mentee relationship. As A2-L4 put it: "It sort of brings you two together, a sort of more personal level" (10'40''-10'48'', the second-round interview). He further explained:

> A2-L4: It definitely helped the conversation and sort of relationship…
> R: build the relationship.
> A2-L4: Yeah, it was definitely positive. So breaks down sort of barriers between informality (and formality). So like, it's sort of more personal. Like as I said before, like I wouldn't say something to * Laoshi [the lecturer] that I would say to * Laoshi [the mentor C11]. It's a bit more like a friend sort of conversation.
>
> (13'01''-13'35'', the second-round interview)

Second, mentors' uses of PFs influenced mentee's uses of PFs. For example, although A4-L4 maintained that he liked using PFs in western social media in general, in that they could make the conversation much more casual and relaxing, he was a bit hesitant to use them, in particular, emoji, with the mentor C13. As he explained:

> Because I feel like it's a student-and-teacher relationship, whereas then the teacher used the emojis back, so I thought it will be ok if I sent some emojis back. So, then it made learning Chinese much more relaxing. It's much more comfortable.
>
> (8'15''-8'35'', the second-round interview)

A4-L4 further explained:

> I think it's just for like young adolescents that find that much more comfortable. Like they … cos you bond over much more with when you become more relaxed and comfortable.
>
> (8'58''-9'11'', the second-round interview)

Third, mentors' uses of PFs helped lighten up the conversation. For example, in A1-L4's words, "lightens up the conversation", "less robotic" and "less strict"; A2-L4 reported that mentors' uses of PFs "brightens the mood". As for A4-L4, he commented that C13's uses of PFs "make the learning environment much more comfortable and relaxed" and "much more casual" (9'35''-9'42'', the second-round interview, File A).

Fourth, mentors' uses of PFs helped them understand mentors' meaning. For example, A2-L4 said his mentor C11's English helped him understand, but emoticons and emoji:

> ... can also help you understand like what she means. Like she might be having a really good day, she might have like a happy emoji or something... also like if she is laughing or something. Sometimes like that sort of help you understand a little bit more.
>
> (11'14''-11'35'', the second-round interview)

Fifth, mentees became more willing to seek more learning opportunities for Chinese language. In A1-L4's words, "it's a positive influence" (12'22''-12'25'', the second-round interview). He further explained:

> A1-L4: Well, so it does help learning. Because it makes the relationship more friendly, and when it's more friendly, you have more incentive or more reason to talk with each other. So that's why I think it helps.
> R: To talk to each other and then more learning happens.
> A1-L4: Yeah.
>
> (11'49''-12'06'', the second-round interview)

A2-L4 echoed what A1-L4 said by saying:

> Yeah, so the way she sort of talk to me, it was, umm, in respectful manner, but also using emoticons and emojis, sort of umm, evens the playing field, sort of, it was more sort of, friend-and-friend sort of... it wasn't like I'm talking to like my teacher, and I have to be like, sort of like polite. It was sort of like the relationship was quite... it was like it was polite, but it was sort of more personal, so we had a sort of informal yet professional sort of conversation.
>
> (19'02''-19'51'', the second-round interview)

And the influence on A2-L4's Chinese learning is:

> A2-L4: The way she talked also encouraged me to reply. And it just spurs sort of more conversations. So for example, so if I'm talking to, like I'm emailing * Laoshi [the mentee's Chinese subject lecturer], often it won't be like lots of lots of emails together. It sort of through the use of WeChat and emojis, it sort of makes the conversation flow a bit more sort of friend-and-friend sort of thing.
> R: So you can keep asking her more questions.
> A2-L4: Yeah. But at the same time, she was still a teacher and very professional, so it was really good, very helpful.
>
> (20'01-20'49, the second -round interview)

Here is A4-L4's comment:

> A4-L4: 18'50'' Because the teacher always uses emojis, and always sending pictures and
> videos, and also like constructive examples as well, I feel much more engaged and
> always I feel more encouraged to ask more questions and talk to her more.
>
> (18'50''-19'09'', the second-round interview)

Based on the above analysis we can see that mentors' use of PFs, in particular, QQ emoji, helped convey friendliness and willingness to help the mentees with Chinese language learning, which helped increase the levels of social presence in the three pairs. In general, the PFs were used to convey positive emotions, which coheres with the conclusions of Novak et al. (2015) and SwiftKey (2016), as discussed in Section 2.4.2.1. And mentees' responses suggest that the PFs used in the mentors' feedback reduced the transactional distance between mentors and mentees, which answers the question that Dunlap et al. (2015, p. 175) proposed for future research.

Aspects that influenced participants' use of PFs

Data analysis reveals that four aspects influenced participants' use of PFs, including three situational aspects (mentor's influence, mentees' personal ways of using PFs, the topic of discussion) and one technological factor.

(1) Mentor's influence

Appendix 17 shows that in the three pairs in Level 4, the two mentors used emoji before the three mentees. Although A2-L4's use of PFs was not remarkably influenced by C11, both A1-L4 and A4-L4 reported explicitly the ways in which the two mentors' uses of PFs influenced how they used them. A1-L4 said that C11's uses of the emoji or emoticons made him use more although he did not use them extensively. Below is what he said:

> It made me use more because I think especially when you are talking across languages,
> and you have to both be talking a language that isn't your first language, you use the
> emojis or the emoticons to sort of express a lighter tone … to lighten the conversation
> and make them know that you are not serious, or if you are joking or something.
>
> (9'35''-9'42'', File A, the second-round interview)

As for A4-L4, he said in the second-round interview that he liked to use emoji in general, because it made the conversation more casual and relaxing. But he was a bit hesitant to use

emoji with the teacher (mentor) at the start, because he felt it was a student-and-teacher relationship. But when C13 used emoji, he thought it would be ok if he sent some emoji as well, "then it made learning Chinese much more relaxing. It's much more comfortable." (8'28''-8'33'', the second-round interview). This example shows how the PFs contributed to the creation of an informal learning relationship by influencing the mentee's interpretation of that relationship.

(2) Mentees' personal ways of using PFs

In the second-round interview, A1-L4 and A2-L4 reported that they did not use many emoji even when they communicated with their friends on western social media. For example, A2-L4 said that his way of using emoji on WeChat was like his way of talking to his friend on western social media: his uses were pretty limited (like a smiley face emoji) instead of a wider range of emoji. He further explained: "So like I've grown up with that, but I still haven't really, you know, got used to this." (7'18''-7'26'', the second-round interview) For A4-L4, as mentioned previously, although he liked using emoji in general, he was hesitant to use emoji in communicating with C13 at the start.

This finding suggests that not everyone uses PFs in the same way and their use of PFs is not necessarily extensive. This finding supports my assumption concerning the characteristics of PFs mentioned in Chapter 2: participants' use of PFs is individual-sensitive.

(3) The topics of discussion

The wide range of topics designed and sent by me as the guiding topics, as well as the actual topics that the three pairs in Level 4 communicated seemed to have provided the mentors and mentees with opportunities to utilize PFs. For example, there were 14 different topics for participants in this level to talk about (see the topics in Table 4). C13's pedagogic uses of emoji, such as the koala emoji (🐨 in W-8), the maple leaf emoji (🍁 in W-11) and the bicycle emoji (🚲 in W-12) were generally consistent with the set topics in Level 4 in Week 8, 11 and 13 (i.e., "local animals", "local plants" and "local transportation"). This finding reflects the context-sensitive characteristic of PFs use as discussed in Chapter 2.

(4) Technological aspects

In line with Dresner and Herring (2010), who assumed that it would be possible that efficiency considerations should be able to influence users' decisions to use emoticons (i.e., PFs in this thesis), since emoticons could be regarded as the shorthand substitutes for longer textual expressions of intention (2010, pp. 260-261), my data analysis reveals that

155

technological aspects also influenced participants' emoji use in the three pairs. As discussed in Section 3.5.1.1, the focus of my thesis is on the situational aspects (or social aspects) rather than the technological aspects, therefore, below I only provide two examples.

In line with what Dresner and Herring (2010, pp. 260-261) claimed, A4-L4 used emoji out of efficiency (or convenience) considerations. A4-L4 used a large number of QQ emoji (see Appendices 16 and 17), but he said it was just because QQ emoji were on the first pages, whereas the Unicode® emoji were on the last page, and it would be time-consuming to keep sliding down the pages. As A4-L4 said: "So, I saw the first, the Chinese emoji. I was like: 'Ok. I'll just use it.' I didn't think too much like: 'Oh, I don't want to use Chinese emoji.' (the second-round interview 7'08'')

4.4.1.2 Self-disclosure

In the latest classification of the social presence element (see Table 2), the second indicator of the *Affective communication* category is "*self-disclosure*". I agree that participants' self-disclosures of their biographies, details of personal life outside of class, or expression of vulnerability make differences in establishing social presence. But I add "*use of their real personal profile picture*" to the definitions on the basis of the reports documented by studies (e.g., Liu et al., 2016; Nowak & Biocca, 2003; Walther, Slovacek, & Tidwell, 2001) (see Section 2.3.3.2).

Self-disclosure of biographies, details of personal life outside of class, or expressions of vulnerability (if any)

Self-disclosure of biographies

In the early stage of the mentor-mentee communication in the three pairs, the mentees introduced their English given names (A2-L4 and A4-L4 also introduced their Chinese names) and their majors. And the two mentors introduced their Chinese full names, their educational background and their teaching experience. That is, the mentors and the mentees provided evidence to their partners that they were open to each other in terms of their basic personal information. Therefore, there is not much difference between their self-disclosure of biographies.

One point that distinguishes A4-L4 & C13 from the other two pairs lies in C13's explanation of her reasons for becoming a Chinese language teacher and A4-L4's explanation of his reasons for learning languages. On 30 August (W-5), C13 introduced her existing job:

teaching Chinese language to foreign students at a university in Beijing. On 31 August (W-6), A4-L4 asked why C13 became a Chinese language teacher. C13 provided two reasons (in e-turn 19):

我成为汉语老师，第一是我非常喜欢语言，我觉得每个国家的语言文化都很美很有意思；第二，我喜欢了解不同国家的人，生活，文化， 希望能跟不同的外国人交流。所以我的专业是"对外汉语"（teaching Chinese as a second language）。😊

(I became a Chinese language teacher, first, it was because I love language very much, I think that the language and culture of every country is very beautiful and very interesting; second, I like to understand people from different countries, [their] life, culture, and hope to communicate with foreigners from different countries. So I majored in "teaching Chinese as a second language". 😊)

On 31 August (W-6), A4-L4 told C13 that he was studying a double degree, and both of the two majors were Asian languages: Japanese and Chinese. He also said: "我要说很多语言！" (I want to speak many languages!) (Proposition 3, e-turn 23).

The above self-explanations of A4-L4 and C13 reveal that both of them were keen and open to communicate with people speaking different languages and to teach/learn Chinese language, which set up the common base for sustaining their mentor-mentee relationship and establishing high degree of social presence in the future.

Self-disclosure of details of personal life outside of class

In A1-L4 & C11, on 2 September (W-6) in an extended exchange, A1-L4 and C11 had an exchange that began with references to local delicacies. First, the mentee sent a picture of iced coffee, then the mentor sent pictures of her snacks: cake and yak meat. Shortly after that, the mentee sent a picture of his friend's room (someone living in his shared house). In return, the mentor sent a picture of her dorm, which she shared with three other Chinese students. Then the mentee sent a picture of his bedroom. Next, the mentor sent two pictures of refreshment that she was eating: grapes (but the picture was actually grape skins and grape seeds) and a waffle, then she asked the mentee to guess what was in the first picture. Later the mentee sent her a picture of another bedroom. Finally, the mentor sent a picture of her dinner: tomato and fried egg noodles.

In addition to these pictures, C11 told me on WeChat on 4 September (W-6) that A1-L4 also sent her a picture of his dog (a German shepherd, the same breed as that she had when she

was young), and a picture of his front garden. C11 told me that she really loved dogs. However, I cannot be sure whether she had told A1-L4 that she really loved dogs and that they had the same breed of dog, because the two pictures were not sent to me.

In total, on this day, C11 sent 8 pictures and A1-L4 sent at least 4 pictures (probably including two more pictures of: his front garden and his dog that I did not receive). Their communication started at 18:15 and came to an end at 00:45 the next day. There were a couple of breaks during this period of time (18:57-19:40, 20:38-21:39, 21:40-22:05, 22:19-00:19). The total messages they sent were at least 224 (mentee: 92; mentor 132), which ranked as the most productive chat sequence in their communication. No other pair had such a lengthy sequence based on the chat logs available to me.

On 17 September (W-8), A1-L4 sent C11 a video clip of a koala taken when he was on an outing. C11 reported her feelings about A1-L4's video clip:"小视频就比较有亲切感了，就是[我]马上就感觉：哦，你周围的生活是这个样子的。就是[我]感觉[距离]又会拉近一点。" (The video clip conveys cordiality, then [I] could have the immediate sense: oh, that's your surroundings. Then [I] feel [the distance] could be shortened.) (4'26''-4'36'', File C) A1-L4's video clip of the koala helped C11 understand A1-L4's living context and, as a result reduced the psychological distance between them and made her feel a sense of "亲切感"(cordiality).

From the sequences of the pictures and the contents of the pictures they sent, as well as the mentor C11's comment on the effects of the mentee's video clip, we can see that they were opening their private lives to each other gradually. The trust between them was increasing and the mentor-mentee relationship were becoming gradually closer. Moreover, we can also find that the uses of pictures, particularly video clips, play obviously positive roles in establishing social presence in this pair.

In A2-L4 & C11, on 3 September (W-6), C11 sent A2-L4 a picture of grape seeds and grape skin from the grapes that she had just eaten and left on the table and asked him what they were. Then on 5 September (W-6), A2-L4 sent her pictures of his dog and told her that the dog was his younger brother. [43] On 13 September (W-7), C11 sent 2 pictures of her breakfast, where there was a little boy, who was her nephew (according to her previous chats with A2-L4), who was having breakfast with her.

---

[43] I have the dogs' picture in my data. It is a small breed, different from C11's past dog and A1-L4's dog, according to what C11 told me: a German shepherd. From the information about the two dogs, I have established that A1-L4 did not submit his dog's picture to me.

C11 told me in the interview that on one occasion A2-L4 sent his personal picture to her, which was taken when he was working. According to their chat logs and the mentor's self-report in the interview, probably it took place on 13 October (W-12). And it was this picture that she reported evoked a sense that he looked like her younger brother as mentioned in Section 4.2.1.[44] And she said: "A2-L4 那个最大的突破就是那个[他的]照片。哈哈。" (The biggest breakthrough is A2-L4's [personal] photo. Haha.) (4'47"-4'51" File C). Therefore, we can see that the picture bonded them together quite closely.

C11's disclosing details of her personal life to her two mentees was consistent with what she reported and her two mentees' reports concerning her role in communicating with them: like a friend to friend relationship (see Section 4.2.1).

However, there is an obvious difference concerning C11's disclosure of her wedding ceremony. One day C11 took the initiative to contact A2-L4 (to protect her privacy, I will not present the exact date) and told him that she had had her wedding ceremony the day before. A2-L4 said "哇哦" (Wow), "真棒" (Great) and "congratulations 😊 " in three e-turns (to protect C11's privacy, the numbers of the three e-turns will not be presented here). This means that C11 wanted to share her happiness about her wedding with A2-L4. However, I have no evidence that C11 shared this information with A1-L4 according to the chat logs between A1-L4 and C11 available to me.

There are four possible reasons for this difference in sharing. 1) Maybe she was not willing to tell A1-L4 about it, so she did not send him this message. 2) She sent him this message, but it was not sent through successfully due to the reception problems with A1-L4's phone, so he did not receive this message, as he said in the first interview that he had dropped his phone and had had problems in reception: "so the reception drops in and out, even in the city, even" (the first-round interview). 3) He received the message but he just did not send this message successfully to me because of technological problems. Or 4) he received the message but he excluded this message from the Chat logs that he submitted to me. In short, the first and the fourth possible reasons involve participants' awareness to protect their privacy; the second and the third involve technological aspects that influence the establishment of SP.

---

44 But I did not receive this picture, either it was because the mentee did not want to share his private photo with me, or because he just did not choose the message to send to me accidently. In the interview, C11 described the picture to me.

C11's wedding ceremony took place in the second break (lasting for 43 consecutive days) in her communication with A1-L4, and taking account of her report in the interview: "我不知道 A1-L4 的具体的性格， 因为那个人，就是通过微信我觉得摸不透" (I have no idea about A1-L4's personality traits, because that person, I can't figure him out on WeChat) (8'00''-8'06'', File C), we can infer that it is highly likely that she did not tell A1-L4 about her wedding due to this lack of insight into A1-L4's personality, that is, because of the first of the four possible reasons mentioned above.

The differences between C11 telling A2-L4 about her wedding ceremony and not telling A1-L4 about it reveals her perceptions of the degrees of closeness with the two mentees, namely, the degree of social presence in the two pairs: low with A1-L4 but high with A2-L4.

In A4-L4 & C13, on 31 August (W-6), C13 said that she liked reading, watching movies, traveling, cooking, chatting with friend etc. And she particularly mentioned that "还非常喜欢 美食" (also like delicacies very much). On 1 September (W-6), A4-L4 said that he liked to "打 电脑" (play computer [games] [or surf the internet]), and he also liked watching movies and chatting with friends. Meanwhile, he mentioned that he liked learning to cook if he had time, and he liked traveling, he had been to Japan, Vietnam and Hong Kong. Compared with A4-L4, C13 did not disclosure much about the details of her personal life outside of class, except that she rode bicycle to work (see Table 37).

A4-L4 sent C13 a picture of his friends and himself, which was taken when he was on an outing on 8 October (W-11). Three days later on 11 October (W-11), he also sent a video of Japanese dancing. But C13 did not send pictures of herself in their communication.

Generally speaking, unlike C11 who shared details of her life outside of class with her two mentees, C13 did not do so in communicating with A4-L4. C13's reserve was in line with what she reported in the interview: the percentage of her role in communicating with A4-L4 was: 60% being a teacher and 40% being a friend (see Section 4.2.1).

Expressions of vulnerability (if any)

Expression of vulnerability to the interlocutor was obvious in two mentees: A1-L4 (with C11) and A4-L4 (with C13). However, neither A2-L4 nor C11 expressed vulnerability to each other.

In A1-L4 & C11, on 16 September (W-8), A1-L4 revealed a sense of vulnerability when he told C11 that he had found a dead kangaroo when he was jogging. He used the crying with downpour tears emoji (😭) and then told C11 that "我哭了" (I cried) as shown in Table 38.

Table 38 - A1-L4's Self-disclosure of His Vulnerability in A1-L4 & C11

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
16-9 (W-8)	638	A1-L4 19:25 今天我去跑步看一个袋鼠死了	I found a kangaroo dead when I was jogging today
	639	A1-L4 19:25 😭	😭
	640	C11 21:10 啊？	Ah?
	641	C11 21:10 被车撞了吗？	[Had it been] hit by a car?
	642	A1-L4 21:19 对。我哭了	Yes. I cried

As mentioned in Section 2.4.2, Danesi stated that although emojis' main pragmatic function is to add a tone of friendliness and pleasantness to the message, they can also convey sadness effectively. However, the sadness is conveyed with intrinsic positivity: it is a mood that the sender wishes to share rather than denying and presumably in the hope of resonance from the receiver (2016, p. 96). Even though that A1-L4 was expressing his vulnerability and probably seeking emotional resonance, C11 did not respond to A1-L4's expression of emotion. Instead, she digressed by asking him questions about kangaroo's living area in the following two e-turns (643 and 644). But considering that she responded more than four hours after A1-L4's turns, and she explained in the subsequent e-turns that she had been busy writing her thesis, she might not have noticed the nuance of sadness conveyed in the mentee's textual messages and the emoji. Alternatively, she might have been uncertain why the mentee could see a kangaroo in a city, since in China kangaroos can only be seen in a zoo.

In the three pairs, all of the five participants told their interlocutor that they were busy because of different issues, such as learning pressure, work pressure, and personal issues (e.g., C11 prepared for her wedding ceremony, which was overlapped with her health issues, writing her thesis and mentoring two mentees). Therefore, being busy was a common issue for the five participants.

However, only A4-L4 expressed his high degree of busyness. A4-L4 used three crying with

downpour tears emojis (😭) in e-turn 410 on 29 October (W-14): "我忙死了. 某甲救我 😭 😭 😭 " (I'm deadly busy. Who can save me!). The textual clue "忙死了" (deadly busy) and "救我" (save me), together with the three crying with downpour tears emoji (😭) conveyed a strong sense of vulnerability. C13 responded with comfort, and the comfort was expressed with a sense of humour, which will be elaborated in Section 4.4.1.3.

Both A1-L4's and A4-L4's expressions of vulnerability convey senses of closeness, which needed to be attended to, because they were speaking out their vulnerability and seeking comfort from the mentors. Therefore, if the mentors could listen to the mentees with empathy, get the point of their vulnerability, and offer comfort or sympathy in time, that is, just like what C13 did, then the degree of social presence could be enhanced.

Use of their real personal profile pictures

As discussed in Section 2.3.3.2, social media users' can use personal profile pictures for impression formation and impression management, which can reveal their personalities. Table 39 shows the way that the five focal participants' made use of profile pictures.

Table 39 - Participants' Profile Pictures in the Three Pairs

Participant	Changes concerning their profile pictures
A1-L4	Such information was not clearly documented,[45] but I did find that at the beginning of his communication with C11, he used an anonymous, default picture in grey, but later he changed it into his real picture: sitting on a rock in a mountain and facing left (from the viewer's perception).
A2-L4	His profile picture was changed from his dog into a picture of himself (probably taken when he was skiing) in Week 6 or 7: partially head-on, generally facing left (from the viewer's perception). But his face was not able to be viewed clearly because he was wearing a pair of skiing glasses.
C11	She changed her cartoon profile picture into a clear, partially head-on, generally facing left (from the viewer's perception) picture of herself before she approached the two mentees.
A4-L4	He used his clear, partially head-on, generally facing left (from the viewer's perception) picture of himself throughout his participation.
C13	She used her own picture throughout her participation: she was facing left (from the viewer's perception), but her face was not able to be viewed clearly.

A1-L4 could not remember what his mentor's profile picture looked like. But he wished that he had had a mentor who used a real photo, and he said: "Because then it feels more realistic, because if you are just talking to some in the internet, it could be anyone." And if the

---

[45] I was aware that he changed his profile picture in communicating with C11, but I did not have clear impressions on when he changed and what the changes were exactly about.

interlocutors use the real photos, "then it just makes in your head that you understand that it's a real person." (31'03''-31'22'', the second-round interview) A4-L4 thought that a mentor using a real profile picture was very important. He said not only because he could not otherwise know that the mentor C13 was young, but:

> Because whenever you meet someone for the first time, the first thing that you want to know, usually is what they look like, especially when you meet someone online as well, you will want to know, you will be curious what they... what the appearances they are like.
>
> (0'09''-0'27'', File 2, the second-round interview)

A4-L4 also further explained that if C13 had used a landscape picture or a cartoon picture, it would have been really hard to know what she looked like when he talked to her (0'37''-0'46'', File 2, the second-round interview).

However, unlike A1-L4 and A4-L4, A2-L4 said: "It is interesting to know what they look like, but it does not really change anything. I don't have any preference if a mentor has or does not have a profile picture." (personal communication via email on 28 March 2017)

The three mentees' responses to the questions in relation to their mentors' profile pictures indicate they have individual differences. For A2-L4, it makes no difference if a mentor uses a real picture as her profile picture. But for A1-L4 and A4-L4, it is important to see their interlocutors' real profile picture.

For C11, initially she used an anonymous profile picture, which was a cartoon figure. As mentioned in Section 3.3.5, in Week 2, I organized a temporary WeChat group and had a meeting with the mentors who had not yet established their mentees. C11 changed her picture during the meeting on WeChat. And she described how and why she changed it into her real picture in the interview:

> … 最开始是有一些那个心理在里边的， 就是感觉有一些隐私的心理。 但是不知道那边学生的层次是什么样子的， 也不知道那边的学生的人到底是一个什么样子的。就是如果我换上自己的照片， 他选了以后， 他到底是选择看老师呢， 还是选学东西呢？所以我就没有放。那就随机选吧… 后来想一想， 诶， 可能就是……如果我对他们这种心态的话， 他们可能对老师也是这种陌生， 不信任的心态。 所以我就换了自己的照片。… 后来就慢慢地就发现就是自己的心灵放开了以后， 他们对你的信任感也逐渐增加. 然后， 后来就越聊越开心。…
>
> (I did have such kind of feeling at the start, like sort of [protecting my] privacy. But [I]

163

don't know what levels the students would be at, and I also don't know what kind of personalities they would have. If I used my own picture, (then) he chose me, did he choose me for my appearance or for learning? So, I didn't use my own picture. ... Just let them choose mentors randomly... Then I thought, oh, maybe ... if I had such feeling, they might have the same feeling toward me, like strangeness and lack of trust. Then I changed to my own picture. ... Then I found gradually that once I opened up my heart, their trust in me increased gradually as well. And then [we] chatted increasingly happily. ...)

(9'49''-10'56'', File A)

When I asked C13 about her impression of A4-L4's profile picture in 2016, she said that she still kept him in her contacts, and A4-L4 had not changed his profile picture after he participated in this research project. She said "这个头像看起来好乖" (He looks like a pretty good boy [in this profile picture]) (personal communication via WeChat at 16:14 on 27 October 2016). This impression was consistent with what she said in the interview in 2015 that A4-L4 "是个特别可爱的孩子" (is a very lovely boy) (6'34''-6'36'', File A. See her report in Section 4.2.2).

The analyses of the five participants' profile pictures may reflect the closeness of the mentor-mentee relationships, and the feedback coming from the three mentees and two mentors indicate the importance of using one's own personal picture as profile picture in establishing higher degrees of social presence and Chinese language learning, as I discussed in Section 2.3.3.

The changes in their profile pictures in A1-L4 & C11 and A2-L4 & C11 (as shown in Table 39) suggest that they were becoming more open and more willing to show their personalities by using their real personal profile pictures. In contrast, in A4-L4 & C13, neither person changed their real personal profile pictures, which showed a steady and open attitude for communication.

The analyses in Section 4.4.1.2 reveal how the five participants in the three pairs disclosed their personal lives to their interlocutors over time, which reflected the changes of the mentor-mentee relationship in each pair over time. The analysis of the four definitions of the indicator *self-disclosure* reveals different degrees of social presence in the three pairs from low to high: A4-L4 & C13, A1-L4 & C11 and A2-L4 & C11, because I assume that C11 shared her wedding news with A2-L4 and A2-L4 sent C11 a picture of himself indicate a higher

degree of closeness. Although both A1-L4 and C11 also shared their private living circumstances with each other and even A1-L4 expressed a sense of vulnerability to C11 by talking about his encounter with a dead kangaroo, which indicated a high degree of closeness but C11 failed to perceive the sense of vulnerability conveyed in the e-turns. Therefore, the social presence in the indicator of self-disclosure in this pair is higher than that in A4-L4 & C13, but lower than that in A2-L4 & C11.

4.4.1.3 Use of humour

Table 40 shows an example of A1-L4's use of humour on 14 August (W-3). He said he played Australian football every weekend (e-turn 102). Then C11 reminded him that he could send her pictures of himself taken while playing football (e-turn 107). In this excerpt of chat logs, the mentee's message in e-turn 120 indicates his humour, and the mentor perceived it as shown by her two subsequent e-turns with both textual message "哈哈" (haha) and three chuckling emojis (🤭).

Table 40 - A1-L4's Use of Humour in A1-L4 & C11

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
14-8 (W-3)	114	**A1-L4 21:56** [图片：***.jpg (请在附件中查看)]	*The picture being referred to was attached to the email sent to me*
	115	**C11 21:57** 哇！	Wow!
	116	**A1-L4 21:57** 这是澳大利亚足球。	This is Australian football.
	117	**C11 21:57** 是国家队的比赛吗？	Is [it Australian] national football team's match?
	118	**C11 21:57** 黄色的？	[The team] in yellow?
	119	**C11 21:57** soccer？	[Are they playing] soccer?
	120	**A1-L4 21:57** 虽然那不是我。	Although it's not me.
	121	**C11 21:58** 哈哈	Haha
	122	**C11 21:58** 🤭 🤭 🤭	🤭 🤭 🤭
	123	**A1-L4 21:58** 是的	Yes

An example of C11's use of humour also appears on this day. In e-turn 130, she said: "我也喜欢游泳但是现在还没有学会 😋 " (I also like swimming but I haven't learnt to be able to swim yet). The syntactic relationship between "学" and "会" is: "学" is a verb, and "会" is the

complement of this verb, which indicates the result of the action: learn to do something and finally be able to do something. Then we can see there is a sense of humour in this sentence, because it tends to be impossible for someone who is still unable to swim to enjoy swimming. The 😛 conveys nuances of her humour or repartee in a playful fashion, as its Chinese textual code "[调皮]" (naughty) conveys.

Shortly after the humour regarding swimming, she said in e-turn 133: "我对足球一窍不通" (I know nothing about [playing] soccer), and "也不理解为什么好多大人喜欢抢一个球玩 🤭 🤭 "(I also don't understand why many adults compete for one ball to have fun) (e-turn 134). Here, the repetition of the 🤭 emoji conveys her self-mockery (self-irony or self-sarcasm) by showing her lack of understanding of a soccer match: I can't sense the enjoyment in playing soccer; The only point that I can get is that they are competing for a ball. This is what the textual codes of this QQ emoji ("[偷笑]" and "[Chuckle]") are conveying. However, A1-L4 did not respond to this humour, or at least did not respond to it directly: he said he could send her a video clip of Australian football game. Probably, he did not respond to C11's humour because there was a fixed idiom: "一窍不通" (know nothing about something) in C11's e-turn 133, which it is highly unlikely that A1-L4 would have been able to understand considering his Chinese language proficiency at that time.

From the above examples we can see that humour was conveyed frequently on this day, and no misinterpretations of such humour occurred, which indicates that a close mentor-mentee relationship was being established.

Humour also happens between A4-L4 & C13. On 29 October (W-14 in e-turn 410) (see Appendix 20), A4-L4 said: "我忙死了. 某甲救我 😭 😭 😭 " (I'm deadly busy. Who can rescue me!).[46] Both the textual clues "忙死了" (deadly busy) and "救我" (rescue me), and the three emojis conveyed his sadness. C13 responded to this message in e-turn 413 by saying: "我想你最近也应该很累，如果可以， 我一定派人去救你 😛 " (I guess you could have been very tired recently, if it could be possible, I would definitely send someone to rescue you). He conveyed his struggle with nuances of humour, and the mentor got this point and responded with humour in textual clues as well as the winking eyes and tongue-sticking-out emoji (😛).

---

[46] The mentee's "某甲" is incorrect, and it could be "某人" (somebody).

The above analysis suggests that humour did not cause misinterpretation and did not become a hindrance to the mentor-mentee relationship and the associated Chinese language learning. Instead, humour conveyed goodwill and made the relationship closer, and hence created the possibility of a sustained attentive relationship, which is what would have created the opportunity for more learning. Meanwhile, as with the expression of vulnerability, the use of humour also requires that the mentee has the linguistic competence to express, understand and respond correctly and appropriately, and the mentor can get the point and respond to the humour.

4.4.2 Open communication

Participants' *open communication* category will be investigated with three indicators: *complimenting and expressing appreciation*, *apology and/or explanation*, and *who initiated new conversations*.

4.4.2.1 Complimenting and expressing appreciation

Considering the nonreciprocal relationship between mentors and mentees, this section will mainly focus on mentors' compliments to mentees and mentees' expressions of appreciation to mentors to investigate their influences on the mentor-mentee relationship building and the associated Chinese language learning.

Mentor's compliments

It remains uncertain whether C11 and C13 used audio messages to compliment mentees since such data were not available to me. Consequently, the two mentors' compliments and the three mentees' expressions of appreciation from three data sources were analysed: pure written text messages, mixed textual messages and pure PFs.

Tables 41 and 42 display in detail in what contexts C13 used pure emoji and mixed textual messages to compliment A4-L4. Appendix 18 provides a general overview of the two mentors C11's and C13's compliments of the mentee(s)

Table 41 - C13's Uses of Pure Emoji to Express Compliment

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
23-9 (W-9)	194	**A4-L4 11:51** 今天很晴天	Today very sunny day
	205	**C13 18:48** 今天天很晴。 S+adv+adj	Today is very sunny. S+adv+adj
	211	**A4-L4 17:13** 晴天不对吗？我的老师告诉我晴天是对。	Isn't 晴天 correct? My teacher told me that it is correct.
	213	**C13 17:23** 今天是晴天， 今天天很晴	[It should be either] 今天是晴天 , [or] 今天天很晴 Today is a sunny day, today it is sunny.
	215	**A4-L4 17:23** 啊！我明白了！	Ah! Got it!
	216	**A4-L4 17:23** 😊	😊
	217	**C13 17:23** 🥳	🥳

Table 42 - C13's Uses of Mixed Textual Messages to Express Compliment

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes		
31-8 (W-6)	21	**C13 16:04** 你学了很多语言，很棒👍	You've learned many languages, great 👍		
13-9 (W-7)	135	**C13 19:24** 你已经可以参加日语竞赛了，太棒了！👍	You've already been able to participate in Japanese speech context, awesome! 👍		
19-9 (W-8)	167	**A4-L4 00:18** 我怎么说 'I will try my best?'	How do I say 'I will try my best?'		
	177	**C13 00:42** 我会尽我最大的努力!	我会尽我最大的努力!		
	184	**A4-L4 14:19** 我会尽我最大的努力! 😜	I will try my best! 😜		
	185	**C13 16:39** 🥳 学得真好！	🥳 [You've] learned really well!		
21-10 (W-13)	354	看起来很漂亮啊	It [the night market] looks pretty good		
	364	**A4-L4 15:38**			
		P1	看起来的意思是'Looks'吗?	P1	Does 看起来 mean 'looks'?
		P2	比如,	P2	For example,
		P3	看起来今天天气很冷。	P3	看起来今天天气很冷。 Look like today whether very cold.

| 381 | **C13 16:02**
看起来就是 looks 👍 | 看起来 does mean looks 👍 |

Appendix 18, Tables 41 and 42 reveal three differences regarding C11's and C13's compliments of their mentees. First, three (including e-turns 215, 286 and 302) out of four of C11's compliment to A1-L4, and one (e-turn72) out of three of her compliments to A2-L4 were not in relation to their Chinese language learning, they were more for building rapport, whereas C13's five compliments were all related to A4-L4's Chinese language learning. This finding suggests that although both the two mentors' compliments helped build close mentor-mentee relationship and create opportunities for Chinese learning, C13's academic purpose in communicating with A4-L4 outweighed the social purpose, whereas C11 did not have a clear line between academic purpose and social purpose, which was in line with what her two mentees reported about their perceptions of C11's role in mentoring them in Section 4.2.1.

Second, the forms that the two mentors used to compliment were different: although they both used mixed textual messages, C11 did not use pure PFs, whereas C13 did not use pure text messages. In addition to the thumb-up emoji (👍), C13 also used the applaud emoji (🥳).

Third, C13 used more PFs (five) in communicating with her sole mentee than C11 did (four) in communicating with her two mentees (three for A1-L4 and one for A2-L4). Taking account of the users' use of PFs intentionally as discussed in Chapter 2, the two findings suggest that C13 had clearer awareness of employing PFs to compliment the mentee on his learning of Chinese language.

Mentees' expression of appreciation

Appendix 19 displays how the three mentees expressed appreciation to the two mentors by analysing the form of textuality: with pure text messages and mixed textual messages, (none of them used pure PFs to express appreciation).

Pure text messages

Although all the three mentees liked to use pure text messages, closer investigation reveals that there are still some differences. The first difference lies in the punctuation mark following "谢谢" (xièxie, thank you). In A1-L4's text messages, the two characters were followed by a full stop (e-turn 19) or without a full stop (e-turns 71 and 629), by a comma

and then a sentence (e-turn 62), or by a pronoun and then a full stop (e-turn 82).

By comparison, A2-L4 used exclamation marks to convey his appreciations (e.g., in e-turns 55, 93, and 240), and he also used "谢谢" (xièxie, thank you) without punctuations (e-turns 41, 182, 303, and 328), although in e-turn 55 it was not followed by the exclamation mark directly. Moreover, A2-L4 also used the adverbs "真的" (zhēn de, really, in e-turns 55 and 93) and "很" (hěn, *very*, in e-turn 240) to modify the word "好" (hǎo, good), which conveyed stronger appreciation of C11's help. Additionally, he also used interjections to help convey his appreciation, such as "啊" (a, ah, e-turn 41), "哦" (o, oh, e-turn 303), or preceded his expression of appreciation with textual laughter "哈哈" (haha, e-turn 328).

As for A4-L4, new phenomena appeared. Amongst the eight of his "谢谢"s (xièxie, thank you), five are followed by "您" (nín, a respectful word of "you"), four include the exclamation mark and two are followed by "*老师" (* lǎoshī, Teacher *) and the exclamation mark. These examples not only suggest a stronger appreciation than A1-L4 and A2-L4 but also show his respect for his mentor. Generally speaking, "谢谢" (xièxie, thank you) followed by exclamation mark can convey stronger sincerity than if it is followed by a full stop or without a punctuation (see A1-L4 and A2-L4). Additionally, A4-L4 expressed his gratitude more obviously with the interjection word "啊" (in English appearing as either "a" or "ah") followed by an exclamation mark (e-turns 27, 94). For example, after the mentor corrected his error with the structure: subjective + 在+place +verb with some examples (in e-turns 24, 25), he said: "啊！ 谢谢您！" (Ah! Thank you!)

The interjection "啊" (a, ah) in modern Chinese (现代汉语) has four tones (refer to Table 17), and different tones convey different meanings. For example, "ā" (with the first tone) conveys a gasp in admiration; "á" (the second tone) conveys that something is surprising or unknown to somebody; "ǎ" (the third tone) conveys particular surprise and a change from being unaware of something to being aware of something; and "à" (the fourth tone) conveys response to others' words or OK (Huang & Liao, 2017, pp. 24-25). Although we cannot directly discern which tone the three "啊"s are respectively, the interjection word "啊"s followed by the exclamation and the context of their uses suggests that they were largely conveying meanings associated with the second and the third tone, therefore, they conveyed stronger emotions than A2-L4's uses of "啊"(a, ah) without an exclamation mark, or his use

of "哦" (o, oh). Moreover, when "哦" (o, oh) is used as an interjection, it can convey a meaning similar to "啊" with the second tone, the third tone, and the fourth tone. However, if it is used individually, the degree of emotion that it conveys is much weaker than "啊" with an exclamation mark does.

Overall, we can see that: appreciation that was expressed:
  (1) without a punctuation mark, or with a comma or a full stop;
  (2) without adverbs like "真的" (really) or "很" (ver*y*) to modify "好" (good);
  (3) without modal particles like "啊" (a, ah) or "哦" (o, oh) , or the textual laughter "哈哈" (*haha*) and "啊" (a, ah) without exclamation mark;
  (4) without "老师" (* lǎoshī, Teacher *) or "您" (nín, a respectful word of "you")

does not seem to express such strong appreciation as that with the relevant textual linguistic phenomena. In fact, A1-L4's appreciation expressed without the textual linguistic phenomena seems to convey indifference rather than sincerity. If this is the case then it is understandable that C11 commented on him as "摸不透" (can't figure him out). Considering A4-L4's expression of appreciation employed all of the four phenomena, as a result, for the degrees of appreciation that the three mentees expressed with pure text messages, A4-L4 expressions were the strongest, followed by A2-L4, and A1-L4, whose expressions were the weakest.

Mixed textual messages

As for the mixed textual messages, since A1-L4 did not use them to express appreciation, below I only compare A2-L4's and A4-L4's ways of using mixed textual messages to express appreciation to their mentor.

The first example appeared on 19 August (W-4), after C11 corrected A2-L4's sentence with the meaning "I hope to be fluent in Chinese not too far in the future", he said in e-turn 65: "[Sticker] 谢谢！" This is the only mixed textual message to express his appreciation explicitly (what emoji that the "[Sticker]" stands for is unidentifiable for me). Another example was when C11 sent a message "我同意你的观点" (I agree with you) on 5 September (W-6), and A2-L4 used this message on 16 September (W-8), C11 praised him for it by saying "你学的很快！" (You've learned so fast!) Then A2-L4 replied "你教我那些😊 " (You taught me those) (in e-turn 319, refer to Appendix 19). This message did not contain "谢谢", but it conveys appreciation implicitly.

Compared with A2-L4, A4-L4 used such mixed textual message twice to explicitly convey appreciation. For example, after the mentor instructed him about the differences between "一点儿" and "有点儿" on 14 September (W-8), he said: "谢谢您 😁 ✌️ " (Thank you 😁 ✌️) in e-turn 156 (see more in Table 22). Here, the written text expressed his appreciation of what C13 had done in elucidating the differences, then in the emoji syntagm, the 😁 emoji conveyed his happiness at eventually grasping the differences between the two expressions, whereas the ✌️ emoji conveyed both his celebration and signalled his achievement, we can also interpret it as indicating that this is a success for both the mentor (her successful articulation) and himself (his successful comprehension).

Another example of A4-L4's mixed textual message appeared on 20 October (W-14), when he talked about his future plans (in e-turn 415). One of his plans was that after graduation he would first travel in different countries (including China) to take a break and then seek jobs. C11 sent her good wishes to him by saying "希望你的愿望都能实现🙏" (may all of your wishes come true) (in e-turn 418), and "还有，中国欢迎你😊 " (plus, welcome to China) (e-turn 419). Then A4-L4 responded in e-turn 420: "谢谢您！ 您可能我的导游!!! 😁 " (Thank you! Probably you can be my tour guide!!!)

The above analysis of A2-L4's and A4-L4's expressions of appreciation with mixed textual messages reveals that the emoji that A2-L4 and A4-L4 used after the text message allowed the mentors to literally see the emotional aspect of the gratitude being expressed. Such collocations can visually reinforce the verbal expression of gratitude with its facial counterparts. Meanwhile, it is apparent that A2-L4's two mixed textual messages did not convey so strong appreciation as A4-L4's messages. And overall, A4-L4 conveyed the strongest appreciation among the three mentees. Such strong appreciation may help evoke C13's sense of achievement, which is consistent with what she said in the interview that her experience in teaching A4-L4 Chinese langauge on WeChat was "特别爽" (particularly awesome) as discussed previously in Section 4.2.2.

In conclusion, A4-L4 not only used pure text messages to express the strongest appreciation to his mentor C13, he also used mixed textual messages by including a wider variety of PFs to help him convey his appreciation, much wider than A1-L4 and A2-L4. The findings

suggest that in the text-based CMC context, mentees are using Chinese language to learn Chinese language, but they have never seen their mentors before, therefore, due to the restrictions of their Chinese language proficiency, it would be better to convey their appreciation explicitly to build close mentor-mentee relationships. If they have difficulty using pure text message to express appreciation explicitly, PFs and other linguistic clues (such as punctuation marks, adverbs, and modal particles) can be used to support them express appreciation.

The discrepancy in the two mentors' expressions of compliments and the three mentees' expressions of appreciation indicates the varying degrees of social presence in the three pairs (from low to high: A1-L4 & C11, A2-L4 & C11, and A4-L4 & C13) and had impact on sustaining the mentor-mentee relationships and creating the opportunities for Chinese leanring.

4.4.2.2 Apology and/or explanation

Considering all mentors participated in my research project voluntarily to help their mentee(s) with Chinese learning rather than learning and practising English with mentees, the relationship between the mentor and the mentee in a pair was nonreciprocal, therefore, if mentees had not communicated with their mentor(s) for a certain period of time, it would be necessary and polite to apologise for that and explain the reasons. Otherwise the mentor(s) would feel nervous or anxious, particularly if the mentor assumed that they had had productive conversations before the break, because they might not know what the causes would be (as C11 reported in Section 4.2.1).

Appendices 20 and 21 display the three mentees' apologies and explanations and the two mentors' apologies and explanations separately. From Appendix 20 we can see that A1-L4's apologies and explanations only took place in Week 3, the first week of their communication. A2-L4's apologies and (or) explanations took place in two weeks (Week 3 and Week 4). However, for A4-L4, the apology and/or explanation language discourse behaviours took place sporadically throughout his communication with C13 (e.g., in Weeks 5, 6, 13, and 14).

As in A1-L4 & C11, there were also two breaks (10 consecutive days and 18 consecutive days respectively) in A2-L4 & C11. The first break occurred after C11 told A2-L4 that she got married. A2-L4 did not apologise for the break when he resumed the communication in Week 12. This lack of apology is understandable because the break and the lack of explanation can be attributed to his understanding that C11 would be very busy because of

the wedding and he did not want to disturb C11 in the following week (W-11) after her wedding ceremony, and there was no need for him to apologise for the break or explain it. As for the second break, because it occurred in Weeks 13 and 14 and I did not collect their communication after Week 14, I do not know whether he apologised.

In addition to the differences regarding when the three mentees expressed apologies and (or) explanations, in Appendix 20 we can see that there were also differences concerning the textual forms, to be specific, unlike A1-L4 and A2-L4 who only used pure text messages to express apologies and (or) explanations, A4-L4 also used mixed text message to convey his such intensions (e.g., e-turn 62).

As mentioned in Section 4.2.2, there were two breaks in A1-L4's communication with C11: 18 consecutive days and 43 consecutive days respectively (refer to Appendix 8). There were multiple reasons for the break of their communication: 1) technological problems related to A1-L4's phone meant that he had to reinstall WeChat; 2) C11 told him in Week 8 that she was busy because she would be preparing for her thesis proposal presentation, and A1-L4 promised that he would not chat with her much in that week; 3) as mentioned in Chapter 1, A1-L4 said that he did not make time for chats sometimes, because he needed time to understand and grasp something new that he had learned from his previous chats with C11; 4) it was related to me, because when either C11 told me that her communication with A1-L4 came to a halt or A1-L4 told me that he came across technological problems, I did not realise that it was necessary for me to pass the message on to the other end of the pair, so that they could take the initiative to contact their interlocutor.

There are two possible reasons for the absence of A1-L4's apologies and explanations: 1) because he thought he had explained that he was quite busy (the first week of their communication) in Week 3 as shown in e-turn 22 in Appendix 20, so he did not think it would be necessary to say so repeatedly; 2) maybe he thought that he had had close relationship with C11 therefore there was no need to apologise again.

No matter whether it was because of either of the above two possible reasons, the result was that A1-L4 neither apologised for nor explained the second break (lasting for 43 consecutive days) when he resumed their communication on 31 October in Week 14. He just abruptly initiated this communication with three e-turns: "澳大利亚有很多名人"(There are many

celebrities in Australia), "Russel Crowe, Hugh Jackman", and "Cate blanchett".[47]

Appendix 21 displays C11's apology and/or explanation in communicating with her two mentees. The majority of C11's communication with A1-L4 took place in a semi-synchronous fashion, that is, she normally responded to A1-L4's messages rapidly with text messages. The longest delay in her response took place on 17 September (W-8), more than five hours after the mentee's last message. Although she did not apologise for her late response to A1-L4, she explained that it was because she had completed her thesis proposal presentation and had to start to write her thesis. Likewise, C11 expressed apologies and explanations to A2-L4 twice for replying to his messages late but no more than five hours (see Appendix 21). Overall, we can see that C11 either explained for what reason she did not respond to the mentee rapidly (to A1-L4), or both apologised for and explained the reasons (to A2-L4), which suggests that she conceived that it was important to provide quick response to her mentees and carry on the communication, and if she could not provide prompt response she would apologise for it or at least explain the reason.

A huge difference emerges: C11 did not apologise but explained to A1-L4 for the less than 5-hour delayed response; however, A1-L4 neither apologised for nor explained the reason for the zero communication within the 43 consecutive days. Instead, he just abruptly resumed their communication, as mentioned previously.

The findings on the huge differences between what C11 did and what A1-L4 did on whether or not to provide apology and/or explanation for the breakdown of communication with each other offer a clue for me to be able to understand why C11 reported that she felt nervous and anxious (see C11's report in Section 4.2.2) after a period of intensive and smooth communication then the communication just broke abruptly for quite some time then it just resumed abruptly: it was due to the absence of apology and/or explanation. The absence of A1-L4's apology and explanation resulted in C11's comments on him: "摸不透" (can't figure him out) (see C11's report in Section 4.2.1), which indicate a distant mentor-mentee relationship and a low degree of social presence. Moreover, the finding may also confirm my speculation mentioned in Section 4.2.2: her negative experience of nervousness and anxiety mainly resulted from her communication with A1-L4, considering that she had the impression that communicating with A2-L4 was like communicating with a younger brother (Section 4.2.1), which indicated that she had a close and intimate relationship with A2-L4 and a high degree of social presence. Furthermore, the finding also lends evidence to

---

[47] The actress' first name was written with lower case in the mentee's e-turn.

my presumption of whether C11 shared the news of her wedding ceremony with A1-L4: it is highly likely that she did not do so.

Appendix 21 documents that C13 only used "不好意思" to convey her apology but with a lighter tone (as the discussion about Table 34), because neither of them were followed by exclamation marks, just with a comma (e-turn 18) or without a punctuation but with an emoji ( ) (e-turn 404).

From the above analysis we can see that the *apology and/or explanation* indicator appeared when the breaks of communication occurred in A2-L4 & C11 and A4-L4 & C13, and the presence of this indicator did not cause negative influences on the mentor-mentee relationships in the two pairs, so it was a promoter or facilitator for the social presence in the two pairs; in contrast, it was missing in A1-L4 & C11 and led to negative influences on the mentor-mentee relationships, therefore, it became an inhibitor in this pair and dampened the mentor-mentee relationships. The following consequence on A1-L4's opportunities for Chinese learning will be presented in the next section.

4.4.2.3 Who initiated new conversations?

Having presented the findings concerning mentors' and mentees' apology and/or explanation in Section 4.4.2.2, further analysis of participants' initiations and responses in the three pairs (Table 43) reveals that A1-L4's absence of apology and explanation caused negative influence on the mentor-mentee relationship and the opportunities for his Chinese learning, as C11 hesitated to contact him and initiate new conversations to continue the Chinese learning on WeChat.

Table 43 shows how many times a participant in the three pairs initiated new conversations in communicating with his/her interlocutor. C11 was rather passive in initiating new conversations in communicating with A1-L4 (only once, which took place in their first communication on 12 August, W-3), but she was comparatively more active in doing so in communicating with A2-L4 (7 times), although both mentees initiated new conversations the same number of times (both 5 times). The differences between the numbers of her initiations of new conversations in communicating with A1-L4 and A2-L4 suggests the differences in her closeness with the two mentees, as reported in Section 4.2.1: she communicated with A2-L4 like communicating with a younger brother, but she could not figure out ("摸不透") what kind of a person A1-L4 was.

Table 43 - Participants' Initiations and Responses in the Three Pairs

Pair	Number of initiations of new conversations		Notes
	Mentor	Mentee	
A1-L4 & C11	1	5	C11's initiation took place in Week 3. A1-L4's initiations took place in: Weeks 3, 6, 7, 8, 14
A2-L4 & C11	7	5	C11's initiations took place in Weeks: 2, 5, 6, 6, 7, 9, 10 A2-L4's initiations took place in Weeks: 3, 4, 6, 7, 12
A4-L4 & C13	4	7	C13's initiations took place in Weeks: 5, 11, 12, 14. A4-L4's initiations took place in Weeks: 5, 6, 7, 8, 9, 11, and 14.

There are not huge differences in the initiations of new conversations between A2-L4 & C11 and A4-L4 & C13 (5:7 and 7: 4). The numbers of initiations of new conversations implies that the mentors and the mentees in the two pairs shared similar initiatives and the both parties in the two pairs were willing to carry on the communication, sustaining the mentor-mentee relationships, which were crucial to creating opportunities for Chinese learning.

The apparent discrepancy in C11's initiations of new conversations in communicating with her two mentees suggests that she had different approaches in communicating with the two mentees: passive (with A1-L4) vs active (with A2-L4).

The findings about A1-L4's and C11's self-disclosure of details of their personal lives outside of class in Section 4.4.1.2 suggest that, after the first 18 consecutive days first break of communication, both A1-L4 and C11 still had a remarkably productive chat sequence: they sent at least 224 messages, including at least 12 pictures (A1-L4: at least 8, it is highly likely that A1-L4 did not send two pictures to me in the chat logs; C11: 4). The findings indicated that the first break did not have too much negative influence on the communication or the mentor-mentee relationship in A1-L4 & C11. Instead, the degree of closeness and the degree of social presence in this pair were remarkably enhanced.

However, from Table 43 we can see that during the second break of communication in A1-L4 & C11 (from W-9 to W-13), C11's enthusiasm for communicating with A1-L4 was greatly inhibited, the evidence is that she completely stopped taking the initiative to contact him. In

contrast, during the same period of time, she still initiated new conversations in communicating with A2-L4 and even told him about her weeding. C11's passive initiative in communicating with A1-L4 consequently inhibited her creating Chinese mentoring opportunities, and finally reduced A1-L4's learning opportunities (as shown in Table 24). As a consequence, the learning opportunities in A1-L4 & C11 were not so sustained or not so many as those in A2-L4 & C11, let alone as those in A4-L4 & C13.

Table 43 tallies the number of participants' initiatives, which is not enough to explain why they vary. Therefore, the two mentors were interviewed to elicit their subjective perspectives regarding whether or not mentor could take initiatives.

C11 said:

> 教师其实可以稍稍主动一些。 因为有时候不是说是学生不和你语音直接聊天， 或者不和你视频聊天，而是说学生可能他也不敢。他也不知道你这个老师到底是一个什么样的性格。如果你主动一次， 但是你不可以次次主动。你可以主动一次，提醒，当作提醒嘛。提醒他一下， 这样也蛮好。
>
> (Actually, the teacher can take initiatives a bit. Because sometimes it is not because the student does not chat with you with audio calls or video calls, but (because) they could be afraid to do so. They don't know what characteristic the teacher has either. If you take initiative once, but you must not take initiative every time. You can take initiative once, reminder, as a reminder. Reminding him once would be pretty good.)
>
> (22'54''-23'18'', File C)

C11's words "你不可以次次主动" (you must not take the initiative every time) implies her expectation or requirement that the mentees should also take the initiative to contact her.

C13 also agreed that mentors could take the initiative to contact the mentees. She further explained:

> C13: 可以。怎么说呢，就是主动不光是在说"啊， 好久不见了"……对我也问过他"最近怎么样"。 到最后的时候嘛， 就是最近他忙得很。 他给我回了。 他跟我说"对不起"嘛， 那他忙去了， 那就不用再说了嘛。 我会问他："** [A4-L4's Chinese given name]， 最近也没见你跟我聊天儿。 你干什么了？ 最近怎么样？ "老师得问问啊。首先是一个关心的态度， 不是说质问你为什么不聊天儿。
>
> (Yes. How shall I put it, taking the initiative [to contact him] does not mean just to say "ah, long time no see" ... Yes once I asked him "how have you been recently". When it

came to the end, he was quite busy. He responded to me. He said "sorry" to me, then he did his own business, so there would be no need to say [chat since he was busy]. [By taking the initiative to contact him] I can ask him: "A4-L4, haven't chatted with you recently. What did you do? How are you going?" The teacher should ask (him). It is to show your care for him, rather than questioning why you [he] did not chat with me.)

(2'28''-2'59'', File D)

C13's explanation as to why she used "不好意思" in e-turn 404 (see it in Table 34 or in Appendix 21) is in line with this. She said: "那时已经算是有段时间没联系了，要想把这段教学较良好地进行下去，我当时觉得老师有时也该主动一下." (... we hadn't chatted for a certain period of time, if I wanted to carry on this teaching well, I felt like teachers could also be proactive at times.) (23:30), and "... 尤其是知道学生本身学习也比较忙的情况下." (... especially on the condition that I've already known that the student is also busy in studying.) (23:31, 12 November 2017, personal communication on WeChat)

Just as C11 mentioned that "你不可以次次主动" (you must not take the initiative every time). Table 43 shows that her initiations were interwoven with A2-L4's initiations, that is, both of them took the initiatives to carry on the communication by initiating new conversations. The same thing also happened in A4-L4 & C13.

However, taking account of C11's report that she had no idea of what A1-L4's personality traits were "摸不透"(can't figure him out), we can conclude that A1-L4's absence of apology and explanation inhibited C11 from approaching him more closely, then it inhibited the mentor-mentee relationship and her level of willingness to remain engaged in mentoring was lowered down by not taking initiatives to contact him, which was contrast to her increasing level of willingness in communicating with A2-L4. This finding indicates that the nine indicators do not have the same value in the whole social presence element of the CoI theoretical framework, and it appears that *apology and/or explanation* outweighs many other indicators, if not all of the other indicators.

The findings concerning the category *open communication* in Section 4.4.2 suggest that the degrees of social presence in the three pairs in ascending order are: A1-L4 & C11, A2-L4 & C11, and A4-L4 & C13. Next, I investigate the last category of the social presence element: cohesive response.

4.4.3 Cohesive response

4.4.3.1 Vocatives

Addressing or referring to the interlocutor by title or by name

Table 44 shows how participants addressed each other in the three pairs. We can see that none of the mentees used their mentors' Chinese names (regardless of their given names or full names) or English names, which is appropriate in Chinese culture. The two mentors did not address their mentee(s) by their English names (neither their full names or given names). C11 did not address her two mentee's Chinese names as C13 did (she addressed A4-L4 by his Chinese given name). However, if we compare the three pairs we may find obvious differences. That is, neither A1-L4 nor C11 addressed each other in one of the listed ways. And the addressivity both in quantity and in forms increases in the three pairs: from A1-L4 & C11, through A2-L4 & C11, to A4-L4 & C13. This pattern generally aligns with the patterns shown in other indicators that I have analysed so far.

Table 44 - Addressing or Referring to Interlocutors by Title or by Name

	Addressing or referring to mentor				Addressing or referring to mentee		
	by title		by name				
Mentee	surname + 老师 (* Teacher)	老师 (Teacher)	Chinese name	English name	Mentor	by Chinese name	by English name
A1-L4	–	–	–	–	C11	–	–
A2-L4	+ (2 times)	–	–	–	C11	–	–
A4-L4	+ (4 times)	+ (once)	–	–	C13	+ (4 times)	–

Because the communication in the three pairs was largely text-based, therefore, addressing the mentors by titles rather than by their names in textual forms on WeChat is still the basic manner to show respect to the mentors according to Chinese culture. Both A2-L4 and A4-L4 employed this strategy, but A1-L4 did not do so. Details of C13's addressivity of A4-L4 are shown in Table 45.

Table 45 - C13's Addressing A4-L4 by His Chinese Given Name

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
30-9 (W-10)	245	**C13 11:01** **，你学习很忙，不忙功课的时候，你会做什么放松一下呢？你和朋友们常常有什么娱乐活动？	**，you are busy in your study, what do you do to relax yourself when you do not study? What do you and your friends usually do for recreation?
21-10 (W-13)	399	**C13 16:58** **，有一个问题	**, there is a problem
	400	**C13 16:59** Verb+地方+来/去：我回旅馆去。我回家去。我回**去。	The mentor presented the structure "Verb+地方+来/去" (verb+place + complement of direction) with some examples.
21-10 (W-13)	402	**C13 19:00** **，你说你想试试书法，你知道中国有名的书法家吗？😊	**, you said you would like to try Chinese calligraphy, do you know any Chinese famous calligrapher?
28-10 (W-14)	404	**C13 20:59** **，最近是不是很忙啊？我最近工作比较忙，没有跟你聊天儿，不好意思😋	**, have you been busy recently? I have been busy recently, (so I) haven't chatted with you, sorry

Note: "**" is A4-L4's Chinese given name.

As mentioned in Section 2.3.2.3, studies suggest an empirical connection between addressing students by their names and cognitive, affective, and behavioural learning (see Rourke et al., 1999 for the associated literature). For example, Eggins and Slade maintained that "the use of redundant vocatives would tend to indicate an attempt by the addresser to establish a closer relationship with the addressee" (1997, p. 145). In line with these suties, the findings of the addressivity of each other in A2-L4 & 11 and A4-L4 & C13 suggest that mentees address mentors by their titles "老师" and mentors address mentees by their names (especially their given names). These results are not redundant, instead, they indicate both parties' attempts to establish a closer mentor-mentee relationship, and the two kinds of addressivity played positive roles in sustaining the mentor-mentee relationship and created more opportunities for learning Chinese, but this needs to be done in culturally-appropriate ways.

Linguistic expressions of social status

Table 46 shows the three mentees' uses of "您" (nín, a polite word of the second pronoun "you") or "你" (nǐ, you) in referring to their mentor. We can see that A4-L4 used "您" (nín) in tandem with "你" (nǐ) to refer to C13, whereas the other two mentees only used "你" (nǐ).

Table 46 – Mentees' Linguistic Expressions of Social Status in Using "您" (nín) or "你" (nǐ)

Mentee	您	你
A1-L4	–	+ (33 times)
A2-L4	–	+ (24 times)
A4-L4	+ (32 times)	+ (19 times)

Figure 4 displays a diachronic analysis of A4-L4's uses of "您" (nín) and "你" (nǐ) in referring to C13. We can see that even though the mentee's use of "你" (nǐ) remains comparatively stable, his use of the more polite and formal pronoun "您" (nín) to address C13 is generally decreasing over time: from the most frequent (11 times) in Week 6 to comparatively rare (two times) in Week 14.
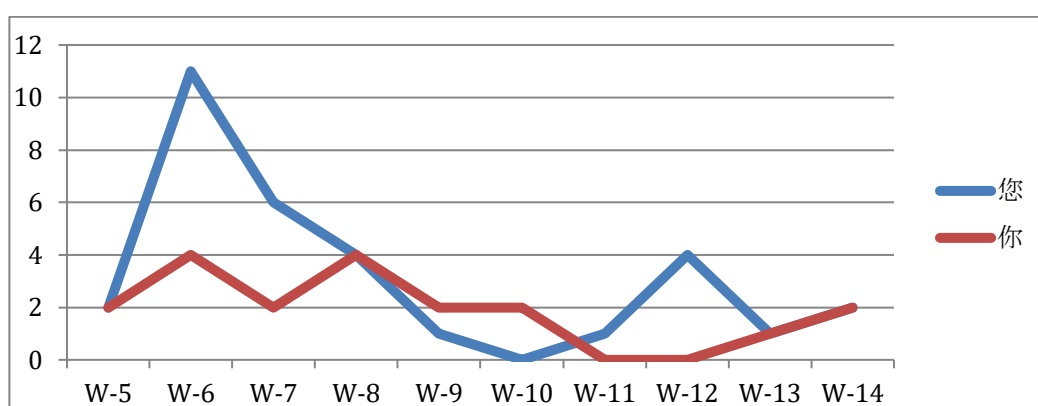
Figure 4 - Trajectory of A4-L4's Addressivity of C13 During Their Communication on WeChat

This tendency suggests that A4-L4 was developing a closer relationship with C13 over time. And overall, it reflects that A4-L4's perceptions that the social hierarchy differences between him and C13 were getting smaller, which indicates that degrees of social presence in this pair increased over time.

4.4.3.2 Addressing or referring to the pair using inclusive pronouns

The second proposed indicator of "vocatives" is addressing or referring to the pair using inclusive pronouns. Table 47 shows the five participants' uses of "我们" (wǒmen, we/us/our) to address or refer to the pair where they were.

Table 47 - Participants' Addressing or Referring to Their Pair with the Inclusive Pronoun: "我 们" (wǒmen, we/us/our)

Pair	Participant	Time(s)	Week(s)	Notes
A1-L4 & C11	A1-L4	1	3	Week 3 is the first week of their communication.
	C11	1	3	Same as above
A2-L4 & C11	A2-L4	0		N/A
	C11	0		N/A
A4-L4 & C13	A4-L4	0		N/A
	C13	5	5, 6, 8	Week 5 is the first week of their communication

C13 used "我们" (wǒmen) in this sense for 5 times (4 times for "we", and 1 for "our"), many more than the rest of participants in the three pairs. In addition, we can see that both A1-L4 and C11 only used "我们" (wǒmen) in the first week of their communication (W-3), whereas C13 used it not only at the start (W-5), but in the middle of her communication with A4-L4 (W-6 and W-8), which implies that she perceived the mentor-mentee relationship in this pair as sustained. By comparison, neither of the two participants in A2-L4 & C11 used the word to address or refer to their pair. This finding suggests that the general systematic pattern emerging so far that the proposed indicators (and their definitions) of social presence appear the fewest both in quantity and in forms in A1-L4 & C11, the medium in A2-L4 & C11, but the most in A4-L4 & C13 does not apply to every indicator or their definitions; the pattern remains only as a "general systematic", therefore, there could be exceptions.

Examples of C13's uses of "我们" (highlighted in yellow) in this sense can be seen in Table 48. The inclusive pronoun "我们" (wǒmen, *we/us/our*) appears to bond the mentor and the mentee together: they were working collaboratively for the same academic goal (Chinese learning). Acknowledging the shared goal in the pair and showing willingness to collaborate with the interlocutor to achieve the goal is crucial for sustaining the mentor-mentee relationship and creating opportunities for Chinese learning on WeChat.

Table 48 - C13's Use of "我们" (wǒmen, we/us/our) to Address the Pair A4-L4 & C13

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
30-8 (W-5)	16	**C13 22:24** 我叫** (**)，现在的工作是一个大学的汉语老师。你呢？可以跟我介绍一下自己吗？<mark>我们</mark>互相认识一下。😝	My name is ** [Pinyin of her full name], I am a Chinese language teacher at a university. What about you? Can you introduce yourself to me? <mark>We</mark> can get to know each other.
1-9 (W-6)	46	**C13 01:48** 这个星期<mark>我们</mark>的话题（huàtí,topic）是 "美食"，<mark>我们</mark>一起分享（fēnxiǎng, share）一下吧，你可以给我介绍一下越南、澳洲、日本、香港的有名的美食或者（huòzhě, or）你喜欢吃的东西，我可以给你介绍一下中国各地的美食，<mark>我们</mark>也可以聊聊做饭的事情。😊	<mark>Our</mark> topic in this week is "delicacy", <mark>we</mark> can share together, you can introduce Vietnamese, Australian, Japanese, Hong Kong's famous delicacies, or what you like to eat, I can also introduce some delicacies in different Chinese areas, <mark>we</mark> can also chat something about cooking.
19-9 (W-8)	183	**C13 00:48** 你最近学习太忙，快早点休息吧，<mark>我们</mark>明天再聊。😊	You have been busy in studying recently, you'd better go to sleep early, <mark>we</mark> can chat tomorrow.

Next, I investigate the last of the nine proposed indicators: participants' use of salutations and phatics in the three pairs.

4.4.3.3 Salutations and Phatics

Salutations

Danesi (2016, p. 101) maintains that salutation is a basic form of emoji's phatic function, and it often overlaps with the emotive function, for example, the informal salutation of "Hey" is often followed by an emoji. This kind of phenomenon is also apparent in my study. My data analysis identified participants' five types of salutations as shown in Table 49 "你好" (nǐ hǎo, hello), "您好" (nín hǎo, politer than "你好"), "你好吗 (nǐ hǎo ma, how are you)" , "hello" and "hi".

By analysing the total numbers of the types of salutation that C11 used in communicating with her two mentees, we can see that C11 did not use any of the five types of salutation in communicating with A1-L4, but she used three types (one "你好", one "hello" and one "hi", also three times in total) in communicating with A2-L4, that is, more both in forms and in quantity than her use in communicating with A1-L4. which shows a difference in her relationship with her two mentees.

The total numbers of salutations used in the three pairs (2, 7, 5) suggest that A1-L4 & C11 used the fewest numbers, and A2-L4 & C11 surpassed A4-L4 & C13, which seems that in A2-L4 & C11, the degree of social presence shown in this indicator outweighs that in A4-L4 & C13. However, the analysis of the textuality of the text messages may reveal some nuances, and the nuances may make a difference.

A1-L4 mainly used pure text message to convey salutations, whereas both A2-L4 and A4-L4 used mixed textual messages (text message with PFs: emoji or emoticon) in addition to pure text messages. The nuance in the difference between A2-L4's and A4-L4's uses of the types of salutation is: A4-L4 used "您好", which is politer than "你好"; A4-L4 used exclamation mark to convey stronger emotion after "你好" whereas A2-L4 did not use it.

Table 49 - Participants' Salutations in the Three Pairs

Pair	Participant	你好		您好		你好吗		Hello		Hi		Total	
		F	Q	F	Q	F	Q	F	Q	F	Q		
A1-L4 & C11	A1-L4	你好， 你好！	2	–	0	–	0	–	0	–	0	2	2
	C11	–	0	–	0	–	0	–	0	–	0	0	
A2-L4 & C11	A2-L4	你好*老师😊 你好*老师😊 你好：）	3	–	0	你好吗？	1	–	0	–	0	4	7
	C11	你好	1	–	0	–	0	hello	1	hi	1	3	
A4-L4 & C13	A4-L4	你好！ ：）	1	您好	1	你好吗	1	–	0	–	0	3	5
	C13	你好！ 你好！😊	2	–	0	–	0	–	0	–	0	2	

Note:

F: form; Q: quantity

Comparing C11's forms of textuality in expressing salutation with C13's, it reveals that C11 used pure text messages whereas C13 used not only pure text massage but mixed textual messages (i.e., text message and emoji).

Compared with the pure written text messages, if written text messages are followed by PFs, they may indicate "both reinforcement to the tone of the salutation, and a way of conveying friendly intimacy and bonding" (Danesi, 2016, p. 86). By comparison, the pure written text messages seem to convey nuances of indifference. As a result, in A4-L4 & C13, the forms of textuality (pure text message "你好！", the mixed textual messages "你好！:)" and "你好！😊") and the exclamation marks in the three salutations can add some extra values to the degrees of social presence in this pair. Hence, there is not much difference in the degrees of social presence in A2-L4 & C11 and A4-L4 & C13. Therefore, for the degrees of social presence in the three pairs, A2-L4 & C11 is similar to that in A4-L4 & C13, but A1-L4 & C11 remain characterized by having the lowest degree of social presence among the three pairs.

Phatics

Table 50 shows participants' phatic expressions in the three pairs. We can see that among the five phatic expressions, none of the participants in the three pairs used the first four expressions ranging from "早上好" to "晚上好"as the openers of their communication. However, the difference is that unlike participants in the other two pairs, neither A1-L4 nor C11 used "晚安" (Good night) either. In other words, phatics were entirely missing in A1-L4 & C11. The total numbers of phatic expressions in A2-L4 & C11 (3 occurrences) were fewer than those in A4-L4 & C13. (6 occurences).

Table 50 - Participants' Phatic Expressions

Pair	Participant	早上好 (*Good morning*)	上午好 (*Good morning*)	下午好 (*Good afternoon*)	晚上好 (*Good evening*)	晚安 (*Good night*)
A1-L4 & C11	A1-L4	–	–	–	–	–
	C11	–	–	–	–	–
A2-L4 & C11	A2-L4	–	–	–	–	+ (2 times)
	C11	–	–	–	–	+ (once)
A4-L4 & C13	A4-L4	–	–	–	–	+ (4 times)[48]
	C13	–	–	–	–	+ (2 times)[49]

---

[48] The last message in A4-L4 & C13 was the mentee's "晚安", their remaining chat logs were not available to me, therefore, I cannot determine whether and how she responded.

[49] C13 used 2 "晚安"s directly as phatics. It is worth mentioning that on 19 September (W-8), C13 did not use "晚安" directly as response to A4-L4's "晚安", but she said: "你最近学习太忙， 快早点休息吧，我们明天再聊。😊" (in e-turn 183. You've been very busy studying recently, so go to sleep soon, let's chat tomorrow.).

Closer investigation reveals that the difference between C11's use of phatics with A1-L4 and A2-L4 is apparent: she neither used pure text messages nor pure PFs, nor mixed textual messages in communicating with A1-L4; however, she used a mixed textual message in communicating with A2-L4 in e-turn 81 (see Table 51: text message ("晚安" followed by an exclamation mark and a joyful [or lovely] emoji [😊]). On 24 August, in e-turns 132-133, C11's phatic expression was implicitly as she promised that she would tell him the answer the next day: she used the emoji (😊) again. It is apparent that in A2-L4 & C11, the degree of social presence in terms of "phatics" is much higher than that in A1-L4 & C11.

Table 51 - Phatics in A2-L4 & C11

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
20-8 (W-4)	80	**A2-L4 12:34 am** 现在我得睡觉，晚安！	I must go to sleep now, good night!
	81	**C11 12:43 am** 晚安！😊	Good night! 😊
24-8 (W-5)	132	**C11 1:43 am** 明天告诉你 😊	I'll tell you tomorrow 😊
	133	**C11 1:43 am** 一言为定！	[I] promise you!
	134	**A2-L4 1:46 am** 没关系！明天见	No problem! See you tomorrow
	135	**A2-L4 1:48 am** 哈哈晚安	Haha good night

Table 52 shows the examples of phatics in A4-L4 & C13. In addition to "good night", both A4-L4 and C13 also used 🤭 to substitute for written text "goodbye" as closures (see Table 53). By comparing C11's and C13's use of phatics, in particular, if we take C13's e-turn 183 in Table 48 as an indirect phatic expression, and her use of 🤭 in e-turn 243 in Table 53 we can see that C11 used fewer phatics in total with her two mentees than C13 did in her communication with A4-L4.

Table 52 - Examples of Phatics in A4-L4 & C13 (Part 1)

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
29-10 (W-14)	427	**A4-L4　22:01** 我睡觉一下。我很累。😶😶😶	I need to sleep for a while. I'm very tired.
	429	**A4-L4　22:01** ==晚安。==	==Good night.==
	430	**C13　22:01** 好好休息吧，==晚安==	Have a good sleep, ==good night==
31-10 (W-14)	438	**A4-L4　04:04** 我想给你介绍澳大利亚的名人但是 我没有时间。🥱	I would like to introduce some Australian celebrities to you, but I don't have time.
	439	**A4-L4　04:04** ==晚安!==	==Good night!==

Table 53 - Phatics in A4-L4 & C13 (Part 2)

Date & Week	E-turn	Sender & Time Message Excerpt	Translation or Notes
27-9 (W-9)	242	**A4-L4　17:38** 我眼看下车! 我会说话您后。🤭	I'm getting off the bus [or train, or tram, due to lack of clues]! I'll talk to you later.
	243	**C13　17:39** 当然可以给你看照片，不过我也在 外边，回家以后给你发照片🤭	Of course [I] can show you some pictures, but I am also on an outing, [I] will send you pictures when I get home

Whether or not participants in the three pairs used salutations or phatics is partly due to the set topics, which were broad topics (see the topics in Chapter 3). C11 said that if the topics were like giving the mentees tasks, the pair started the conversations with "澳大利亚的主要交通工具是什么什么，北京的交通工具有哪些" (The main means of transportation in Australia include blabla, and what are the main transportation in Beijing), but "问完这些问题他们就撤了" (after they finished asking the questions they just disappeared quickly) (16'51"- 17'17", File A). Based on C11's report and the above analyses, we can infer that although she used the word "他们" (they) to refer to the two mentees who opened up and ended a conversation abruptly and as a result the exchanges were not like a natural conversation. Her implication was that this feeling was largely referring to A1-L4 due to his lack of phatics and salutations.

The findings concerning the indicator of salutations and phatics in the three pairs suggest that they can be used not only to soften the opening and ending of a conversation but make it feel more natural, and they can signal both parties' willingness to start a new conversation and continue communicating with the interlocutor in the future. This feeling helped sustain

the mentor-mentee relationship, enhance the degree of social presence, and create more opportunities for future Chinese learning.

Having analysed separately the nine proposed indicators in Sections 4.4.1-4.4.3, next, I provide an overview of the influences of the indicators on the mentor-mentee relationships and the establishment of social presence.

4.4.4 Overview of the influences of the proposed nine indicators on the mentor-mentee relationships and the establishment of social presence

In order to visualize the findings in Sections 4.4.1-4.4.3 and the influence of each of the nine indicators on both the mentor-mentee relationships and the degrees of social presence in the three pairs, I display them in Table 54.

Table 54 - Contributions to Social Presence in the Three Pairs

Social Presence		A1-L4 & C11		A2-L4 & C11		A4-L4 & C11	
Categories	**Nine Indicators**	**A1-L4**	**C11**	**A2-L4**	**C11**	**A4-L4**	**C13**
Affective communication	Use of PFs	Q: 1 | T: 2	Q: 3 | T: 2	Q: 2 | T: 1	Q: 2 | T: 1	Q: 3 | T: 3	Q: 3 | T: 3
		Total: 3	Total: 5	Total: 3	Total: 3	Total: 6	Total: 6
	Self-disclosure	2	2	2	3	2	1
	Use of humour	3	3	1	1	1	2
Open communication	Complimenting or expressing appreciation	App: 1	C: 2	App: 2	C: 1	App: 3	C: 3
	Apology and/or explanation	Ap: 1 | E: 1	Ap: 1 | E:1	Ap: 2 | E: 2	Ap: 3 | E: 2	Ap: 3 | E: 3	Ap: 2 | E: 2
		Total: 2	Total: 2	Total: 4	Total: 5	Total: 6	Total: 4
	Who initiated new conversations	2	1	2	3	3	2
Cohesive response	Vocatives: addressing the mentor by title or addressing the mentee by name; linguistic expressions of social status	Ad: 1 | L: 2	Ad: 2 | L: N/A	Ad: 2 | L: 2	Ad: 2 | L: N/A	Ad: 3 | L: 3	Ad:2 | L: N/A
		Total: 3	Total: 2	Total: 4	Total: 2	Total: 6	Total: 2
	Addressing or referring to the pair using inclusive pronouns	2	2	1	1	1	3
	Salutations and phatics	S: 1 | P: 1	S: 1 | P: 1	S: 3 | P: 2	S: 2 | P: 2	S: 2 | P: 3	S: 3 | P: 3
		Total: 2	Total: 2	Total: 5	Total: 4	Total: 5	Total: 6
		Total: 20	Total: 21	Total: 24	Total: 23	Total: 33	Total: 29
		Total: 41		Total: 47		Total: 62	

Notes: (1) the value of the different levels of social presence in each indicator: the highest social presence = 3; medium level of social presence = 2; the lowest level of social presence =1   (2) Q: quantity; T: type; App: expressing appreciation; C: complimenting; Ap: apology; E: explanation; Ad: Addressing or referring to interlocutors by title or by name; L: linguistic expressions of social status; S: Salutation; P: phatics

The inclusion of two scholars in addition to me in evaluating the levels of social presence, as discussed in Chapter 3, has reduced the potential bias if I had been the only examiner. However, there can still be controversies concerning the scores because the scoring involves subjective evaluations by comparing with what other participants did and how they did in a single indicator of social presence.

This table reveals four points. First of all, both the mentor and the mentee in the same pair (rather than a single party) played a role in influencing the mentor-mentee relationship and the degree of social presence of an individual indicator of social presence. Specifically, both the mentor and the mentee should work collaboratively to make the mentor-mentee relationship closer and establish greater social presence. Only one single party's effort would not make a huge difference. An example is that C11's initiations of new conversations were different in communicating with her two mentees (Table 43), and she reported that although she could take initiative to contact the mentees, she "不可以次次主动" (must not take the initiative every time), which implied her requirement of the mentees to also take some initiative. Both parties in A2-L4 & C11 and A4-L4 & C13 took initiatives and contributed to opening up new conversations, which implied the four participants' willingness to make efforts, continue the communication, sustain the mentor-mentee relationship and create more learning opportunities. This finding does not cohere with what Swan and Shih (2005) maintained: the dynamic nature of social presence represents the fluctuations in student social presence in responding to the fluctuations of the instructor teaching presence. This finding suggests that the dynamic nature of social presence is that both mentors and mentees shape social presence, in other words, students do not just respond to the fluctuations of the instructor teaching presence, what students do also influences the fluctuations of the instructor teaching presence. As a result, this finding provides an empirical operationalization of the 'dynamic nature' that Garrison refers to in the 2009's definition of social presence (see Table 1).

Second, no single indicator can tell us what and how the mentor-mentee relationship is in the pair and what the degree of social presence is in the pair. For example, both A1-L4 and C11 disclosed many details of their personal life with pictures and showed close relationship between them and high degrees of social presence through *self-disclosure of details of personal life outside of class* in the category of *self-disclosure*, it does not necessarily mean that the holistic degree of social presence in this pair is the highest among the three pairs.

Third, as a result, all of the individual influences from each participant's uses of each

indicator shaped the mentor-mentee relationship and the final degree of social presence in the pair. Although there is a general systematic pattern that the degrees of social presence in the three pairs increases from the lowest in A1-L4 & C11, the medium in A2-L4 & C11, to the highest in A4-L4 & C13, each of the nine indicators does not appear evenly in the three pairs. which means that both parties in a pair and every indicator of social presence shape the mentor-mentee relationship and the degree of social presence in the pair. This means that establishing higher degrees of social presence is a collaborative task that requires each party of the pair to be aware of and exploit the capacity of each indicator. The richness of the potential resources (i.e., nine indicators of social presence, that is, nine aspects) means that pairs will differ in how they achieve greater social presence.

There are exceptions to the general principle of 'more is better'. The first example is in A2-L4 & C11. A2-L4 used more salutations than A4-L4 (Section 4.4.3.3), and the second example is that A1-L4 & C13 used more inclusive pronouns "我们" (we/us/our) than A2-L4 & C11. One more apparent example is that although A1-L4 disclosed many details of his personal life with pictures in Week 6 (see Section 4.4.1.2), which shows that he was establishing greater closeness with C11, but what he did in the majority of other indicators showed the lowest degree of closeness compared with the other two mentees, especially the absence of apology and explanation inhibited C11 from taking initiatives to start new conversations (see Sections 4.4.2.2-4.4.2.3).

Fourth, the ascending degrees of social presence in the three pairs is consistent with the ascending numbers of patterns for Chinese language learning shown in Table 19, and also consistent with the ascending numbers of initiatives that each of the three pairs took to create opportunities for Chinese language learning shown in Table 24. This finding suggests that a higher level of social presence is an indicator of a higher level of collaborative learning activities. Therefore, I do not agree with Jahng et al.'s (2010) argument that a higher level of social communication was not necessarily an indicator of a higher level of collaborative learning activities (p. 54), and I believe that a higher level of social presence is an indicator of a higher level of collaborative learning activities.

4.5 Conclusion

My findings in Section 4.3 provided evidence of mentees' learning of Chinese on WeChat, which indicates that the answer to the first research question: there is evidence that WeChat was employed as an informal Chinese as an additional language learning in the three pairs.

These findings also reveal more of WeChat's pedagogic potential.

The findings in Section 4.4 suggest that the nine indicators of social presence (i.e., nine aspects) influenced mentor-mentee relationships and the associated Chinese learning, which indicates that the answer to the second research question is that all the nine aspects contributed to shaping the relationships within the mentor-mentee pairs.

As discussed in Chapter 2, in the current CoI theoretical framework, social presence's function is to create "a social-emotional climate so that participants may feel sufficiently comfortable to engage in meaningful and sustained online learning" (Garrison, 2017, p. 38). However, the findings in Sections 4.2-4.4 reveal that "creating a comfortable environment" is just a superficial function of social presence in online learning. The deeper and underlying function of "creating a comfortable environment" is to increase the opportunities for Chinese learning and, to facilitate learning processes during these opportunities. This is what the current CoI theoretical framework has not revealed or made explicit. These findings also falsify what Akyol and Garrison (2008) reported that social presence did not have any impact on learning but was correlated with satisfaction (p. 18).

The findings in Sections 4.2-4.4 also reveal the necessity to distinguish *opportunities for learning* from *learning* itself. Specifically, among the three issues investigated: the nine aspects, mentor-mentee relationships (which indicate the varying degrees of social presence) and Chinese learning on WeChat, there is an intervening variable between the mentor-mentee relationships and the Chinese learning on WeChat: the opportunities for Chinese learning. The relationship is shown in Figure 5.

Figure 5 - How the Identified Aspects Influence the Mentor-Mentee Relationship and Chinese Learning on WeChat

Figure 5 provides a visual answer to the second research question. The findings in Sections 4.2-4.4 suggest that the nine aspects all contributed to influencing the mentor-mentee relationships, and, subsequently, the mentor-mentee relationship influenced the opportunities for Chinese learning, and which created contexts in which Chinese learning on WeChat was influenced. The different mentor-mentee relationships reflect the degrees of

social presence in the three pairs, that is, the climate of the learning environment that indicates whether both parties (mentor and mentee) feel comfortable with one another. If both of them feel comfortable to engage with each other, then more opportunities for Chinese learning would be created, which, create the context for more Chinese learning to take place on WeChat. In other words, the three variables are positively correlated: the more harmonious the mentor-mentee relationship is (or the higher the degrees of social presence), the more opportunities there are for Chinese learning, and the learning processes could be facilitated if either a mentor or a mentee notices or both of them notice the opportunities and take(s) the initiative to use them for the purpose of learning, which will be further discussed in Chapter 5.

In Chapter 4, I have shown that with the CMDA as a toolkit, with the social presence density calculation as a quantitative method, together with qualitative methods, it is possible to reveal the visual forms of participants' discourse behaviours and identify nuanced and not easily identifiable aspects that influenced the mentor-mentee relationships and the opportunities for Chinese learning. As a result, these data analysis methods enabled me to have a better insight into the aspects that influenced the mentor-mentee relationships and the associated Chinese learning, which cannot be obtained by merely using the quantitative method proposed by Rourke et al. (1999). The combined data analysis methods used in Sections 4.3-4.4 also enable me to find out the answer to the third research question: PFs (e.g., emoji and emoticons) are the specific features of text-based communication on WeChat that play a significant role in emotional exchanges, the maintenance of mentor-mentee relationships, the establishment of social presence, and the creation of opportunities for Chinese learning. More discussions will be in Chapter 5.

Chapter 5: Discussion

5.1 Introduction

In Chapter 4, I outlined the patterns of the three mentees' Chinese learning on WeChat and investigated nine aspects that influenced the mentor-mentee relationships and the opportunities for learning in the three pairs in Level 4. I identified that PFs were the specific features of text-based communication on WeChat that play a significant role in emotional exchanges, the maintenance of mentor-mentee relationships, the establishment of social presence, and the creation of opportunities for Chinese learning. This chapter will discuss what these accounts give rise to. First, I outline the Chinese learning of the three pairs on WeChat from three perspectives: the distinctive features of the learning, the importance of noticing in the learning, and the importance of participants' initiatives in creating learning opportunities. Then I discuss the social presence in this study in relationship to three issues: 1) the roles of PFs in sustaining the mentor-mentee relationships and creating opportunities for Chinese learning; 2) the timing of the emergence of the *affective communication* category in relation to the other two categories (*open communication* and *cohesive response*); and 3), the importance of online etiquette (or "netiquette"). I then move to a discussion of issues concerning Chinese language learning as a discipline and the communication medium and how they need to be considered in the social presence in the CoI theoretical framework. Finally, I discuss the importance of training both mentors and mentees to be digitally literate in Chinese learning on WeChat.

5.2 Chinese learning on WeChat

5.2.1 Distinctive features of Chinese learning using WeChat

By demonstrating mentors' and mentees' reflections on their mentor-mentee relationships and informal learning in Section 4.2.1, and their reflections on Chinese mentoring on WeChat in Section 4.2.2, and by demonstrating both the momentary evidence and longitudinal evidence of Chinese learning in the three pairs with learning patterns in Section 4.3, my findings not only showed that learning takes place in the three pairs but suggested that WeChat has obvious pedagogic values in addition to its intrinsic social functions. These findings will add further insights to the reported benefits discussed in Section 2.2.1.

My findings suggest that the informal, international and intercultural learning of Chinese

using WeChat has multiple features. It can:

1) be both systematic and profound, rather than just fragmented or momentary. A4-L4's learning trajectories for "好啊" (hǎo a) and "好吧" (hǎo ba), as well as "一点儿" (yì diǎnr) and "有点儿" (yǒu diǎnr) (see Section 4.3.2), suggest that appropriate use of social media in informal Chinese learning on WeChat can make intermittent or sporadic learning develop both in breadth and in depth, which I assume is more valuable than sporadic and discrete learning. Therefore, these examples indicate that fragmented Chinese learning can be accompanied by comprehensive learning by integrating the subtle and sporadic learning systematically, which brings forward the importance of noticing in Chinese learning on WeChat, as will be discussed in Section 5.2.2.

2) be flexible and convenient, suitable for learning/teaching anywhere and anytime with resources available as needed. For example, A4-L4 asked C13 how to read some characters in a picture that he took in a night market (in Week 12). This example shows that using WeChat to connect learners of Chinese and Chinese native speakers can extend the learning to settings outside formal classrooms, to the informal settings and, as a result, increase learners' time and opportunities for Chinese learning while also fulfilling learners' specific learning needs, which therefore will help resolve the three challenges that Australian university Chinese language learners faced as discussed in Section 1.1.1: 1) having limited learning time; 2) being unlikely to obtain tailored support from teachers in their classroom learning settings; 3) lacking extra support after classes.

3) be critical and engaging. WeChat's basic features (such as sending text messages, pictures, audio messages and links) have been designed and developed for social purposes, such as to convey shared information, to express ideas, and to listen to others. Similar to using multimedia tools to deliver instruction, leveraging these WeChat features may make the learning of Chinese language both critical and engaging, as reported by mentees in Section 4.2.2. For those Australian university Chinese language learners, who may lack the confidence to approach Chinese native speakers and obtain learning and practice opportunities in F2F contexts, the asynchronous chat mode and text-message-dominant feature of WeChat communication with Chinese native speakers may offer a private and comfortable learning environment. Hence, we can see that the informal, international and intercultural learning of Chinese using WeChat can resolve the second and the third challenge that Australian university learners of Chinese face

(i.e., being unlikely to obtain tailored support from teachers in their classroom learning settings and lacking extra support after classes).

4) be personalised. The two mentors, C11 and C13, provided tailor-made support by setting personalised teaching plans (e.g., C11 implemented a specific teaching plan for A1-L4 that focused on improving his listening skills after she learned that he would be participating in an in-country study tour after Week 14), offering personalised learning materials (e.g., C13's pictures regarding traditional Chinese clothing in Week 12) and personalised feedback (e.g., C11's and C13's feedback in response to their mentees' specific queries), and so forth. Meanwhile, the three mentees also had the freedom to decide what they wanted to focus their learning on by asking personalised questions. As a result, we can see that if some students in the formal classrooms settings have individual learning needs that cannot be satisfied properly (e.g., if some students taking Chinese as a compulsory subject are placed in the same class as students who are taking Chinese as an elective subject), WeChat can offer them an alternative way to obtain extra personalised support, which can help resolve the third challenge (i.e., lacking extra support after classes)that Australian university Chinese language learners are facing, which has been discussed in Chapter 1.

5) expose mentees to features of Chinese internet varieties. We can see that in addition to learning standard Chinese words and expressions, learning Chinese language on WeChat can also expose the mentees to more variants of Chinese language, such as slang, in particular, internet slang. For example, A1-L4 reported noticing that C11 used a wide array of modal particles and interjections (see Section 4.3.1.4), and A2-L4 noticed that C11 used "木有" (mù yǒu) and asked C11 to make a clarification in English (See the Example 2 in Sub-pattern 2 of Pattern 4, Appendix 11).

6) be cost-effective. WeChat can be used on multiple devices (smart phones, tablets, desktops, laptops, and web). 96% of Australians aged 25-54 and 95% of Australians aged 12-24 owned smartphones as of March 2018 (Hughes, 2019). Taking account of the high compatibility of WeChat on a wide range of devices and Australians' high ownership of smartphones, if we include smartphones and social media like WeChat in Chinese learning at Australian universities, it would be cost-effective to conduct bring-your-own-device (BYOD) programs (see Ng, 2015, 2016; Ng & Nicholas, 2016 for more information about the concept of BYOD). Therefore, there will not be much reason for concern about the cost for the universities, because the majority of Australian

university students (if not all of them) have their own smartphones and will be able to take the responsibility for the maintenance and safety of their own devices. Given the expansion of free-access WiFi and cheaper mobile data access plans, it is also increasingly likely that students will be able to afford appropriate data plans without great difficulty.

From the above six features we can see that Chinese learning using WeChat has the potential to address the challenges in Chinese learning in Australian tertiary education discussed in Chapter 1, and also offer additional benefits to the learners and the universities. However, in addition to the six benefits of using WeChat for Chinese learning, there are also undeniable challenges such as: how to resolve the challenge arising from the potentially fragmented and trivial aspects of using WeChat for Chinese learning. This will be discussed in the next section.

5.2.2 The importance of noticing in Chinese learning on WeChat

In addressing the issue of potential fragmentation and trivialisation, Traxler (2010, pp. 62-63) maintained that in ways that are extreme but shared with all digital devices:

> Mobiles deliver knowledge 'chunked', structured and connected in very different ways from the lecture, the web and the book. Knowledge is never purely abstract, unaffected by how it is stored, transmitted or consumed. With mobiles, using a small screen and a limited input medium, the 'chunks' became much smaller but the navigational overhead became much, much larger. In essence, small pieces of knowledge and learning could be easily presented but their relationship to each other and to anything else became much more difficult to understand, thereby fragmenting and potentially trivialising what learners learn.

Such fragmented and trivial aspects pose challenges to the informal, international and intercultural Chinese learning that could occur as a result of using WeChat. The findings in Section 4.3 reveal the significance of noticing in such contexts and how noticing (and associated reflection) is integral in creating coherence in the learning experience.

Nicholas and Starks (2014) maintain that the communicative repertoire of an individual additional language learner (in their terminology referred to as "self") "contains all resources, linguistic or otherwise, that any self has available to him or her to communicate as a result of noticing and storing sets of features during his or her encounters with others" (p. 15). Schmidt, who proposed the *noticing hypothesis*, suggested that nothing was learned

unless it had been noticed. Noticing itself did not lead to acquisition, but it was the starting point (as cited in Lightbown and Spada, 2013, p. 115).

The static analysis of mentees' learning moments in Section 4.3.1 showed that mentees were active in noticing and identifying the differences between their use of Chinese language and the mentor's. For example, A4-L4 noticed that C13's use of "晴天" was different from his and he even reported that his lecturer had told him that "晴天" was correct (see Table 41, and see more examples of both A4-L4's and C13's awareness in Appendix 12). A1-L4 also noticed that C11 used a large number of modal particles and interjections with the radical "口". A2-L4 noticed C11's use of the character "俢" (see Table 18).

However, I presume that although it is important that the mentees notice some linguistic phenomena new or unfamiliar to them spontaneously, it is not necessary to require them to notice everything by themselves (Pattern 4 in the static analysis of mentees' learning moments involves mentees' noticing). If mentors can help them, for example, by providing corrective feedback (Pattern 1 involves mentors noticing), mentees may be assisted to notice Chinese language features more efficiently or notice the features that they are not able to identify independently.

Therefore, mentors should be sensitive to mentees' dynamic language learning processes and judge whether it is necessary (or possible) to correct an observed error as a means of guiding noticing. In cases where learners may not be ready to learn a particular feature, it may be more appropriate to leave it for the mentee to make progress until such time as the learner's interlanguage system has the capacity to productively engage with the feedback. Therefore, the mentor should have a robust knowledge base of Chinese language and language learning, Chinese linguistics and Chinese teaching. If the mentor does not monitor the mentee's dynamic learning process, learning of isolated features may still occur but it may tend to be fragmented rather than systematic.

The dynamic analysis of A4-L4's learning trajectories (Section 4.3.2) revealed noticeable examples of how both the mentor and the mentee in the pair noticed and identified linguistic phenomena that appeared in the interlocutor's messages, and then took the initiative to work on the identified linguistic phenomena collaboratively, which resulted in the learning being pushed forward step by step. This meant that the learning process was systematic and integrated, rather than momentary and fragmented. In Section 4.3.2, I presented examples of the learning trajectories involving many learning opportunities

collaboratively created by both A4-L4 and C13.

The above discussion shows us that noticing is critical to make WeChat-based informal Chinese learning systematic and integrated. The discussion evokes one more aspect that is also significant for Chinese learning on WeChat: both the mentor and the mentee in the pair need to take the initiative to create Chinese learning opportunities.

5.2.3 The importance of both the mentor's initiative and the mentee's in creating Chinese learning opportunities on WeChat

In Section 4.3, I analysed the evidence of the creation of learning opportunities in the three pairs on WeChat. The static analysis of the three mentees' learning moments suggests that from Pattern 1 to Pattern 4, the degrees of the three mentees' initiative increased. A4-L4 had the strongest initiative because for Sub-pattern 2 of Pattern 4, he gained more (8) evidence compared with A1-L4 (0) and A2-L4 (6) (see Table 19) after he noticed a linguistic phenomenon and sought C13's feedback. Additionally, the dynamic analysis of A4-L4's learning trajectories showed that both the mentee's (A4-L4) and the mentor's (C13) initiatives interwove, which indicated that both of them collaborated in creating learning opportunities for Chinese.

Considering that in both the learning moments (as shown in Table 19) and in the learning trajectories (Table 20), A4-L4 had the most learning opportunities among the three mentees, we can see that if both parties (both the mentee and the mentor) take strong initiative, put in more effort and work collaboratively, then the learning opportunities will be more frequent than those created if only one party (either the mentee or the mentor) is active.

Cleveland-Innes and Campbell (2012) argued that "a collaborative learning community necessitates the adoption of personal responsibility and shared control", which is the core of online learning community and involves a significant shift: "from the transmission of information in the lecture hall and the passive role of students" (p. 284). This requires both teachers and students to take responsibility and work collaboratively.

The mentee in a pair needed to take initiative to create learning opportunities, because in the context of my study, the mentor had never previously had communication with the mentee, either online or offline. This meant that the mentor could not know the mentee's Chinese language proficiency and what he intended to learn. However, after the mentor had communicated with the mentee for a period of time and had gained insight into his Chinese

201

language proficiency, she could take the initiative to identify what the mentee needed to acquire and provide feedback of various (appropriate) kinds. As a result, not only could more learning opportunities be created but the learning could develop in a multi-dimensional way, to be comprehensive and integrated rather than fragmented and momentary, not only static but also dynamic.

The findings in Section 4.3 reveal that the three mentees were satisfied with their mentoring experiences on WeChat. The findings also reveal that, in each of the three pairs, the mentors negotiated a kind of relationship with their mentees and reached a consensus about what "mentoring" involved, and what their identities were in the process (as reflected in their ratings of the percentage of teacher-student relationship and friend-friend relationship, refer to Section 4.2.1). The negotiation resulted in different learning patterns and different quantities of learning opportunities in the three pairs. Both A4-L4 and C13 contended that C13's role was more like "a teacher" than "a friend", and this pair created the most learning opportunities among the three pairs. This relationship suggests that learning opportunities are maximized when both mentors and mentees agree that academic purpose should outweigh social purpose in their communication (– even in this kind of informal learning experience), which can relieve Nippard and Murphy's (2007, p. Abstract) concern that expressions of social presence may distract students' attention from the content.

Regardless of the contribution of motivation or other external aspects, we can enhance mentors' mentoring performance, and let the mentees see how their questions were answered and how their confusions were clarified in order to promote a sense of achievement. As a result, mentees would be able to have the impetus, confidence and interest to learn more and seek more opportunities to learn. In turn, this increased engagement would be likely to lead to mentors having more impetus and willingness to collaborate with the mentees, which would likely mean that more learning opportunities would be created.

The findings in Chapter 4 reveal the importance of noticing and initiative-taking by both the mentor and the mentee in Chinese learning. The findings also show us the distinctive significance of PFs (in particular, emoji) in creating learning opportunities. A comprehensive discussion of these issues is in the next section.

5.3 Social presence in this study

I proposed nine indicators of social presence in Chapter 2 to investigate what aspects

influenced and how they influenced the maintenance of mentor-mentee relationships and the associated Chinese learning on WeChat. The findings in Section 4.4 show us how the presumed nine indicators collaboratively (rather than separately) influenced the mentor-mentee relationships and the opportunities for Chinese learning. Among the findings, three aspects stand out as crucial issues for maintaining the mentor-mentee relationship and creating more opportunities for Chinese learning in this WeChat mentoring experience. The three aspects include: 1) the roles of PFs, 2) the affective communication category of social presence, which should be developed earlier than the other two categories (i.e., open communication and cohesive response) and 3) online etiquette.

5.3.1 The roles of PFs in sustaining the mentor-mentee relationship and creating opportunities for Chinese learning on WeChat

The examples of mentees' learning patterns in Section 4.3 and the mentees' reports in Section 4.4.1.1 suggest that due to constraints on the mentees' Chinese language proficiencies, they had difficulty in precisely conveying their emotions, attitudes, intentions and tones and correctly interpreting what mentors' text messages intended to convey. The absence of visual cues (e.g., they did not use video calls) and the limited number of verbal cues (i.e., only limited numbers of audio messages from the mentors) added extra difficulty to the interpretation task.

The findings in Section 4.4 show that PFs, especially some emoji that are designed to simulate human facial expressions and gestures (e.g., smiley emoji, 😊), may assist the participants to convey not only their own emotions (indicating PFs' emotional function) but their attitudes, intentions and tones (indicating PFs' communicative function) and interpret those of their interlocutors. With PFs, the mentees are also able to "see" their mentors' facial expressions (e.g., the "smiling" emoji 😊 , the "smiling" emoticon ":-)" or ":)", and the "tongue-sticking-out" emoticon ";-P") and gestures (like the "thumbs up" emoji 👍 , or the "nose picking" emoji 🤭), and "hear" the sound of their mentors (e.g., "hahaha~~~" used for laughter). These additional visual supports can help them understand their mentors' emotions, attitudes, intentions and tones that can be filtered out by communication media such as WeChat, even with limited Chinese language proficiency.

Dresner and Herring (2010) stated: "Perhaps because of their resemblance to whimsical line drawings, emoticons have expressive, playful, and informal connotations" (p. 261). In line

with them, my findings concerning the three functions of PFs (i.e., emotional, communicative and pedagogic) and how they were deployed together with text messages and other linguistic clues (e.g., uses of punctuation, adverbs, modal particles, interjections, etc.) in Chapter 4 suggest that emoji also have those connotations, and it seems that emoji tend to be more expressive, more playful and more informal than emoticons because of their colorful and vivid images.

Three significant aspects have been identified in influencing the mentees' uses of PFs (in particular, emoji) in Section 4.4.1.1: the topics of discussion, mentees' personal ways of using PFs on WeChat, and mentors' influence. From the third factor we can see the importance that the mentor uses PFs (in particular, emoji) earlier than the mentee in the same pair. Below are three reasons for this.

Firstly, some mentees did not have the habit of using such features (e.g., A1-L4 and A2-L4), or some mentees liked to use emoji but might have hesitated to use them prior to the mentor (e.g., A4-L4). If a Chinese mentor used PFs more proactively and earlier than the mentee did, the friendliness and willingness to carry on the mentoring seemed to be conveyed in a visually easily comprehensible fashion, and this relieved the mentee's nervousness and brought the mentor and mentee together (as A2-L4 reported). As Danesi (2016, p. 96) maintains: "In the absence of physical tone, which might lead people to read a negative content in a message, the smileys are discourse particles for rendering the tone positive or at least calm and assuaging."

Secondly, the mentor's proactive use seemed to trigger the mentee's awareness of using such features as well (e.g., A4-L4), and make the communication seem friendly and function more smoothly. This proactivity seemed to give rise to more cohesive and closer mentor-mentee relationships as well as more learning opportunities.

Thirdly, the findings in Section 4.4.1.1 offer a confirmative "Yes" to Dunlap et al.'s (2015, p. 175) question: "Is there a relationship between emoticon use and student persistence in online courses?". The findings also lend more evidence to the connections between "participants' uses of PFs" and "student retention" in online learning: one mentee appears to have had more incentive (A1-L4) and two mentees were encouraged (A2-L4 and A4-L4) to communicate with mentors more or seek more Chinese learning opportunities (see how mentors' uses of PFs influenced the mentees reported in Section 4.4.1.1).

After both the mentor and the mentee began to use a greater number and greater variety of PFs, the mentor-mentee relationship in a pair became closer, and more opportunities for Chinese language learning were generated. This finding is in line with what Garrison (2017) presumes: "When students identify with the group and perceive themselves as part of a community of inquiry, the discourse, the sharing of meaning and the quality of learning outcomes will be optimized." And in turn, the success in the cognitive presence "has a reciprocal and reinforcing effect on group cohesion" (p. 46).

These findings confirm the positive role of PFs in creating a comfortable learning atmosphere and enhancing learning, which is in line with what Shea and Bidjerano (2009, p. 551) argued:

> Results indicated that the social presence element associated with comfort in online discussion was the most significant item correlated with variance in the cognitive presence of the respondents. Lower level of comfort with online discussion is strongly correlated with lower levels of cognitive presence. When students see their instructors taking an active role in focusing online discussions on relevant issues, they also report higher cognitive presence as measured by this factor.

So far, we can see that there is a cause-and-effect relationship among mentors' use of PFs, comfort in online learning settings, and social presence. It represents process, as shown in Figure 6. There is potential for iterations of parts of the process at specific points or of the process as a whole. To be specific, mentors' uses of PFs helped make the mentor-mentee relationship more cohesive, and make the online learning setting comfortable, then the mentees were encouraged to talk to their mentors more. As a result, more opportunities for Chinese learning on WeChat were generated.
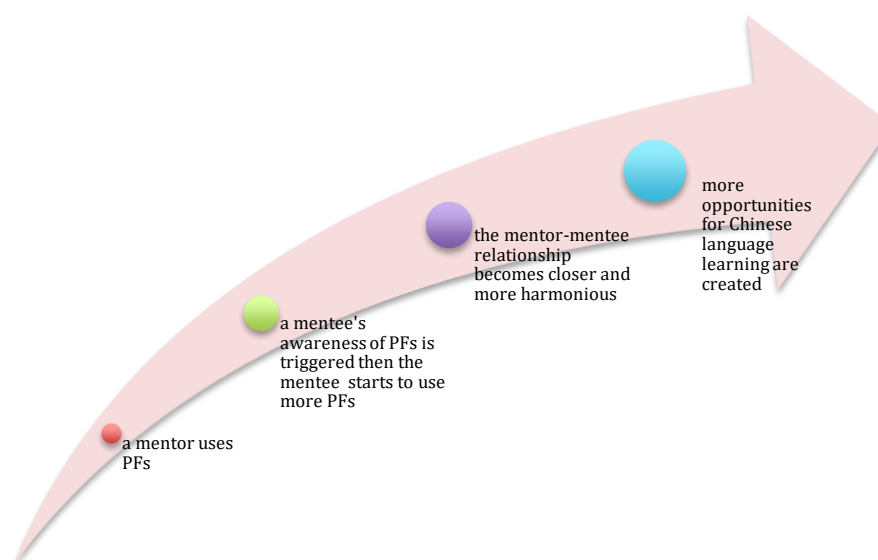
Figure 6 - The Influence of a Mentor Taking Initiative to Use PFs on the Mentor-Mentee Relationship and the Mentee's Chinese Learning

This finding may offer some hints in relation to the questions regarding the influence of one person on others put forth by Dunlap et al. (2015, p. 176) and Provine et al. (2007, p. 306). It illustrates that an instructor's use and modeling of PFs can encourage and prompt students to use them as well and influence their perceptions of PFs; the use of PFs is contagious, like laughter. Thus, PFs, in a sense, can function as both a catalyst and as a barometer of the mentor-mentee relationship.

"Catalyst" refers to the friendliness and willingness to engage conveyed by PFs that can provide a context for change to happen: changing unfamiliarity into familiarity between a mentor and a mentee can help them build mutual trust and rapport, then sustain the mentor-mentee relationship and provide more opportunities for Chinese learning.

"Barometer" refers to how PFs can indicate the level of cohesiveness in the mentor-mentee relationship. This is because some PFs, especially some emoji "originated to represent facial expressions in written text through iconic visual images" (Danesi, 2016, p. 62). As a result of this relationship, it is generally easy for the interlocutor to recognize what emotion and speech acts the PFs are conveying. For example, C11 was confident to use the nose-picking emoji ( ) and the eyebrow-raising emoji ( ). A1-L4 did not view her uses of the two QQ emoji as offensive acts, which suggests that both of them felt that they had established a sufficiently close relationship: C11 knew that using these QQ emoji would not have negative effects and damage their relationship; and A1-L4 understood what meaning and intention the two QQ emoji were conveying.

206

The results and findings concerning PFs that mentors and mentees used resonate with the majority of studies and confirm the positive roles or functions of PFs in text-based CMC. These results and findings contrast with Provine et al.'s (2007, p. 305) claim that emoticons were "unnecessary" and "unwelcome". Instead, in the communication analysed in this thesis, PFs were necessary and welcome, and they helped build rapport and maintain the mentor-mentee relationship, both of which matter greatly for Chinese learning on WeChat. Moreover, these features are neither "blunt" nor do they have "stark simplicity" as Provine et al. claimed (2007, p. 306). Instead, they can express happiness, sadness etc., and even more subtle emotions in quite delicate ways as the analysis in Chapter 4 showed.

Despite the benefits of using PFs, we should avoid being overly enthusiastic about the functions of PFs in online learning. We must be cautious to take into consideration the characteristics of PFs since their use is peer- and age-sensitive, culture-sensitive, context-sensitive, group-sensitive, and individual-sensitive, especially in intercultural computer mediated communication. These complex sensitivities mean that it can be easy for misinterpretation of the sender's intended meanings to emerge, which may have negative influences on the communication (Griffiths, 2015) and probably on the associated Chinese learning experience.

Although the five mentees in the second-round interview did not report that any of the mentors' uses of PFs were offensive, and even though C11's uses of three emoji: the nose-picking emoji ( ), the eyebrows-raising-up emoji ( ) and the heart-eyes-and-mouth-watering emoji ( ) can have subtle negative meanings, A1-L4 did not perceive C11's use of these three emoji as offensive. However, such emoji must be used with caution. They can be used when both parties recognize that a sufficiently close relationship has been established. If a participant in a pair thinks that a sufficiently close relationship has been established with the other pair member and uses the nose-picking emoji ( ) to convey intended playfulness, but the other does not feel the same way, (s)he could interpret it as indicating sarcasm or offence.

Highlighting that PFs can convey emotions in the text-based CMC does not mean that we can deny that other linguistic clues (e.g., punctuation marks, modal particles, interjections, and adverbs) can also convey emotions. As discussed in Section 4.4, emotion was embedded in different indicators of social presence and was conveyed in different forms (i.e., pure text

message, mixed textuality, and pure PF[s]) throughout the communication in the three pairs. This finding coheres with the caveat from Dunlap et al. (2015, p. 176):

> … online educators should keep in mind that emoticons are just one of many ways to express emotion and intent in the online classroom and that emoticons cannot magically solve all of the problems of distance and isolation in online courses.

As discussed in Section 2.3.1, because nonverbal clues are filtered out, text-based CMC is significantly different from F2F communication. The analyses of the functions of PFs (in particular, emoji) in Section 4.4 show that PFs have been embedded into the computer-mediated communication in the mixed textual messages together with the linguistic clues (e.g., punctuation, modal particles, interjections, and adverbs) or used independently (i.e., pure PFs) with three distinctive functions (i.e., emotional, communicative, and pedagogic). To be specific, they conveyed emotions (which is the first indicator of social presence shown in Table 3), and attitudes, intentions and tones of communicative speech acts (which appears in the remaining eight indicators of social presence shown in Table 3) in the text-based CMC. Although the pedagogic function is likely to be more strongly related to teaching presence and cognitive presence, which is beyond the scope of this study, its significance in this study is precisely this mediating link with social presence.

As a result, we can see that PFs (in particular, emoji) as an indicator of social presence, not only convey emotions but can alsoconvey communicative speech acts, and play significant roles (as a catalyst and a barometer) in the establishment and maintenance of social presence (including exchanging emotions, establishing familiarity and maintaining the mentor-mentee relationships) and the creation of opportunities for Chinese learning. Therefore, we cannot ignore PFs' existence or overlook their significance, instead, we must cultivate both mentors' and mentees' competence of using PFs (in particular, emoji). I will make further discussion on this in Section 5.5.2.

5.3.2 Which category of social presence should be developed earlier?

As discussed in Section 2.3.2.4, Garrison (2017) argues that the "open communication" category and the "cohesive response" category of social presence should be developed earlier than affective communication (p. 39). He also contends that setting a social-emotional climate is "more about a feeling of belonging to the group and less about connecting with others on a personal basis" (2017, p. 39). As I document in the following paragraphs, I do not share these views.

In the context of my study, in addition to the lack of visual clues, mentees and mentors had not had either online or offline communication with one another before their participation. As a result of this absence, there were more specific challenges (at least four) that they faced in establishing social presence.

In the first place, in the blended learning and online formal learning contexts, students have established trust in their lecturers on the basis of their trust in the university because they presumably believe that the university has a strict and professional employment system, which enables only qualified staff to teach this subject. By comparison, in learning outside the classroom, although I informed the mentees that this research project was taking place with the permission of the university, and they were also informed that the mentors were postgraduate students or university teachers in China, they still lacked a basis in experience to trust their mentors. I played only a weak mediating role between a mentor and a mentee, and the trustworthy institution (i.e., the university where the mentees were studying, and where the ethics approval was issued) was in a sense far away from both the mentors and mentees (some mentees reported they felt hesitant to contact their mentors due to the restrictions of their Chinese language proficiency and the unfamiliarity with their mentors, as shown in Footnote 3). Therefore, the social-emotional climate in this research project tended to be more subject to personal relationships (i.e., the personalised mentor-mentee relationship).

Moreover, in blended learning, students' participation in online learning will vary in accordance with the requirements of the universities (e.g., they could get certain credits for their participation or taking that course, or being assessed by exams). By comparison, in my study the mentees participated voluntarily without payment or credit points as reward. And the mentors did not have the same power as the lecturers in the mentees' Chinese subjects, for example, they could not assess mentees' performances and give them scores and credits.

Additionally, mentees' restricted Chinese language proficiency may have inhibited what they could express with text-messages, and whether or not they expressed their meaning appropriately (which could have made them less easily comprehensible for the mentors), which is greatly different from the student-teacher communication in the online learning settings if both parties are proficient in the same language. This can be seen in A2-L4's report concerning why he did not send audio messages to C11 although he received them from C11 (see Section 4.2.2): he was not so confident and not good at speaking at that time.

Furthermore, WeChat is a Chinese social media application and the majority of its users are Chinese or from a Chinese background, so this can be called a *Chinese domain* following the term *Japanese domain* coined by Pasfield-Neofitou (2011). The one-to-one (i.e., one mentor-one mentee) private chat mode spared the mentees from communicating simultaneously with multiple unknown people who were also using WeChat[50], since the mentees were in a comparatively closed and safe context. However, when mentees first stepped into this domain, they indicated that they still felt shy (refer to Footnote 3) to open up their communication. This may have further inhibited the establishment of social presence.

The four specific challenges imply that it is demanding to establish emotional exchanges and build emotional closeness in contexts such as my research context. And the challenges can help us understand why 14 out of 15 mentors from the larger learning program reported that the biggest hindrances to sustaining the mentor-mentee relationships and the associated Chinese language mentoring was the lack of emotional exchanges (as reported in Section 1.2).

Mentors and mentees participated in my research project voluntarily for the shared academic purpose of informal Chinese language learning. The informality was reinforced because the participants had already been identified as mentors or mentees in the F2F verbal introduction of my research project to the potential participants. Moreover, since the engagement in my research project mainly involved engagement in pairs where only two parties were involved (a mentor and a mentee), the identification of the "group" in the current CoI theoretical framework (i.e., "pair" in my study) had been established at the start, that is, immediately after a pair was formed Therefore, the academic purpose, the academic identities have been established at the start, and the other two categories of social presence (i.e., open communication and cohesive response) were not urgent issues in my research project.

The most obvious and immediate challenge was to show one's friendliness and willingness to engage and build mutual trust in the mentor-mentee relationship. Therefore, the affective communication category of social presence should be prioritized to open up their relationship at the early stage. It is possible that the affective communication could decrease slightly over time when the cohesion in a pair and open communication have increased, which would reflect the dynamic nature of social presence, but analysis of this issue is

---

[50] If the mentees did not disable WeChat features such as "People Nearby" ("附近的人") and "Shake" ("摇一摇"), people who were not participants in my research project would have the chance to contact them. See Appendix 4 for my advice on how to avoid this risk.

beyond the scope of this thesis.

5.3.3 The importance of online etiquette

In Section 1.2, I have introduced that the biggest hindrance that the majority of Chinese mentors in the wider learning project pointed out was the absence of emotional exchanges. The findings in Section 4.4 suggest that such hindrance could be reduced (or overcome) by the use of nine indicators of social presence.

Although mentors and mentees could use PFs as a supplementary method to enhance the communication, the majority of the computer-mediated communication in the three pairs was still text-based (see Appendix 9). In other words, the written texts remained the basic form of communication (and had to convey meanings, emotions, attitudes etc.). This raises the importance of how to express respect and politeness in the informal, international and intercultural Chinese learning on WeChat. Below are two examples.

The first example is related to the written form that would enable the mentees to express respect to the mentors. The written text form for addressing the teachers/mentors by title is "老师"(teacher) (whether they are used with PFs or not). This written form can show the respectfulness directly with less likelihood of misinterpretation.

The second example is associated with expressing apology and providing explanation. For instance, the *apology and/or explanation* indicator appeared when there was inconvenience caused to the interlocutors in A2-L4 & C11 and A4-L4 & C13. The indicator acted as a promoter or facilitator for the social presence in the two pairs. In contrast, the indicator was missing in A1-L4 & C11, as a consequence, it became an inhibitor in this pair and inhibited C11 from taking initiative to contact A1-L4, which largely (because A1-L4 also reported that he had technological problems with his phone) resulted in two breakdowns in their communication (there were 43 consecutive days in the second break). During this period of time, there were no learning opportunities in this pair. Therefore, the finding supports what Cleveland-Innes and Campbell (2012, p. 285) argued: if managed well, emotion may serve as an enabler (rather than a distractor) in supporting online learning. The finding also supports what Kelly and Watts maintained: relational maintenance could be regarded as a kind of need and relationships can "weaken and unravel if they are not attended to" (2015, p. Discussion).

Addressing the mentor as "老师"(teacher) in the context of this study, and conveying apology

and/or providing explanation in online communication involve online etiquette literacy. Because complimenting others, expressing appreciation, apologising for any inconvenience caused to others and (or) explaining to them etc. are significant in both offline and online communication.

In the text-based CMC, the communication between the mentors and the mentees was largely text-based (see Appendix 9), that is, the nonverbal clues had been largely filtered out. However, the mentees' Chinese language proficiency restricted them from correctly interpreting what the mentors were conveying, and also restricted them from correctly and appropriately conveying their own meanings. Therefore, there were extra requirements and extra difficulty in conveying politeness and respect.

Evidence suggests that native speakers perceive pragmatic failure as more serious than grammatical error (see Schauer, 2009). In line with Thomas (1983), who argued that pragmatic failure can be due to pragmalinguistics or sociopragmatics (Thomas, p. 99), Leech (2014) contended that learning to communicate successfully (including politely) in a foreign language is "partly a matter of linguistic appropriateness, and partly a matter of cultural adaptation or accommodation" (p. 263).

The findings in Section 4.4 show us that among the nine indicators, A1-L4's biggest and most obvious problem was in the *open communication* category of the social presence element, in particular, the absences of both apology and explanation had a negative influence on his Chinese language learning by reducing C11's willingness to take the initiative to contact him and initiate new conversations, which consequntly reduced his opportunities for Chinese language communication. Additionally, he was not as good as A2-L4 and A4-L4 at expressing his emotions in the text-based CMC context, although he was open to disclosing his personal life and vulnerability as identified in Section 4.4.1.2. This signals the necessity of training mentees in online etiquette in commmunnicating with a Chinese mentor in online learning settings, such as WeChat.

5.4 Issues that should be considered in the social presence element in the CoI theoretical framework

The findings in Chapter 4 raise three issues relevant to the social presence element of the CoI theoretical framework: discipline-related issues, issues concerning the communication medium, and the formality of the online learning (which will be discussed in Chapter 6).

In the latest CoI theoretical framework (Garrison, 2017, p. 25, also see Figure 2), the discipline-related issues and the communication medium are conceived as "exogenous" or "indirect" variables "for reasons of parsimony" (Garrison, 2017, p. 33).

5.4.1 Discipline-specific issues

In the latest CoI theoretical framework (Garrison, 2017, p. 25, also see Figure 2), the discipline standards are conceived as "exogenous" or "indirect" variables simply "for reasons of parsimony" (Garrison, 2017, p. 33). However, my findings in Chapter 4 suggest that the indicators and their definitions of social presence may vary across subjects, therefore the disciplinary issues should not be treated as "exogenous" or "indirect" variables. The disciplinary issues that influenced the mentor-mentee relationships and the opportunities for Chinese learning involve both linguistic aspects and pedagogic aspects.

The linguistic aspects that need to be taken into consideration in relation to social presence and the CoI framework are two-fold:

Firstly, studies suggest that successful CMC between learners of a target language and native speakers requires both parties to have a *shared linguistic repertoire* (Vandergriff, 2016, p. 166), which means that the mentees should have sufficient Chinese language competence to enable successful communication. But the reality is that for mentees such a repertoire has to be learned and developed so that they can communicate and negotiate their relationship with their mentors. This involves a specific requirement for the mentees of the discipline itself (i.e., Chinese language), which is different from learning other disciplines online.

In the existing social presence element (see Table 2), none of the full set of nine indicators can be established well if the participants do not have a shared linguistic repertoire. Both *expressions of vulnerability* and *use of humour* require tacit agreement between the interlocutors (i.e., both of them should be able to understand what the interlocutor was conveying), and they also require the mentee to have sufficient Chinese language proficiency to be able to correctly express their intended meaning, and appropriately respond to the mentor.

Secondly, the synchronicity of CMC and the Chinese writing system itself may pose specific linguistic challenges to CMC and the associated Chinese language learning. As I elaborated in Section 3.5.1.1, it is necessary to differentiate different levels of synchronicity in CMC

(asynchronous, semi-synchronous, and synchronous). When Australian Chinese language learners communicate with Chinese native speakers in the largely Chinese text-based semi-synchronous context of WeChat, they have to use a Chinese writing system that is different from the alphabetic writing system that they are used to, and they have to respond rapidly to their interlocutors. As a result, the time pressure of inputting Chinese characters correctly to make the communication develop smoothly is much higher than that in the semi-synchronous CMC in learning other disciplines, for example, where the mentees are using the same native language (e.g., English) with their mentors to learn subjects such as history or geography.

As for the pedagogic aspects, C13's creative pedagogic uses of five emoji as shown in Table 37 implies that some emoji can be used as realia and have lexical meanings. A4-L4 did not feel that these emoji were helpful for him learning Chinese characters or words, which was probably because he had higher Chinese language proficiency (he was in Level 4, the advanced level Chinese class at his university) and had grasped these words or characters. However, for beginner level Chinese language students (e.g., students in Level 1), such pedagogic uses of emoji do have pedagogic values, as it is common for additional language teachers to use images or flash cards as realia in classroom learning settings. Considering the embedded playfulness of using emoji to engage with an interlocutor, which is related to "enhanced feelings of intimacy and closeness" (Kelly & Watts, 2015, p. Findings) and therefore is related to social presence, it is plausible to assume that the pedagogic aspects are part of the disciplinary issues that should be taken into consideration in relation to social presence in the CoI theoretical framework.

In conclusion, both the linguistic factor and the pedagogic factor are significant parts of the Chinese disciplinary issues associated with learning languages in general and in specific ways with the learning of Chinese that should be considered in the social presence element of the CoI theoretical framework. It is likely that in order to make the CoI theoretical framework more inclusive and explanatory, issues that reside in other disciplines should also be considered.

5.4.2 Issues concerning the communication medium

There are three issues concerning the communication medium that need to be considered: the consideration of the interactive multimodal CMC on WeChat, the communication mode, and the software running on each device involved in the communication and research.

5.4.2.1 The interactive multimodal CMC

In this section I discuss the complexity of synchronicity in CMC and the multimodality of CMC.

(1) The complexity of synchronicity of CMC. As discussed in Section 3.5.1.1, in the interactive multimodal platforms such as WeChat, different modes (at least text, audio and video) can be utilized with three different degrees of synchronicity: synchronous, semi-synchronous, and asynchronous.

In Section 4.2.2, I have discussed that participants' uses of WeChat features with different levels of synchronicity indicated their perceptions of different levels of social presence in the pairs. For example, among the wider group of learning project participants, none of the mentors and mentees used synchronous communication modes: video calls or voice calls. Some mentors (e.g., C2, C3, C7, C14 and C15) reported it was because they were not so acquainted with their mentees. Consistent with the wider pattern, none of the three mentees in the three pairs sent audio messages to their mentors although they received asynchronous or semi-synchronous audio messages from their mentors. A4-L4 explained the reasons in the second-round interview: "I feel like because I don't feel that comfortable" (4'43''- 4'46'').

Therefore, the mode(s) of the communication medium that the participants have used and the levels of synchronicity involved should be considered in the social presence element of the CoI theoretical framework. Although in Table 3 I did not propose any indicators or their definitions to be included to investigate social presence in relation to participants' different uses of the synchronicity of WeChat, I propose that future studies should consider three levels of synchronicity of the CMC that participants' use with the medium as an indicator, or at least as part of the definition of an indicator, or as the fourth category juxtaposed with the other three existing categories (i.e., *affective communication*, *open communication* and *cohesive response*, refer to Table 3).

Likewise, the three levels of synchronicity should also be considered in the CoI theoretical framework. That is, these levels should be considered not only within the realm of social presence, but in teaching presence and cognitive presence, and, as a result, in the whole CoI theoretical framework. For example, in the investigation of participants discourse behaviours and engagement in Chinese learning using the CMDA approach, it is necessary to consider what mode(s) of the communication medium participants have used and the levels

of synchronicity involved. Although in this thesis I did not focus on teaching presence and cognitive presence, the benefits of considering the three levels of synchronicity are significant. Below are two examples.

First, as discussed in Section 4.3.3, the classification of the three levels of synchronicity, together with A4-L4's self-report concerning C13's ways of aligning and delimiting her messages made the messages look clear and well organised, rather than being clumped up, and this form of presentation was helpful for his Chinese learning because he was a visual learner, I realised that it would be easier to delimit and align the messages during asynchronous communication than to do it in semi-synchronous communication because in asynchronous communication, participants would have more time than participants in semi-synchronous communication because of the time pressure arising from the intense and frequent messages sent back and forth.

Second, acknowledging different levels of synchronicity helped me capture different interactions and different levels of the disrupted turn-adjacencies, and different numbers of the characters in the e-turns and understand the reasons for them. For example, in semi-synchronous chat mode, because there are frequent messages sent back and forth, especially in the competitions for the floor, messages can be much shorter than those in asynchronous chat mode. From the excerpts of chat logs in Chapter 4 we can see that the general numbers of Chinese characters in the asynchronous chat mode in A4-L4 & C13 (e.g., Tables 33, 34 and 37) are more than those in the semi-synchronous chat mode in A1-L4 & C11 (e.g., Tables 11 and 30).

I am not claiming that both A1-L4's and C11's short messages with fewer Chinese characters in an e-turn are not good for Chinese learning, because I understand that such shorter messages reflect the time pressure of the semi-synchronous communication. Moreover, I understand that the frequent and intense messaging back and forth in semi-synchronous text-based CMC indicate that both A1-L4 and C11 once had strong willingness to contribute to the communication, to maintain the mentor-mentee relationship and create more Chinese learning opportunities, for example, their most productive chat sequence (with at least 224 total messages, 92 from A1-L4 and 132 from C11) was referred to in Section 4.4.1.2.

Neither am I claiming that A4-L4's and C13's long messages in an e-turn with more Chinese characters are not beneficial for Chinese learning, because in the asynchronous communication, they had substantial time to compose long text messages and use the

delimitation and alignment strategies, which as A4-L4 reported (Section 4.3.3), made the text messages organized and clear and helped his learning because the messages did not "stay clumped up" (16'27'', the second-round interview). As a result, I can see that C13 put substantial effort into making the Chinese learning on WeChat well organized and clearly presented, which simultaneously signalled her willingness to keep the communication open and carry it on, as well as the high degree of social presence in this pair.

(2) The multimodality of CMC (in particular, interactive multimodal platforms such as WeChat, see Figure 3). The current indicators and their definitions of social presence are still largely framed around text-based CMC (see Table 2), which consequently reduces the explanatory power of the social presence element of the CoI theoretical framework . Although there is mention in the definition of the indicator *expressions of emotions* that "unconventional expressions of emotion, including repetitious punctuation, conspicuous capitalization, emoticons" (see Table 2), it does not take account of graphics, and does not distinguish emoticons from emoji explicitly or take account of other PFs (e.g., lexical surrogates). Moreover, dynamic or animated emoji have also be widely used in social media (although this study was not able to interpret all the animated emoji that participants used in their communication, as discussed in Section 3.5.5 and see more in Xue, 2017). However, the findings in Section 4.4 demonstrate the significance of PFs (in particular, emoji) in conveying emotions, conveying communicative forces, and being used with pedagogic functions, and their positive role in sustaining mentor-mentee relationships and creating opportunities for Chinese learning. Therefore, it is necessary for the social presence element to consider the multimodality of CMC by including graphics, and in a broader sense, to include more PFs (both static and dynamic, see Figure 3) in investigating social presence in social media mediated Chinese learning.

5.4.2.2 The communication mode

The shaping of the existing CoI theoretical framework works well for one-to-many online communication (e.g., one teacher to many students, or one student to many fellow students), or many-to-many (e.g., many students communicating with many other fellow students). It does not take into consideration the one-to-one CMC, which is the main communication mode used in the mentor-mentee relationship in my study.

Garrison argues that the refined definition of social presence (i.e., the 2009 definition in Garrison 2009, p. 352) "places a priority on academic goals and communication within the community", so that "personal relationships enhance and do not inhibit academic discourse

and group identity (i.e., cohesion)" (2017, p. 42).

In the one-to-many or many-to-many formal online learning settings, if the relationship between the teacher and one student is broken, the repair can be supplemented by the relationship between the teacher and other students, therefore, the teaching and other students' learning experiences can still go forward. This can also occur in the many-to-many case.

However, the one-to-one personal relationships do not always enhance academic discourse and group identity. In the one-to-one informal learning, if inconvenience (if not offence) has been caused but no remedies were negotiated to repair the mentor-mentee relationship, then the broken mentor-mentee relationship will have a negative influence on subsequent learning opportunities. As discussed in Section 4.4.2.2, A1-L4's omission of both apology and explanation after two breaks of communication (the first lasted 18 days and the second 43 days) resulted in C11's anxiety (see Table 10) and confusion (her words "摸不透" [can't figure him out] about her impression of A1-L4), which further inhibited her from taking the initiative to contact him and offering him learning opportunities proactively, which, in turn, inhibited and reduced A1-L4's opportunities for learning (see Table 43).

Therefore, to improve the explanatory power of the social presence scheme and the CoI theoretical framework, it is necessary to take account of the one-to-one communication and learning mode.

In conclusion, both the disciplinary standards and the communication medium should not be considered to be situated as peripheral aspects. In fact, they permeate the whole community (i.e., the CoI), impact each of the three elements (i.e., social presence, cognitive presence, and teaching presence) and the interactions among the three elements, as a result, influence every process of learning. Otherwise, their influences on the ecology of the CoI, the healthy interactions among the three elements, the learning processes and learning outcomes, would be largely underestimated.

5.5 The importance of improving digital literacy

5.5.1 Digital literacy in Chinese learning with WeChat

In a study investigating how mobile devices (mobile phones) were used by learners, particularly in the informal learning settings, Cook et al. (2008, p. 17) concluded:

It strikes us that, at least in part, the lack of ability on the part of the learners in this study to conceptualise effective uses of their mobile phones for learning relates to the need for a change in mindset in learners in terms of their perceived ideas about what valuable learning is and how it can be engendered.

Birch's (2001) study suggests that new technologies require the development of new competencies. However, the implementation of new technology among learners has sped far ahead of our perceptions of what competencies it requires. One of the problems it causes is that learners have to perceive and develop the necessary competencies by themselves (as cited in Cleveland-Innes & Campbell, 2012, p. 283).

Ng (2013, p. 10) proposed a three-dimension framework of mLearning literacy, which was further developed into the mobile digital literacy framework in Ng (2016, p. 96), as can be seen in Figure 7 below.

In Ng's (2016, p. 96) mobile digital literacy framework, the *technical dimension* is concerned with technical and functional skills; the *cognitive dimension* involves critical thinking, evaluation competencies, and multiliteracies; and the *social-emotional dimension* entails attitudes, social skills (e.g., online manners), as well as safeguarding competencies concerning cyber security. Mobile digital literacy is within and between the three dimensions, which needs to be developed to sustain mobile digitally literate individuals (Ng, 2016, p. 95).
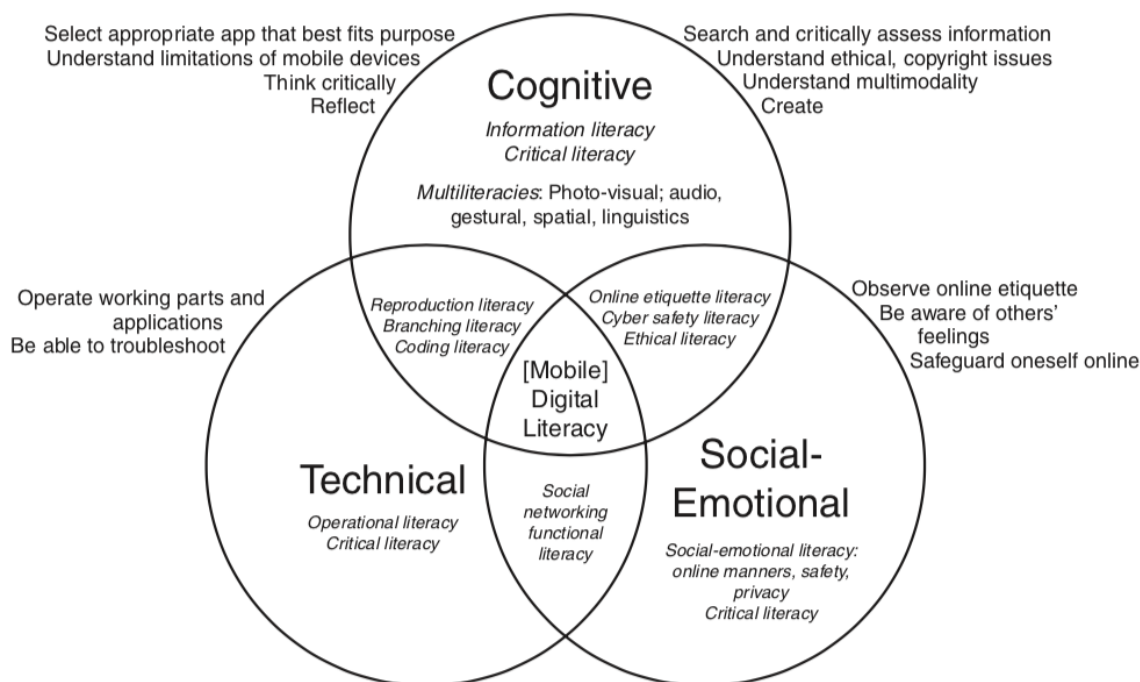
Figure 7 - Mobile Digital Literacy Framework (Ng, 2016, p. 96)

The definition of social presence element of the CoI theoretical framework mentioned in Section 2.3.2 relates to an "ability", specifically, "social presence is the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities" (Garrison, 2009, p. 352). We can see that the notion of the social presence element in the CoI theoretical framewrok has overlaps with Ng's (2016, p. 96) mobile digital literacy framework, especially with "social-emotional" literacy (see Figure 7).

Ng (2016) argued that sustaining mobile learning at a personal level involved both the teachers and the students. Ng defined sustainability at the personal level as: "the continuing use of mobile technologies for safe and effective learning across the individual's lifespan." (2016, p. 88) Although in this study the mentees' Chinese learning experience on WeChat was only documented over 13 weeks, the issues identified in Chapter 4 suggest that there is space for both mentors and mentees to develop digital literacy, which will help them establish higher degrees of social presence, and prepare them for safe, sustained and effective lifelong learning using social media in informal, international and intercultural computer assisted language learning contexts.

The findings in Chapter 4 and the above discussions in this chapter highlight the significance of four prominent aspects of participants' digital literacy in informal, international and intercultural Chinese learning on WeChat, including: noticing, developing mentors' and

mentees' competence of using PFs, online etiquette literacy, and cyber safety literacy. Because I have elaborated the importance of noticing and online etiquette in Sections 5.2.2 and 5.3.3 in this chapter, below I will focus on the remaining two aspects.

5.5.2 Developing both mentors' and mentees' competence of using PFs

In addition to the four elements of Chinese language knowledge (phonology, vocabulary, syntax, and Chinese characters) that are critical parts of teaching Chinese as an additional language, Zhang Zhanyi (Zhang, 1984, pp. 63-64) proposed one more element: Chinese culture, which he presumed to consist of *cultural knowledge information*[51] (知识文化) and *cultural communication information*[52] (交际文化). Later, increasingly more scholars cohered with him (Liu, 2000, pp. 129-130).

Inspired by Zhang's (1984) classification, I propose that in the context of Chinese learning on WeChat, the learning of Chinese language involves learning *knowledge of Chinese digital culture* and developing *Chinese digital communicative competence* in communicating with Chinese people or people with Chinese background.

Some native QQ emoji on WeChat embody Chinese culture and traditional customs, and they are part of *knowledge of Chinese digital culture*. Specific cultural references include the red packet emoji ( ) and the chick emoji ([ ], which stands for the animal of the lunar year 2017, that was changed into a dog emoji [ ] in 2018). Chicken and dog are two of the 12 zodiac animals. In Chinese social media, they signal Chinese culture in a digital manner, which mentees need to become familiar with.

Meanwhile, mentees communicating in Chinese on WeChat also need to develop *Chinese digital communicative competence* in communicating with Chinese people (such as the mentors) or people with Chinese background in Chinese on WeChat appropriately. An important aspect of this communicative competence is (Chinese) people's face management in CMC, such as WeChat.

Face (面子) is a critical notion in Chinese culture. Asian and Western perceptions and practices of *face* are different (Ting-Toomey et al., 1991). In fact, Lim and Basnyat's study concerning *face* and online social networking suggests that even in Asia, different countries

---

[51] The English translation was Zhang's (1984) original translation.
[52] See the previous footnote.

(such as China, Japan, Korea, India/Pakistan, Thailand, and Vietnam) have different interpretations of this notion (2016). Lim and Basnyat argue that the Chinese notion of *face* encompasses four respects (i.e., gaining face, maintaining face, saving face, and losing face), which are not only manifest in F2F communication settings but also in online settings (2016, p. 18). My study contributes findings in relation to this issue.

Both C11's and C13's uses of QQ emoji and their ways of expressing apology manifest (literal and cultural) face management in the digital communication settings (i.e., WeChat). For example, C13's use of smiley face QQ emoji (😳) and the winking and tongue-sticking-out QQ emoji (😜) when she corrected A4-L4's error helped mitigate the face threat to the mentee (see Table 33). Whereas C13's use of the winking and the tongue-sticking-out QQ emoji (😜) in Table 34 has both a face-saving effect (saving her face) and a face-maintaining effect (maintaining both her and A4-L4's face to keep the communication open) after she apologized to the mentee for not having chatted with him for one week.

Additionally, C13's textual clue "不好意思"(bù hǎoyìsi) instead of "对不起"(duìbùqǐ) actually suggested a lighter tone in her apology (Table 34), and it was not so formal as was C11's "很抱歉" (hěn bàoqiàn) in communicating with A2-L4 (see e-turn 54 in Appendix 21). C13's use of "不好意思" (bù hǎoyìsi) and the tongue-sticking-out QQ emoji (😜) with both textual clues and PFs could not only save her face (being a mentor, with a higher social position than the mentee), but could also save the mentee's face by taking on the "fault" for not having chatted with the mentee for a long time, which could help establish higher degree of social presence because it indicated C13's willingness to keep the communication open.

My findings are in line with Ng (2016), who argued that both the teachers and the students must be mobile digitally literate to achieve sustainability in the mobile learning programs. For one thing, I think that allowing for A1-L4's lower degree (compared with the other two mentees') of social presence in general (refer to Table 54), and the comparatively lower level of sustained mentor-mentee relationship (see Appendix 2), and the lowest level of learning opportunities in the three pairs (refer to Table 19), it suggests that mentees should be trained to be digitally literate, to make sure that despite the restrictions of their Chinese language proficiency, they would be still able to communicate with Chinese people or people with Chinese background on WeChat. This is not a simple task since it entails being not only linguistically correct but also pragmatically appropriate across multiple textual forms (i.e.,

pure text messages, mixed textual messages, and pure PF[s]).

For another, as discussed in Chapter 1, 14 out of 15 mentors in the wider learning project reported that the lack of emotional exchanges hindered them from communicating with their mentees, which suggests that a large number of mentors did not know how to convey their emotions on WeChat. Therefore, mentors should also be trained to adapt to the CMC medium and develop Chinese digital communicative literacy in order to establish higher degrees of social presence, sustain the mentor-mentee relationships and create more opportunities for Chinese learning.

The reported aspects that influenced mentees' use of paralinguistic features suggest that we can raise participants' (including mentors' and mentees') awareness of using PFs and design communication topics that can be easily linked to different categories of PFs (e.g., the eight categories of emoji on iOS).

The significance of PFs (in particular, emoji) in establishing and maintaining social presence (including exchanging emotions, establishing familiarity and sustaining mentor-mentee relationships) and creating opportunities for Chinese learning has been discussed above. Dunlap et al.'s (2015, p. 177) study concluded that effective use of emoticons was a *digital competency*, which was an aspect of a person's *digital literacy* and involves ability to use CMC accurately and appropriately. Danesi (2016) used the term *emoji competence*. I propose to use the term *competence in using PFs*, which is to go beyond emoticons and emoji to include more phenomena.

For mentors, having the competence in using PFs (in particular, emoji) has substantial instructional implications. In addition to the pedagogic function of emoji identified in Section 4.4.1.1 in this thesis, Dunlap et al.'s literature review shows that the instructional potential of emoticons[53] includes: enhancing teaching presence, providing personalized feedback, softening critical feedback, establishing clear expectations for emoticon use, and going beyond emoticons (2015, pp. 176-177). C13's creative uses of some emoji as realia (as shown in Table 37) have instructional implications for mentors who have lower level Chinese proficiency mentees.

Garrison suggests: "Modeling of appropriate messages and responses can also be crucial in

---

[53] Although Dunlap et al. (2015) used the term "emoticons", I found that actually they categorised emoji under emoticon. See my discussion in Section 2.4.1.1.

giving the participants a sense of belonging" (2017, p. 48). Following Garrison's suggestion and taking account of the instructional potentials of emoticons[54] reviewed in Dunlap et al.'s study (2015, pp. 176-177) and the pedagogic function of PFs identified in Section 4.4.1.1, future mentors may model messages and responses with either pure text messages, pure PFs, or mixed textual messages. PFs could be like C13's smiley QQ emoji, which functions as a friendly reminder in correcting mentees' errors. If the mentor-mentee relationship has become close enough, mentors may also use emoji (like the winking-and-tongue-sticking-out emoji [😜]) to convey nuances of humour and playfulness. And the query-look and question-mark emoji (🤓) tend to be easily comprehended as expressions of confusion because of the question mark. Similarly, easy to comprehend are both C11's and C13's uses of the thumb-up emoji (👍), the applaud emoji (👏) and the red heart emoji (❤️) to express compliment or affirmative feedback.

Mentees also need to develop such competence to understand the mentors' pedagogic uses of PFs correctly and make appropriate responses.

I think the *competence in using PFs* should be regarded as one of the most important aspects of a mentee's (or learner's) and mentor's (or teacher's) digital literacy. And it should be conceived as part of the social-emotional skills necessary in online learning as outlined in Ng's (2016) framework (see more in Ng, 2016, p. 96; also refer to Figure 7).

5.5.3 Cyber safety literacy

Mobile digital literacy concerning risks to privacy is coined by Ng as *cyber safety literacy* (2016, p. 96). For the communication on WeChat, Zeng (2017) mentioned that there were potential challenges and risks concerning using WeChat, mainly involving censorship and surveillance. Therefore, both mentors and mentees need to be cautious about the contents that they communicate on WeChat. Additionally, both mentors and mentees should have solid knowledge about WeChat features, in particular, how to set restrictions in their devices' Settings, for example, not allowing WeChat to access their location, contacts, etc. Moreover, they can also go to WeChat "Settings", set some restrictions to protect their privacy, for example, enable "Friend Confirmation", not allowing some contacts to view their posts on "Moments", and disabling some features that might increase the risk of being contacted by strangers, such as "Message in a Bottle", "People Nearby", and "Shake" (see Appendix 4).

---

[54] See the previous footnote.

In fact, issues involving big data privacy and security are a common concern globally, for example, in 2018, it was reported that up to 87 million Facebook users' data was obtained by Cambridge Analytica and misused.[55] To avoid possible risks, future research projects can develop "Rule of Conduct" similar to those in Appendix 4. In addition to this, all participants should be trained to be cyber-safety literate in learning using social media.

To conclude, the four prominent aspects of participants' digital literacy in informal, international and intercultural Chinese learning on WeChat (i.e., noticing, learning knowledge of Chinese digital culture and developing digital communicative competence, online etiquette literacy, and cyber safety literacy) should be the important parts in training both the mentors (or instructors) and the mentees (or students) to be digitally literate in the future Chinese learning programs using WeChat.

5.6 Conclusion

Overall, despite the controversies concerning the educational values of social media, I have documented some new benefits of using WeChat in Chinese learning. I have also outlined the significance of participants' noticing and initiative in creating learning opportunities. Additionally, as mentioned in Chapter 1, although 14 out of 15 mentors reported that the absence of emotional exchanges, and the mentor C1 put it aptly as "情感缺失" (the absence of emotions) or "缺乏情感交流" (lack of emotional exchanges), my analysis of the three pairs investigated in this thesis show us what aspects can support or inhibit the emotion exchanges, how emotions could be exchanged and how higher levels of social presence could be established, which have significant and remarkable influences on the mentor-mentee relationships and Chinese learning.

Other research has reported that social presence plays a mediating role between cognitive presence and teaching presence in online learning settings (Garrison et al., 2010, p. 32). The findings in Chapter 4 reveal how this mediating role works, to be specific, as an antecedent to teaching and learning (which is in line with Garrison, 2017, p. 37) in the specific context of Chinese learning via WeChat, allowing for the specific challenges discussed in Section 5.3.2. The implications and limitations of this study, and the suggestions for future studies will be elaborated in the next chapter.

---

[55] See news at: https://www.abc.net.au/news/2018-04-05/facebook-raises-cambridge-analytica-estimates/9620652

Chapter 6: Conclusions

6.1 Summary

As reported in Section 1.2, one of the most obvious aspects hindering most of the mentors (14 out of 15) in the larger learning project from engaging with their mentees was the absence of emotional exchanges ("情感缺失", absence of emotion or "缺乏情感交流", lack of emotional exchanges) and unfamiliarity ("心理距离", psychological distance; "不熟" not acquainted; "陌生的感觉", sense of strangeness and "完全不认识", completely do not know). However, the three pairs of mentors and mentees investigated in this thesis had more substantial communication than other pairs, and as I outlined in Section 4.2, the five participants reported that they were satisfied with their WeChat experiences. These outcomes motivated me to focus on these three pairs.

In Section 4.3, I presented evidence of Chinese learning in the three pairs, which demonstrates two points: 1) participants in the three pairs used WeChat for Chinese learning rather than for socialising; and 2) in this WeChat environment, Chinese learning opportunities were created and used to support that learning. The findings revealed more evidence of WeChat-mediated Chinese learning than previously identified (as discussed in Section 2.2). The findings suggested that the more sustained the mentor-mentee relationships, the more opportunities (including the learning patterns documented in Table 19, the frequency and the duration as shown in Appendix 8) were created to learn Chinese, such that A4-L4 had more opportunities for Chinese learning than A1-L4 and A2-L4. There seems to be a consistency in the patterning of the relationships between social presence and learning. The findings suggest that in Chinese learning on WeChat, what is sustained in the mentor-mentee relationships is the *opportunity* to learn Chinese. How such opportunities are exploited to support learning is an additional issue that I was also able to explore.

I sought to understand the aspects which influenced and how they influenced the mentor-mentee relationships through the lens of social presence. In Chapter 2, I reanalysed the literature concerning the social presence element within the CoI theoretical framework (see Table 2), in order to provide a basis for understanding the connection between more sustained mentor-mentee relationships and more opportunities to learn Chinese on WeChat. In this reanalysis, I built on previous work to propose a refined list of nine indicators of social presence (see Table 3) to provide a framework of how they influenced the mentor-

mentee relationships and Chinese language learning in ways that are more specific to the learning of Chinese in an informal, international, intercultural, one-to-one, WeChat mediated context.

In Section 4.4, I documented that the nine indicators that I proposed appeared to influence the mentor-mentee relationships. As depicted in Figure 5, because the mentor-mentee relationship represents the degrees of social presence in the pair, I was able to identify a consistency between the sustained mentor-mentee relationships, the degrees of social presence, and the *opportunities for learning*. To be specific, the sustained mentor-mentee relationships result from higher levels of social presence that create more opportunities for learning, in which the learning processes can be shaped. This finding raises the necessity to distinguish *opportunities for learning* from *learning* itself. To put it simply: if there are no sustained mentor-mentee relationships, there will not be opportunities for learning and, as a result, no learning will ensue. However, the presence of an opportunity is not an automatic guarantee of learning. Unless either a mentor or a mentee notices or both of them notice the opportunity and take(s) the initiative to use it for the purpose of learning, learning does not occur. The findings in Section 4.4 also reveal that PFs are the specific features of text-based communication on WeChat that impacted the mentor-mentee relationships and Chinese language learning.

Below, I elaborate the implications of these findings in two categories: theoretical and practical implications.

6.2 Implications

6.2.1 Theoretical implications

This thesis has four theoretical implications.

Firstly, the additions and adaptions that I have made to the indicators of social presence element in the existing CoI theoretical framework and their definitions address some limitations in this framework. By drawing on findings reported in disciplines such as media, communication and education (such as including investigations on participants' use of their real personal profile picture as an alternative way of investigating participants' self-disclosure) and by taking account of Chinese language and Chinese culture (e.g., including addressing or referring to mentors by title "老师" and mentees by their names) (see Table 3 for my modifications in red), my modifications extend what was proposed by Garrison

(2017). This extension adapts the framework to the specific context of informal, international and intercultural Chinese learning using WeChat that characterised the mentor-mentee relationships investigated in this study. My analysis of the data shows that all the nine proposed indicators of social presence worked collaboratively and had demonstrated influences on the maintenance of mentor-mentee relationships, the creation of Chinese learning opportunities, and the associated learning process.

Secondly, as depicted in Figure 6, my findings manifest that among all the nine proposed indicators of social presence, PFs stand out as prominent features of text-based communication on WeChat that have significant roles in exchanging emotions, establishing familiarity, sustaining the mentor-mentee relationships, creating opportunities for Chinese learning and facilitating learning processes. The PFs serve as a catalyst that functions as an icebreaker to overcome unfamiliarity, and a barometer that can indicate the degree of social presence. Kim, Franck and Kim (2014, p. 223) reported that "… literature on social presence suggests that nonverbal cues play a critical role in determining the degree of both intimacy and immediacy". For *immediacy*, Mehrabian (1969) defined it "as the extent to which communication behaviors enhance closeness to and nonverbal interaction with another" (p. 203). I have made it clear what the critical roles of PFs are and how they influence the degree of both intimacy and immediacy in this study.

Thirdly, I identify that the current CoI theoretical framework needs refinement to be able to better reveal the deep and underlying function of social presence. The function of social presence is currently described as to create a comfortable learning environment or atmosphere (Garrison, 2017, p. 38; Shea & Bidjerano, 2009), but the findings in Chapter 4 show us that creating a comfortable learning environment is just a superficial function of social presence and that it has a more powerful underlying function: to increase opportunities for online learning and facilitate the learning process. However, as indicated above, whether these opportunities for learning could become learning depends on whether either a mentor or a mentee notices or both of them notice the opportunities and take(s) the initiative to use them for the purpose of learning.

Fourthly, I propose that three issues should be taken into consideration in relation to social presence and the CoI theoretical framework, which can make the CoI theoretical framework more inclusive and explanatory. I have discussed in Sections 5.4.1-5.4.2 that the disciplinary issues and the communication medium issues should be considered in investigating social presence within the CoI theoretical framework. One more issue concerns the formality of the

online learning context.

The current CoI theoretical framework is used in analysing online learning and blended learning (Garrison, 2017, p. 33), which are formal in nature according to the definition of the term "informal learning" in Section 1.6.3. I found that neither Garrison's current social presence element (2017, also see Table 2) nor the CoI theoretical framework explicitly takes account of informal learning, which includes informal online learning and informal blended learning. The study in this thesis is of informal online learning, but the findings can be applied in formal learning settings (e.g., formal classroom learning integrated with online learning) and informal blended learning settings (e.g., informal classroom learning integrated with informal online learning with WeChat[56]). Therefore, I propose the formality of the online educational context should also be taken into consideration in the framing of social presence within the Community of Inquiry framework.

The three issues are outlined in Figure 8. As mentioned previously, the current CoI theoretical framework mainly focused on formal online learning and formal blended learning, both of which have been highlighted in yellow. The remaining content in the figure is my contribution, which has the prospect of enriching our understandings of the complexity of online learning and expanding the explanatory power of the CoI theoretical framework.

---

[56] For example, an instructor in a Chinese class asks students to do an extracurricular activity: go to a supermarket, interact with Chinese people using "你好" (Hello) and ask them how to pronounce five of their favourite fruits in Chinese by using "请问" (May I ask....), "这是什么" (What's this) and "那是什么" (What's that), practise the pronunciations of the fruits, record their own pronunciations of the fruits as audio messages and send the audio messages to the instructor with WeChat. The activity does not have specific curricular criteria, because different students may have different favourite fruits, because some Chinese people that the students meet in the supermarket do not speak Standard Mandarin but speak different Chinese dialects (i.e., do not satisfy the curriculum criteria: the students are learning Standard Mandarin). The specific focus of this activity is to practise what the students have learned in the classroom settings and use them to interact with Chinese people in real situations: "你好"(Hello), "请问" (May I ask....), "这是什么" (What's this) and "那是什么" (What's that). The pronunciations of different kinds of fruits are not part of the focus of this activity. As long as students have sent pronunciations of five fruits, the instructor would assume that they have interacted with Chinese people and used the phrases.
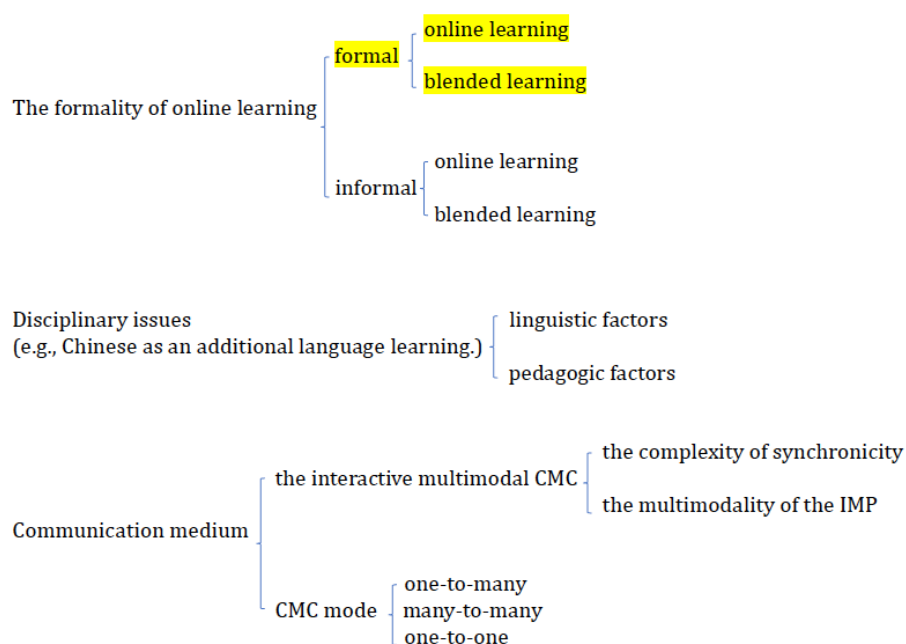
The formality of online learning
- formal
  - online learning
  - blended learning
- informal
  - online learning
  - blended learning

Disciplinary issues (e.g., Chinese as an additional language learning.)
- linguistic factors
- pedagogic factors

Communication medium
- the interactive multimodal CMC
  - the complexity of synchronicity
  - the multimodality of the IMP
- CMC mode
  - one-to-many
  - many-to-many
  - one-to-one

Figure 8 - Additional Variables to be Taken into Consideration in the Social Presence Element of the CoI theoretical Framework

Turning back to the model of the current CoI theoretical framework, we can see in Garrison's diagram of the CoI theoretical framework (2017, p. 25, also refer to Figure 2) that engagement with participants, engagement with content and engagement in relation to goals/direction, are depicted as three ovals with the same amount of overlap. And the centre of the overlap is labelled *Educational Experience*. But as I contend below, the overlap needs to reflect varied disciplinary characteristics and the requirements specific to that experience.

In the one-to-one Chinese learning on WeChat, the language *per se* (i.e., the CMD) is the content of learning, but the engagement with the other participant and the engagement in relation to educational goals or directions (i.e., both the teaching and the learning) are also part of the content, in other words, part of the engagement with content. This relationship is because learning language is also about learning communicating and interacting, and in Wen's words, "in computer-supported collaborative language learning, language is not only the learning context but also the learning medium" (2019, p. 3). Therefore, between the three engagements, there are more overlaps than potentially in other subjects (e.g., mathematics) as depicted in Garrison's diagram (see Figure 2). This suggests that all learning has an object of learning, but that these considerations appear to be more substantial when the means of learning, i.e., a language is (more prominently than in other disciplines) the object of learning. That is to say, the relationships of the three types of

engagements vary across subjects. But how much overlap there could be in different disciplines needs further research because my thesis does not focus on teaching presence and cognitive presence.

On the basis of the above elaboration, I propose that Garrison's latest version of the structural relationships of the three presences (2017, p. 25, see also Figure 2) can be revised as depicted in Figure 10. For the convenience of the readers, I also put the Figure 2 here as Figure 9.
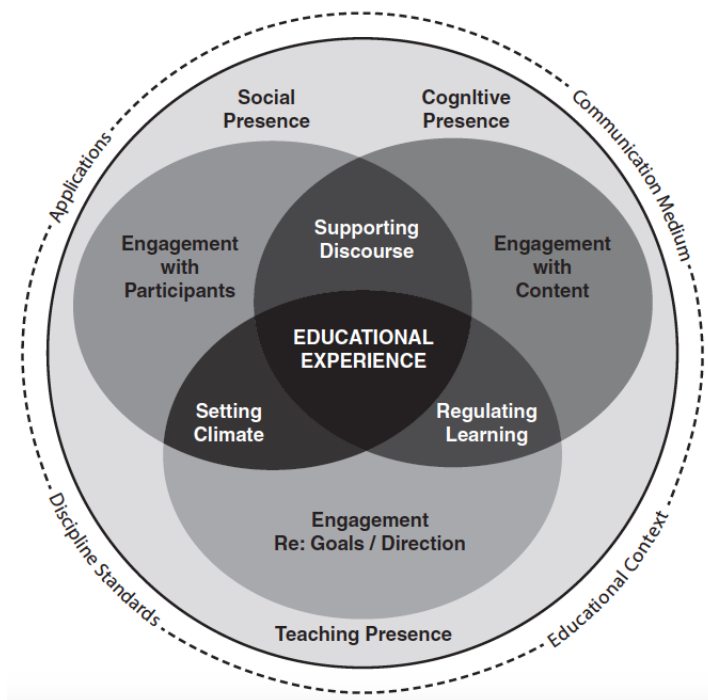

Figure 9 - The Current Model of the CoI Theoretical Framework (Garrison, 2016, p. 59; 2017, p. 25)
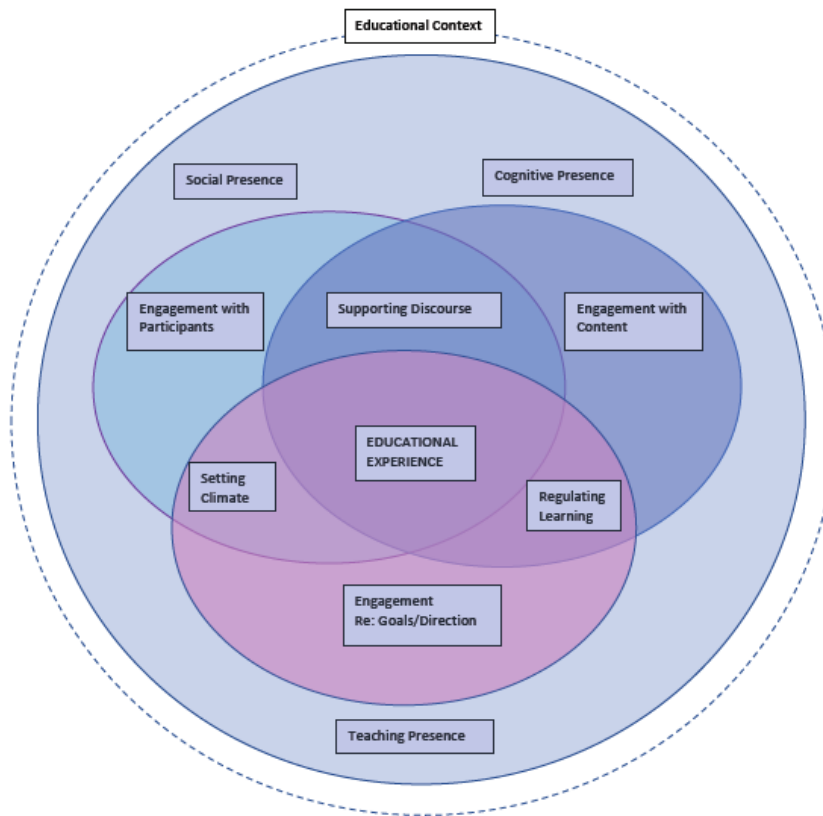
Figure 10 - Community of Inquiry Framework in Informal, One-to-One, Additional Language Learning Context with Social Media

Legend:

	: Discipline Standards and Communication Medium
	: Social Presence
	: Teaching Presence
	: Cognitive Presence

As shown in Figure 10, the light grey colour of the discipline standards (or subject matters) and communication medium indicates how they permeate the community (i.e., the CoI), because the core educational experience of an online CoI is for academic purposes and to achieve specific subject goals and outcomes. The effect of my change to make this an endogenous influence is that the subject matter features should be seen a *direct* rather than *indirect* variables. In addition to this, *communication medium* mediates the learning and teaching process whenever they take place. If the medium involves interactive multimodal CMC, then two variables (the complexity of synchronicity and the multimodality of the interactive multimodal platform should be taken into consideration. And if the medium involves different modes of communication, then it is necessary to take account of whether there are one-to-many, many-to-many, or one-to-one communication. As for the *educational context*, it remains as the general context of the online learning community, and can be

232

regarded as *exogenous* and *indirect* variables, but the investigation of a CoI should encompass specification of the formality of online learning. As discussed previously, including both the formal and the informal online learning will improve the explanatory power of the CoI theoretical framework.

6.2.2 Practical implications

There are seven practical implications of my study. First and foremost, I reveal more of the pedagogic potential of WeChat in Chinese learning. In line with studies discussed in Section 1.1.2 and Section 2.2, the findings in my thesis demonstrate that social media has obvious pedagogical potential in addition to its foregrounded social function. Herring and Nix (1997) put forth a concept "serious chat" and stated that "the purpose of the communication has a strong effect on the discourse produced" (pp. 1-2). My findings enrich our understandings of how to leverage "chat" with academic purposes (i.e., "serious chat" according to Herring and Nix's concept) in language learning by connecting learners of Chinese with Chinese native speakers via WeChat. For example, A4-L4 asked C13 a question about the characters in a poster that he had seen in a night market and C13 provided feedback, which reveals that the effective establishment of these connections means that Chinese learning may happen naturally anywhere and anytime in an informal manner but with "serious" academic purpose since WeChat can be used on different devices (mobile phones, tablets, laptops and desktops). As a result, appropriately structured social media experiences can extend language learning to settings outside the classroom, enabling those experiences to be embedded in learners' daily lives, and offer life-long learning prospects, therefore, may shed light on the resolutions to the challenges that Australian university learners of Chinese are confronting, as discussed in Section 1.1. Although my study focuses on informal learning, the research findings and some methods can be applied in or adapted for formal, blended learning settings.

Second, my study can help improve the degrees of social presence if there are specific challenges for the establishment of social presence similar to those identified in my study (see Section 5.3.2). Overall, the context of my research presented major challenges in establishing higher degrees of social presence: the mentors and mentees had never seen each other before either online or offline, the mentors did not get paid, the mentees did not get credit points for participating in this project, and so on. However, the three pairs were still able to establish and negotiate higher levels of social presence in such a challenging context. For example, mentors and mentees used PFs to convey emotions and speech acts (e.g., intentions and attitudes), A4-L4 used "老师" (teacher) to address or refer to C13 and

used "您" to convey politeness and respect to C3, in turn, C13 used inclusive pronouns to refer to the pair. The relative ease with which these participants were able to do this in these circumstances, means that it is plausible to assume that similar increases in social presence will be easier to achieve in projects designed to be not so difficult. Future practitioners may draw on the nine aspects identified in the three pairs to establish higher degrees of social presence, increase the opportunities to learn Chinese that the sustained mentor-mentee relationship provides, enhance the Chinese learning process and achieve high student retention rate.

I propose that higher degrees of social presence between mentors and mentees could be established more easily if Chinese learning on WeChat could be implemented in a blended learning context, that is, where formal classroom learning is supported by informal learning, because mentees/learners may have established trust in the teaching institution and the lecturers, perhaps also including the use of credit points as rewards and motivation. Alternatively, if it is still implemented in an informal learning research project, without direct connection with formal learning, higher degrees of social presence can also be established in the same way as reported for the three pairs in my thesis. If it is not possible to have F2F meetings, synchronous meetings (preferably with synchronous video) between a mentor and a mentee at the start or on a regular basis can function as warm-up or ice-breaking opportunities, as also suggested by Walther and Parks (2002, pp. 556-557), Wu and Miller (2021, p. 575) and Garrison (2017, p. 48). Moreover, if there is a coordinator liaising between mentor(s) and mentee(s), communication between the mentors and mentees can be assisted in case that misunderstanding or technological problems emerge and inhibit the communication.

Third, the significant roles of PFs in the CMC context identified in this study have practical implications for formal learning settings. As mentioned in Chapter 4, the mentees reported that they did not use PFs to communicate with their lecturers in the text-based CMC. If the formal classroom teaching instructors utilise the three functions (emotional, communicative and pedagogic) in communicating with their students in the CMC contexts (e.g., via emails), it is also likely to improve social presence in the classroom learning settings.

The fourth practical implication involves the necessity to train both mentors and mentees in digital literacy in informal, international and intercultural Chinese learning on WeChat (e.g., raise both mentors' and mentees' awareness of noticing, cultivate their online etiquette literacy, and improve their cyber safety literacy) as discussed in Chapter 5.

The fifth practical implication concerns the pedagogic strategies of *delimiting and aligning text messages*. These strategies are particularly important in modelling and presenting syntactic structures and are helpful for mentees who are visual learners (like A4-L4. See his comment on this in Section 4.3.3). However, whether or not mentors can employ this strategy depends on the operating systems of their phones or other devices. As discussed in Chapter 3 (see Footnote 21), users of WeChat for Android phones can present text messages with the delimiting and aligning strategy in composing text messages on WeChat's chat interface, but iOS WeChat users cannot do so directly.[57]

The sixth practical implication is about the equality in participants' participation. To be clear, although so far (30 April 2021) WeChat has versions for phones, tablets, computers and web, users will not be able to log in to the WeChat computer version or web version if they do not have WeChat installed on their phones, because users must scan the QR code on the web with their WeChat for phones and confirm to log in, or log in WeChat on computer then confirm on their phones.[58] Therefore, it may be necessary for future research projects to take this issue into account and make sure that each participant has a smart phone (e.g., by lending smart phones to the students who do not have them).

One more equity issue is that, as I reported in Chapter 1, broken or lost mobile phones inhibited the communication between mentors and mentees. In order to keep both mentor and mentee contactable with each other, in future informal, international and intercultural Chinese learning programs using WeChat, planning of the programs needs to include multiple devices. That is, in addition to WeChat on mobile phones, there should be alternative ways (such as email) to ensure if there are technological problems with one participant's WeChat or phone, (s)he is still contactable.

The seventh practical implication concerns software modification. Although my study does not focus on analysing technological aspects (or medium aspects), it does reveal that Pinyin IME and handwriting IME, as well as the WeChat versions for different operating systems may have affected the quality of mentors' (e.g., C11) messages, and mentees' (e.g., A2-L4) Chinese learning (see Table 18). This practical implication involves two respects:

---

[57] There are indirect methods to make it possible for iOS devices. For example, because there is a "Return" key (or "换行" in Chinese keyboard) in the text-message composing keyboard in WeChat "Moments", which enables users to delimitate and align a text message, therefore, a WeChat user with an iOS device can compose a message and align it properly in WeChat "Moments", then select the whole message, cut and paste in the text box in WeChat's chat interface, and send it to the receiver.
[58] See http://kf.qq.com/faq/161224EjYriq161224JnUvE3.html, and http://kf.qq.com/faq/161224yaMnMf1612247ZFVfM.html , both were retrieved on 20 January, 2018.

1) The first respect is that the Handwriting IME in the operating systems should not provide nonstandard characters (e.g., C11's "俢" in Table 18, which is not officially standard in Mainland China) as long as the user has chosen the Chinese (simplified) Handwriting IME or Chinese (simplified) Pinyin IME, then the corpus of the characters in the IME will automatically exclude the corpora of traditional characters (including different versions of traditional characters used in Taiwan, Hong Kong and Macau) and only provide officially standard simplified characters. Then the user of Chinese (simplified) Pinyin will only need to choose officially standard simplified characters, without bothering to choose the officially nonstandard characters or traditional characters, which may save the user's time and improve the quality of the text messages.

2) The other respect relates to the design of WeChat itself to make it more user-friendly. As mentioned in Section 3.5.1.1, in WeChat for Android devices, users can delimit and align a message in different lines by using the "Return" key (in the Chinese keyboard it is the "换行" key) in the keyboard when composing a message in the chatting interface, whereas in WeChat for iOS devices, users cannot do so directly because there is not the key either in the English keyboard or in the Chinese keyboard. And users of WeChat for iOS cannot divide an e-turn into different propositions either due to the same reason. Therefore, if users of WeChat for iOS do not know the alternative way to delimit and align a message in different lines and divide and e-turn into different propositions, then their long text messages will appear chunked and "stay clumped up" as reported by A4-L4 (16'22''- 6'28'', the second-round interview).

Delimitation and alignment are important techniques in visually modelling syntactical structures. If a mentor's phone can be used to delimit and align a message, the mentor may present syntactical structures visually clearly, like how C13 did in Table 23. And such kind of delimitation and alignment is particularly helpful for visual learners like A4-L4. Since WeChat has this feature on WeChat for Android devices, there is no reason for them to exclude the iOS users from the feature.

6.3 Limitations

There are two limitations in this study: 1) the findings in this thesis are based on the analyses of three pairs in only one level. As a consequence, there is insufficient data to

generalise to other contexts or levels. As a result, the translation of these findings to other learning settings needs to be done cautiously. Future research is needed with larger samples by including mentees from different levels of Chinese classes, which will enable large-scale data analysis and find out whether there are common or different phenomena across levels; and 2), it involves the specific methodological issues discussed in Section 3.5.5 (see more in Xue, 2017). There are 12 unrecognised PFs in the three pairs' submitted chat logs (refer to Appendices 14-17), due to the unresolved methodological challenges in relation to Unicode® emoji and animated emoji. And there are 82 audio messages remaining only partially recognizable due to the technological restrictions of WeChat (refer to Appendix 9). The inclusion of the Unicode® emoji, animated emoji and audio messages would have enabled me to interpret the emotional exchanges, mentor-mentee relationships and Chinese learning in multimodal computer-mediated communication on WeChat in asynchronous and semi-synchronous circumstances. Such limitation should be avoided by revising data collection methods in the future studies.

6.4 Future research directions

There are six research gaps concerning the social presence element of the CoI theoretical framework identified in Section 2.3.2.4, and this thesis fills some of the research gaps. 1) It provides some insights into social presence of the CoI theoretical framework in informal, international and intercultural learning settings. 2) It demonstrates not only what creates positive emotion but what creates negative emotion, and how emotion influences opportunities for learning – and subsequently learning. 3) It depicts the development patterns of social presence, as well as its influence on other dependent variables, specifically, the maintenance of mentor-mentee relationship (or the retention of learning), opportunities for learning and learning process, although it does not explicate its connection to the other two presences (i.e., teaching presence and cognitive presence) or learning outcome, because that extension is beyond the scope of this thesis. 4) Although it cannot provide a clear answer to the question of whether there is an optimal level of social presence, it proposes that the level should be dynamic and flexible rather than fixed and demonstrates that it is necessary to be aware of the individual differences on emotional needs, and to note the finding that both mentors and mentees would shape the dynamics (or the fluctuations) of social presence, rather than only one of the two parties as discussed in Section 4.4.4. As a result, there is clear evidence of how the dynamism involved in negotiating social presence is mutually influenced by both mentors and mentees. 5) It proposes that affective communication should be developed earlier in specific context such as in the informal, international and intercultural, computer assisted language learning context of this study.

And 6), it is a study that has modified the social presence element of the CoI theoretical framework and investigated Chinese language learning using WeChat after Wang et al.'s study (2016), the modifications can enrich insights into the application of the CoI theoretical framework in WeChat-based Chinese language studies.

My thesis demonstrates the multi-level, complexity of aspects and their collaborative influences (supportive or inhibitory) on social presence and learning. The complexity coheres with the complex nature of human emotions and calls for more research agendas. On the basis of the results and findings of my thesis, I propose six future research directions in the realm of informal, international and intercultural additional language learning by connecting learners with native speakers using social media.

6.4.1 Is the boundary of language no longer clear?

McCulloch and Gawne (2018) postulate that emoji are not language because they do not have grammar. Rather than just saying emoji are not language, McCulloch suggests that emoji are gestures (2018, slides 40-41).

In contrast, Dresner and Herring (2010, p. 263) argue that "emoticons that indicate pragmatic illocutionary force are parts of text, on a par with, for example, punctuation marks." And they assume that "the bounds of language and linguistic behaviour become vague". In line with them, Nicholas and Starks (2014) maintain that "[T]he independent development of emoticons in the digital world presents strong evidence that questions the role of images and suggests that they might well be positioned within the realm of language rather than outside it"(p. 9). And Danesi (2016) explicates explicitly that emoji do have grammar.

The analyses of PFs (especially emoji) in my thesis show us more evidence of how substantially they have been embedded into the text-based CMC (e.g., can be used independently or in tandem with characters and punctuations) with multiple functions (i.e., emotional, communicative and pedagogic), which shows that the boundary of language is fuzzy. This is in agreement with what Nicholas and Starks (2014, p. 9) stated:

> We are not suggesting that images fulfill the 'same' role as words but viewing images as unconnected with or not an integral part of a communicative system (i.e., used to supplement rather than provide core meaning) does not allow us to fully engage in understanding the nature of what has to be learned and how various elements of that system interact to support, replace or conflict with one another. In other words,

learners and teachers do not engage with a system that is narrowly focused on 'language' and neither do they engage with systems that involve only one set of features.

Danesi puts a further question: "Is the rise and spread of emoji a passing trend or the arrival of a veritable new universal language?" (2016, p. 184) Although he states that there is not a clear answer to the question (2016, p. 184), the subtitle of his book, <u>The Semiotics of Emoji: The Rise of Visual Language in the Age of the Internet</u> implies his point of view. My thesis cannot give a clear answer to Danesi's question either, but the distinctive role that PFs have played in the establishment of social presence and emotional relationships between participants means that (at least currently) they play significant roles (i.e., as a catalyst and a barometer) and are likely to continue to do so for some time. Despite the debates on whether or not emoji are language, future research may explore further in this direction and see if there could be clearer answers to it, or if different interpretations may arise.

6.4.2 What is the optimal degree of social presence?

Garrison argues: "The optimal level of social presence is dynamic and dependent on the specifics of cognitive and teaching presence" (2017, p. 49), but it is still uncertain what the optimal level of social presence is since the degree does not remain stable. The discussions in Chapter 5 offer a broader perspective on this question by arguing that if there is an optimal level of social presence, it is most likely different among different students, and there should be a flexible rather than fixed degree of social presence to reflect individual differences (e.g., individuals' different emotional needs) and temporal difference (i.e., there could be dynamic changes over time).

A possible research agenda is to investigate how to develop both mentors' and mentees' competence in the use of PFs, and train them to be able to interpret the emotions, speech acts (such as intentions and attitudes) implied by particular PFs in various contexts (taking account of complex sensitivities that the use and interpretations of PFs involves: peer- and age-sensitive, cultural-sensitive, context-sensitive, group-sensitive as reviewed in Section 2.4.1.3, as well as individual-sensitive reported in Chapter 5). This is because the flexibility of interpreting particular PFs not only gives space and contains the risk of ambiguity, it also gives social presence opportunities to be negotiated. Following this research agenda, future studies can investigate the dynamic shaping of *degrees* of social presence and avoid the danger of making an apparently *fixed* claim about any assumed "optimal degree".

A future research agenda can also include: investigating different mentees' different degrees of emotional needs, and the dynamic changes of an individual participants' emotional needs, as well as the dynamic degrees of the three categories of social presence (i.e., *affective communication*, *open communication*, and *cohesive response*) over a certain period of time and investigate the negotiations of social presence that change over time.

6.4.3 What role does gender play in building and sustaining the mentor-mentee relationship on WeChat?

Because in the three focused pairs in this study, the three mentees were all males whereas the two mentors were both females, the findings reflect only these gender variables. Will there be different findings if the mentees are females, but the mentors are males, or if other gender relations are involved? I have not explored this issue in this thesis but the gender issue needs further investigation.

6.4.4 Which indicator of social presence may have more valence?

Rourke et al. (1999) posited the social presence density calculation method and although they applied equal weighting to the 12 indicators in the method, they suggested that the 12 indicators should have different weights in the future studies. (p. 67) For example, *referring to other students by name*, and *referring explicitly to the contents of another's message* are better indicators of interaction than having the students' name automatically provided by the software, and should have more valence. The findings in my study suggest that the nine proposed indicators function as a whole, but they do not seem to have the same valence: *apology and/or explanation* are likely to have more valence than most of, if not all the rest of, the other indicators, which has been examplified by the negative influence of the absence of A1-L4's apology and explanation in communicating with C11. But this is still a tentative assumption due to the limited data and limited samples (i.e., only three pairs). More studies in this direction in the future may offer deeper insights and see whether other indicators should have more weights.

6.4.5 Pedagogic potentials and social presence in more of WeChat's features

My thesis has only focused on the one-to-one communication involving one mentor and one mentee in three pairs. Future studies may investigate the pedagogic potential of using WeChat group chat mode (which involves one-to-many and many-to-many communication) to learn Chinese, and the variables that may enhance or inhibit social presence. Additionally,

pedagogic potentials and social presence in other WeChat's features also need to be investigated, for example, audio messages, voice calls, video calls and Moments. Furthermore, it also seems reasonable to include whether making one's own WeChat "Moments" viewable to their mentor/mentee as a definition of the *self-disclosure* indicator in Table 3.

6.5 Conclusion

To conclude, my thesis suggests that in one-to-one, informal, international and intercultural computer assisted Chinese language learning using WeChat, emotional exchanges can be conducted, the mentor-mentee relationship can be maintained, systematic and profound, critical and engaging learning can be achieved, even if mentors and mentees are strangers before the mentoring experience.

My thesis also lends more evidence to the role of situational aspects and shows that it is the people involved who have substantial influences on the success or failure of IT projects, a role larger than the technology per se, which calls for more person-centred future research in tandem with employing the pedagogic affordances of technology.

Appendices

Appendix 1 - Calendar of the 14-Week Data Collection on WeChat in 2015 and the 22 Pairs

Calendar of the 14-Week Data Collection on WeChat in 2015

Week	Mo	Tu	We	Th	Fr	Sa	Su	Week	Mo	Tu	We	Th	Fr	Sa	Su
1	27	28	29	30	31	1	2	8	14	15	16	17	18	19	20
2	3	4	5	6	7	8	9	9	21	22	23	24	25	26	27
3	10	11	12	13	14	15	16	10	28	29	30	1	2	3	4
4	17	18	19	20	21	22	23	11	5	6	7	8	9	10	11
5	24	25	26	27	28	29	30	12	12	13	14	15	16	17	18
6	31	1	2	3	4	5	6	13	19	20	21	22	23	24	25
7	7	8	9	10	11	12	13	14	26	27	28	29	30	31	1

Legend：

July	August	September	October	November

The 22 Pairs

Levels	Pairs				
Level 1	A1-L1 & C15	A1-L1 & C7	A2-L1 & C5	A3-L1 & C2	A3-L1 & C5
	A4-L1 & C6	A5-L1 & C6	A6-L1 & C3	A7-L1 & C8	A8-L1 & C7
Level 2	A1-L2 & C9	A2-L2 & C1	A3-L2 & C1	A3-L2 & C9	A4-L2 & C3
	A4-L2 & C10	A5-L2 & C12			
Level 4	A1-L4 & C11	A2-L4 & C11	A3-L4 & C14	A3-L4 & C4	A4-L4 & C13

Appendix 2 - Duration/Maintenance of the Mentor-Mentee Relationships in the 19 Pairs

Legend: ▓ = the mentor-mentee relationship has not been established yet; ■ = there is communication between the mentor and the mentee in this week; N/A = the mentor-mentee relationship has been established, but the chat logs in this week are not available to me.

Level	Pairs	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Level 1	A1-L1 & C15	■	■												
	A1-L1 & C7	▓	▓	■	■		■								
	A2-L1 & C5	▓	■	■											
	A3-L1 & C5	▓	■				■			■					
	A3-L1 & C2	▓	■		■				■						
	A4-L1 & C6			■	■										
	A5-L1 & C6	■		■									■		
	A7-L1 & C8	▓	■	■			■								
	A8-L1 & C7		■												
Level 2	A1-L2 & C9	▓	▓	■	■										
	A2-L2 & C1	N/A	■	■	■										
	A3-L2 & C9	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓		■		
	A3-L2 & C1	■		■				■							
	A4-L2 & C3	■	■												
	A4-L2 & C10	▓	N/A	■											
Level 4	A1-L4 & C11	▓	▓	■			■	■	■					■	
	A2-L4 & C11	▓	■	■	■	■	■	■	■	■	■		■		
	A3-L4 & C4	▓	▓	▓	▓	▓	■	N/A	N/A				N/A		
	A4-L4 & C13	▓	▓	▓	▓	■	■	■	■	■	■	■	■	■	■

Legend:

▓ The mentor-mentee relationship has not been established yet.

■ There is communication between the mentor and the mentee in this week.

N/A The mentor-mentee relationship has been established, but the chat logs in this week are not available to me.

Appendix 3 - Evolutions of the Affective/Emotional Category and Its Indicators of SP in the CoI Theoretical Framework

Studies	Category name	Indicators (examples only)
Rourke et al. (1999, pp. 61-62)	Affective responses	Expression of emotions
		Use of humour
		Self-disclosure
Garrison and Anderson (2003, p. 51)	Affective	Expressions of emotions
		Use of humour
		Self-disclosure
Garrison (2009, p. 353)	Personal/Affective	Self projection/expressing emotions
Garrison (2011, pp. 38-39)	Interpersonal communication	Affective expression
		Self-disclosure
		Use of humour
Garrison (2017, pp. 45-46)	Affective communication	There is not an explicit and brief name of this indicator
		Use of humour
		Self-disclosure

Rules of Conduct for WeChat Project Participation

The aim of this research is to investigate the potential of WeChat for learning Chinese as a second language. As one of the participants in this research, you will be a member of a community that includes people in both Australia and China. In this community, everyone needs to care for each another.

We will help you experience the potential of WeChat for Chinese language learning and practice, by making this group a private group, and by telling you what to do in case you encounter any risks. However, please always bear in mind that WeChat **in this research** is not a tool for the purpose of general socializing, but for learning and practising Chinese. You are responsible for any content you post on WeChat, for your behavior on WeChat, and for any consequences thereof during your participation in this research.

To protect yourself and other participants, here are some simple rules:

- The only person to whom you may submit private chat history is Ms. Yanjun Xue.
- Do not divulge information that may compromise your privacy to others whether in one-on-one private chat, group chat or in WeChat "Moments".
- Do not record video calls, voice calls or Walkie Talkie conversations when communicating with other participants.
- Do not forward any chats (including text messages, pictures, etc.) to people who are not participants in this research.
- Do not post any commercially sensitive information about ** University[59] and your institution, including their partners or confidential personal information about the university's students, alumni or employees, and your institution's students, alumni or employees.
- If you make public comment about either ** University or your institution in the group or in WeChat "Moments", you must declare that it is your own opinion and that you do not represent either of them. In Chinese you can make clear that something is your own view by saying "我认为⋯⋯(In my opinion…)"
- Avoid posting misleading or incorrect information about yourself, others, ** University, or your institution by checking facts before you post.
- Respect other participants and their opinions. If you disagree with someone's opinion, do so in a polite and constructive manner. In Chinese you can signal that you disagree

---

[59] "** University" refers to the Australian university where mentees were enrolled.

by saying "我不这么认为……(My view is different…)"

- Do not chat or post any content that is offensive, inflammatory, racist, sexist, extremist, violent, pornographic or fraudulent. If you see/hear comments such as these posted or made by other participants, in Chinese, you can say "在我看来，发这些内容是不合适的(In my view, that comment is inappropriate)." You can report such content to Ms Yanjun Xue.

- You should avoid culturally sensitive topics such as politics, religion and military matters. If you see/hear comments that make you uncomfortable, in Chinese you can say: "我们谈点儿别的吧(I would rather talk about something else)." If the comments continue, in Chinese you can say: "我不想再谈这个话题了(I am going to stop this conversation)."

- Misuse of WeChat in this project will not be tolerated, and if deemed necessary, legal ramifications will be pursued. You have an overarching obligation to report any suspected misuse with evidence to Ms. Yanjun Xue. If illegal events are reported they will be forwarded to the Risk Management Officer (** University) for possible further action.

Part One: Questionnaire

(Australian Participants)

1. Are you male or female?

   ☐ Male ☐ Female

2. What is your age group?

   ☐ 18-30 ☐ 31-40 ☐ 41-50

3. Are you a

   ☐ first-year student ☐ second-year student

   ☐ third-year student ☐ forth-year student

   ☐ Other. Please specify:

4. Your first language or mother tongue:

5. Are there any people who speak Chinese in your family?

   ☐ Yes. Please specify your relationship(s)

   ☐ No.

   If you have ticked YES, is it Mandarin or Cantonese or another variety?

   ☐ Mandarin ☐ Cantonese

   ☐ Other variety(s). Please specify:

6. Which language do you mostly speak when communicating with your family members at home?

   ☐ English ☐ Mandarin ☐ Cantonese

   ☐ Other(s). Please specify:

7. Have you learned/studied Chinese before?

   ☐ Yes ☐ No

   If you have ticked YES, where did you learn?

   ☐ at home from/with my parents.

   ☐ at home from/with my grandparents.

   ☐ at home with my private tutor.

   ☐ in Chinese school on weekends.

   ☐ at primary school.

   ☐ at high school.

   ☐ online.

8. Was Chinese class an elective or compulsory subject?

   at my primary school:

   ☐ elective ☐ compulsory

at Years 7-10:

☐ elective   ☐ compulsory

at Years 11 & 12

☐ elective   ☐ compulsory

9. Have you ever taken a subject about social networking sites or social media such as Facebook, Twitter, Line, etc.?

☐ Yes. Please specify:

☐ No.

10. Have you ever taken any course(s) that required you to use mobile devices (such as PDAs, iPad, smart phones, etc.)

☐ Yes. Please specify:

☐ No.

11. Are the learning and practising hours (including the lecture hours and tutorial hours) that are part of your Chinese classes enough for you?

☐ Yes. Please specify:

☐ No.

12. Why do you want to learn Chinese? (You may choose more than one)

☐ I am interested in Chinese culture.

☐ I am interested in Chinese language.

☐ I have relatives and friends (including spouse, girl friend or boy friend) who

speak(s) Chinese.

☐ My parents require me to study Chinese.

☐ The university requires me to take a foreign language subject.

☐ It is for my future career.

☐ To travel in China.

☐ Other(s). Please specify:

13. The basic information about your current smart phone:

Brand:

Model number:

Service provider:

14. The networks that you use:

☐ 3G   ☐ 4G   Other (please specify):

15. Please provide your comments and thoughts about how you envisage Chinese as a second language learning and teaching on WeChat.

Part Two: 调查问卷

（中方参与者）

1. 您的性别？

    ☐ 男   ☐ 女

2. 您的年龄？

    ☐ 18-30   ☐ 31-40   ☐ 41-50

3. 您目前是：

    （1）☐ 硕士研究生   ☐ 博士研究生

    （2）如果您目前是教师，那么请选择您截至目前的最高学位：

    ☐ 硕士   ☐博士

    （3）如果您目前既是在读研究生又是教师，请从下面的选项中二选一：

    ☐ 硕士研究生＋教师   ☐ 博士研究生＋教师

4. 您读本科时的专业：

5. 您读硕士研究生（时）的专业：

6. 您读博士研究生的专业：

7. 您从事对外汉语教学多长时间了？

    ☐ 3-6 月   ☐ 6-12 月

    ☐ 1-2 年   ☐ 2-5 年   ☐ 5 年以上

8. 您在哪儿从事过对外汉语教学？（可以多选）

    ☐ 中国大陆

    ☐ 港／澳／台

    ☐ 英语国家的私人语言学校

    ☐ 英语国家的公立学校（含小学、初中、高中）

    ☐ 英语国家的大学

    ☐ 非英语国家的私人语言学校

    ☐ 非英语国家的公立学校（含小学、初中、高中）

    ☐ 非英语国家的大学

9. 您是否从事过网络汉语教学？

    ☐ 是 请具体说明：

    ☐ 否

10. 您是否在网上学习过某一门（多门）课？

☐ 是 请具体说明：

☐ 否

11. 您是否使用移动设备（如掌上电脑, iPad, 智能手机等）学习过？

☐ 是 请具体说明：

☐ 否

12. 您的智能手机的基本信息：

品牌：

型号：

电信运营商：

13. 您现在使用的移动网络服务：

☐ 3G   ☐ 4G

14. 请您谈谈您对利用智能手机，用微信进行对外汉语教学与学习的看法。

Part One: Interview Schedule

(Australian Participants)

1. If you are a beginner-level or pre-intermediate-level student, is it desirable for the topics discussed to keep pace with the texts?

   ☐ Yes   Reasons:

   ☐ No   Reasons:

   ☐ Other   Reasons:

   If you are an intermediate-level or advanced-level student, is it desirable for the topics

   discussed not to keep pace with the text, but remain within the topics specified in the texts?

   ☐ Yes   Reasons:

   ☐ No   Reasons:

   ☐ Other(s)   Reasons:

2. Can WeChat be a desirable supplementary platform to Chinese as a second language classroom teaching and learning？

   ☐ Yes   Reasons:

   ☐ No   Reasons:

   ☐ Other(s)   Reasons:

3. What modality do you prefer when communicating with Australian participants？

   ☐ One-on-one chat   Reasons:

   ☐ Group chat   Reasons:

   ☐ Moments   Reasons:

   ☐ Other(s), please specify:

4. What are the advantages and disadvantages of one-on-one chat, group chat, and 'moments' for you when learning and practising Chinese on WeChat?

   One-on-one chat

   Advantages:

   Disadvantages:

   Group-chat

   Advantages:

   Disadvantages:

   Moments

   Advantages:

   Disadvantages:

5. Which modality do you prefer when communicating with Australian participants, synchronous or asynchronous communication?

☐ Synchronous   Reasons:

☐ Asynchronous   Reasons:

   ☐ Other(s), please specify:

6. What are the advantages and disadvantages of synchronous chat and asynchronous chat for you when learning and practising Chinese on WeChat?

   <u>Synchronous chat</u>

   Advantages:

   Disadvantages:

   <u>Asynchronous chat</u>

Advantages:

Disadvantages:

7. Which modality do you prefer when communicating with Australian participants synchronously?

   ☐ Audio chatting Reasons:

   ☐ Video chatting Reasons:

   ☐ Walkie Talkie   Reasons:

   ☐ Other(s), please specify:

8. What are the advantages and disadvantages of each of the functions in synchronous chat?

   <u>Audio chatting</u>

   Advantages:

   Disadvantages:

   <u>Video chatting</u>

   Advantages:

   Disadvantages:

   <u>Walkie Talkie</u>

   Advantages:

   Disadvantages:

9. Which modality do you prefer when communicating with Australian participants asynchronously?

   ☐ Text messages   Reasons:

   ☐ Photos   Reasons:

   ☐ Audio messages   Reasons:

   ☐ 8-second video messages Reasons:

   ☐ Other(s), please specify:

10. What are the advantages and disadvantages of each of the functions in asynchronous chat?

Text messages

Advantages:

Disadvantages:

Photos

Advantages:

Disadvantages:

Audio messages

Advantages:

Disadvantages:

8-second video messages

Advantages:

Disadvantages:

11. What benefits have you experienced in using WeChat while you are learning Chinese? (You may choose more than one)

☐ A reduction in anxiety

☐ Greater opportunities for language production than in language classes

☐ An authentic audience

☐ The flexibility of studying and practising Chinese language in many different places

☐ Challenged some stereotypes about Chinese culture.

☐ Gave me more exposure to the Chinese language

☐ Other(s), please specify:

12. Which aspect(s) of your Chinese language knowledge has/have been obviously improved by WeChat? (You may choose more than one)

☐ pronunciation　☐ vocabulary　☐ grammar

☐ Chinese characters　☐ Chinese culture

13. Which aspect(s) of your Chinese language skills has/have been obviously improved by WeChat? (You may choose more than one)

☐ listening　☐ speaking　☐ reading　☐ writing

14. What are the advantages and disadvantages of using the Pinyin input method on your mobile device?

Advantages, please specify:

Disadvantages, please specify:

Other(s), please specify:

15. What are the advantages and disadvantages of using the handwriting input method on your mobile device?

Advantages, please specify:

Disadvantages, please specify:

Other(s), please specify:

16. What are the advantages and disadvantages of inputting Pinyin via the English input mode on your mobile device?

Advantages, please specify:

Disadvantages, please specify:

Other(s), please specify:

17. When you were communicating in writing in Chinese on your mobile device, do you prefer the Pinyin input method or the handwriting input method?

☐ Pinyin input method   Reasons:

☐ Handwriting input method   Reasons:

18. When you were using WeChat while you were learning Chinese, which factors were hindrances for you?

External factors:

☐ Problems with the mobile phones, please specify:

☐ Telecom services, please specify:

☐ Time difference, please specify:

☐ Other(s), please specify:

Subjective factors:

☐ Different personalities among Australian and Chinese participants, please specify:

☐ Cultural difference between Australia and China, please specify:

☐ Sensitive issues (such as political issues), please specify:

☐ Academic and working pressure, please specify:

☐ Privacy, please specify:

☐ Intellectual property right (for example, gaining permission to use pictures used on

WeChat), please specify:

☐ Other(s), please specify:

19. Was the navigation through different functions and modes in WeChat user-friendly?

☐ Yes. Please explain:

☐ No. Please explain:

☐ Other(s), please explain:

20. When you were communicating with other participants, were you overloaded with different types of messages or materials?

☐ Yes. Please specify:

☐ No. Please specify:

☐ Other(s), please specify:

21. Was it difficult for you to download and install WeChat?

☐ Yes. Please specify:

☐ No. Please specify:

☐ Other(s), please specify:

22. Did you feel lonely when learning and practising Chinese on WeChat?

☐ Yes. Please specify:

☐ No. Please specify:

☐ Other(s), please specify:

23. Based on your experiences in this project with WeChat, do you think that WeChat is useful to supplement classroom and tutorial experiences of Chinese language learning?

☐ Yes. Please specify:

☐ No. Please specify:

☐ Other(s), please specify:

24. Please list up to five adjectives that capture your Chinese language learning and use experiences with WeChat. Please put the adjectives in order of importance for you.

25. Is your Chinese language learning and use experience on WeChat the same as what you expected or imagined before starting?

☐ Yes. Please specify:

☐ No. Please specify:

☐ Other(s), please specify:

26. What role do you think that your Chinese interlocutor(s) played while you were using WeChat in mobile and informal settings?

27. What opportunities does WeChat offer for Chinese language learning compared with traditional language classroom teaching and learning?

28. What challenges does WeChat present compared with traditional language classroom teaching and learning?

29. Please make some suggestions about teaching and learning Chinese as a second language on WeChat:

1) Suggestions for teachers

2) Suggestions for students

3) Suggestions for designing instructional activities

4) Suggestions for administration

5) Suggestions for other issues

30. Will mobile-assisted language learning replace classroom language learning?

Part Two: 访谈问题

（适用于中方参与者）

1. 您认为利用微信这个平台，在移动式、非正式的学习环境中，汉语教师应该是什么样的角色？

2. 在微信这个平台上教汉语会给汉语教师带来哪些不同于传统课堂教学的机遇？

3. 在微信这个平台上教汉语会给汉语教师带来哪些不同于传统课堂教学的挑战？

4. 在微信这个平台上进行汉语作为第二语言的教与学活动，您有哪些建议？

   6) 对教师的建议：

   7) 对学生的建议：

   8) 对教学活动设计的建议：

   9) 对组织管理工作的建议：

   10) 其他方面的建议：

5. 如果您辅导的学生有初级和准中级的，那么您对话题与课本同步的模式是否认同？

   ☐ 同意   原因：

   ☐ 不同意   原因：

   ☐ 其他   原因：

   如果您辅导的学生有中级和高级的，那么您对话题与课本不同步，但是限定话题的模式是否认同？

   ☐ 同意   原因：

   ☐ 不同意   原因：

   ☐ 其他   原因：

6. 根据您在本研究项目中的体验，您觉得微信这个平台能否对对外汉语课堂教学起到有益的补充作用？

   ☐ 能   原因：

   ☐ 不能   原因：

   ☐ 其他   原因：

7. 您喜欢用哪种模式跟澳大利亚的学生聊天？

   ☐ 一对一私聊   原因：

   ☐ 群聊   原因：

☐　朋友圈　　　　　　　原因：

☐　其他　　　　　　　原因：

8.　在微信上进行汉语的教与学活动时，一对一的聊天模式、群聊的模式、朋友圈的聊天模式各自的优缺点有哪些？

一对一私聊

优点：

缺点：

群聊

优点：

缺点：

朋友圈

优点：

缺点：

9.　同步和非同步的聊天模式，您更喜欢用哪种跟澳大利亚的学生聊天？

☐　同步　　　原因：

☐　非同步　　原因：

10.　您认为同步和非同步的聊天模式各自的优缺点是什么？

同步模式

优点：

缺点：

非同步模式

优点：

缺点：

11.　同步的聊天模式下，您更喜欢下列哪种形式跟澳大利亚的学生聊天？

☐　语音　　　原因：

☐　视频　　　原因：

☐　实时对讲　原因：

☐　其他　　　原因：

12.　您认为同步的聊天模式下微信的各项功能的优缺点分别有哪些？

语音聊天

优点：

缺点：

视频聊天

优点：

缺点：

<u>实时对讲</u>

优点：

缺点：

13. 在非同步的聊天模式下，您更喜欢用下列哪种形式跟澳大利亚的学生聊天？

☐ 文字 原因：

☐ 图片 原因：

☐ 语音 原因：

☐ 小视频 原因：

☐ 其他 原因：

14. 在非同步的聊天模式下，您认为微信的各种功能的优缺点分别有哪些？

<u>文本信息</u>

优点：

缺点：

<u>图片信息</u>

优点：

缺点：

<u>语音信息</u>

优点：

缺点：

<u>小视频信息</u>

优点：

缺点：

15. 您认为在微信这个平台上进行汉语作为第二语言的教与学，哪些因素会起到制约作用（可以多选）？

客观因素：

☐ 手机本身 举例：

☐ 网络服务 举例：

☐ 时差 举例：

☐ 其他 举例：

主观因素：

☐ 中澳学生之间的性格差异 举例：

☐ 中澳之间的文化差异　　举例：

☐ 敏感问题（如政治因素等）　　举例：

☐ 学习和工作的压力　举例：

☐ 隐私问题　　　　举例：

☐ 知识产权问题　　举例：

☐ 其他　　　　　举例：

16. 请列出五个形容词来描述您用微信教汉语的体验。请把这五个词按您认为的重要性进行排序。

17. 您认为未来移动式语言学习是否会取代传统的课堂语言学习？

☐ 　是　　原因：

☐ 　否　　原因：

☐ 　不好说　　原因：

Interview Schedule

(Australian Participants)

1. Did you receive any help with learning Chinese from other people? If so, how did they help you?

2. Did you experience any conflict between different people helping you with learning Chinese? If so, can you tell me about it, please?

3. Your mentor sent you some audio messages, but you did not send audio messages back. Can you tell me why, please?

4. Based on your experiences, do you think that there are any differences between Western Emojis and Chinese Emojis?

5. Did you use Chinese emojis or emoticons in WeChat? What were your experiences with using them?

6. Were the emojis that your Chinese mentor sent helpful in your communication with them?

7. How did your mentor's use of emojis influence your communication with them? Can you give some examples of how they influenced your communication?

8. Were any emojis that your mentor sent not unacceptable or offensive to you? If so, how did they influence your communication with your mentor?

9. Did you like your Chinese mentor's ways of using WeChat? Why (not)?

10. How did the way that your mentor used WeChat influence your communication with them?

11. What influenced you in maintaining or stopping the use of WeChat with your mentor?

12. How did your Chinese learning experience in the formal class settings influence your learning using WeChat?

Appendix 8 - Detailed Analysis of the Chat Logs in One-to-One Chat Mode in the Three Pairs

Levels	Pseudonyms	Weeks and Dates	Text Messages		Audio Messages		Photos		Video Messages		Links		Files		Weekly Quantity		Notes
			A	C	A	C	A	C	A	C	A	C	A	C	A	C	
Level 4	A1-L4 & C11	W-3, 12/8	8	12											62	98	The video message sent by A1-L4 on 17/9 and the photos sent by both A1-L4 and C11was initially viewable to me, but then due to unknown technological problems, it was finally not able to be downloaded and viewable. The same problem also happened to the photos sent in this pair.
		W-3, 14/8	52	76		10	1				1						
		W-6, 2/9	83	118		3	4	8							92	133	
		W-6, 3/9	5	4													
		W-7, 9/9	3	7											94	153	
		W-7, 10/9	53	55		18	1	2									
		W-7, 11/9	37	50		19		2									
		W-8, 16/9	6	3				1							26	38	
		W-8, 17/9	18	26		7	1	1	1								
		W-14, 31/10	3	7											29	57	
		W-14, 1/11	26	37		9		2				2					
		Total: 782 (AP: 303 CP: 479)															
	A2-L4 & C11	W-2, 9/8	16	28											16	28	
		W-3, 16/8	4												4		
		W-4, 17/8		6											14	23	

Levels	Pseudonyms	Weeks and Dates	Text Messages		Audio Messages		Photos		Video Messages		Links		Files		Weekly Quantity		Notes
			A	C	A	C	A	C	A	C	A	C	A	C	A	C	
		W-4, 19/8	7	8		2											
		W-4, 20/8	3	7													
		W-4, 23/8	4														
		W-5, 24/8	20	33											30	55	
		W-5, 25/8		2													
		W-5, 28/8	10	18				1				1					
		W-6, 31/8	2	4				1							20	40	
		W-6, 3/9	4	7		1											
		W-6, 5/9	13	23		1	1	3									
		W-7, 7/9	3	6		1									16	38	
		W-7, 11/9	7	16			1	5									
		W-7, 13/9	5	8				2									
		W-8, 15/9	3	6		4									16	28	
		W-8, 16/9	8	12													
		W-8, 17/9	5	6													
		W-9, 22/9	2	3			1								6	6	
		W-9, 23/9	3	3													
		W-10, 2/10	4	4											4	4	

Levels	Pseudonyms	Weeks and Dates	Text Messages		Audio Messages		Photos		Video Messages		Links		Files		Weekly Quantity		Notes
			A	C	A	C	A	C	A	C	A	C	A	C	A	C	
		W-12, 13/10	27	32		5		1							27	38	
		Total: 413 (AP: 153 CP: 260)															
	A4-L4 & C13	W-5, 26/8		2											7	9	
		W-5, 30/8	7	7													
		W-6, 31/8	7	18											19	39	
		W-6, 1/9	6	13				1									
		W-6, 2/9	3	3													
		W-6, 3/9		1													
		W-6, 5/9		3													
		W-6, 6/9	3														
		W-7, 7/9	8	1											24	38	
		W-7, 8/9		10													
		W-7, 10/9	1														
		W-7, 11/9	4	17													
		W-7, 12/9	2	1													
		W-7, 13/9	9	9													
		W-8, 14/9	14	9		1									30	22	

Levels	Pseudonyms	Weeks and Dates	Text Messages		Audio Messages		Photos		Video Messages		Links		Files		Weekly Quantity		Notes
			A	C	A	C	A	C	A	C	A	C	A	C	A	C	
		W-8, 16/9	2	1		1											
		W-8, 18/9		1													
		W-8, 19/9	12	9			2										
		W-9, 23/9	11	8			3								32	23	
		W-9, 27/9	18	15													
		W-10, 30/9	3	9											5	12	
		W-10, 1/10	2														
		W-10, 2/10		3													
		W-11, 8/10	4	4			11	2							32	15	
		W-11, 9/10		4				2									
		W-11, 11/10	15	3			1		1								
		W-12, 12/10		8											15	41	
		W-12, 15/10	3	18				7									
		W-12, 17/10	10	7			2										

Levels	Pseudonyms	Weeks and Dates	Text Messages		Audio Messages		Photos		Video Messages		Links		Files		Weekly Quantity		Notes
			A	C	A	C	A	C	A	C	A	C	A	C	A	C	
		W-12, 18/10		1													
		W-13, 21/10	11	20			9								20	20	
		W-14, 28/10		1											22	14	
		W-14, 29/10	13	13													
		W-14, 31/10	7				2										
		Total: 439 (AP: 206 CP: 233)															

(Notes: a single sticker or a single emoji sent as a message is classified as a text message; "A" and "C" stand for "Australian participant" and "Chinese participant" respectively.)

Appendix 9 - Types and Numbers of WeChat Features Participants Used in Level 4

Message type	A1-L4 & C11		A2-L4 & C11		A4-L4 & C13	
	A1-L4	C11	A2-L4	C11	A4-L4	C13
Text messages	294	395	150	232	175	219
Audio messages	0	66	0	14	0	2
Photos	7	16	3	13	30	12
Video messages	1 (partially identifiable)	0	0	0	1 (identifiable)	0
Links	1	2	0	1	0	0
Files	0	0	0	0	0	0
Total	303	478	153	260	206	233
	781		413		439	

Appendix 10 - A1-L4's Patterns of Chinese Learning with C11

Patterns		Descriptions
1		1) 14-8 (W-3). In e-turn 135, A1-L4: 我可以给你一个短影. In e-turn 136, C11: 短影？ In e-turn 137, C11: 短的电影？ In e-turn 138, A1-L4: 是的. In e-turn 143, A1-L4: 我说的不对的。 In e-turn 145, C11: 我们说， 短电影.
		2) 2-9 (W-6). As shown in Table 11 concerning the C11's correction ("你应该说mee too! 我也是！" in e-turn 183) of A1-L4's error "我觉得同样的" (in e-turn 182).
		3) 10-9 (W-7). In e-turn 455, A1-L4: 一天天黑天更更晚. In e-turn 458, C11 corrected him by saying "日落时间会一天比一天晚".
		4) 10-9 (W-7). In e-turn 524, A1-L4: 我说明用汉语难. On 11-9 (W-7), in e-turn 526, C11: 很难用汉语说啊
		5) 11-9 (W-7). In e-turn 575, A1-L4: 我想做商用了汉语. In e-turn 578, C11: 你想用汉语做生意？
		6) 17-9 (W-8). In e-turn 648, A1-L4 made an error by saying "这个星期我会做聊天很小". In e-turn 649, C11: 什么叫聊天很小.
		7) 17-9 (W-8). In e-turn 686, A1-L4: 那个响不是公路，是海边. In e-turns 687-689, C11 sent audio messages, and in e-turn 690, A1-L4: 对， 鸟的声音. We can infer that probably C11 said something like "我听到了鸟的声音" (I heard of bird's noise) in the three audio messages then A1-L4 noticed and used the word "声音".
		8) 1-11 (W-14). In e-turn 759, A1-L4 made an error by saying "给我一个推介". In e-turn 761, C11: 给你推荐一个？
2		There is no such evidence.
3		1) 11-9 (W-7). In e-turn 624, A1-L4: "99百分都有车". In e-turn 625, A1-L4: "我认识这是对！" In e-turn 626, C11: "百分99， 99%". In e-turn 627, C11: "百分之九十九".
4	Subpattern 1	In the second-round interview, A1-L4 reported that "the most unforgettable, or impressive, or useful expression" that he learned from C11 was the characters with the radical "口" (i.e., Chinese modal particles and interjections), therefore, there is no exact time and date to indicate when this pattern

		occured.
	Subpattern 2	There is no such evidence.

Note: For the sake of space, the irrelevant contents in an e-turn will not be included in the Descriptions column, but will be described as "made an error by saying...". This note also applies to Appendix 8 and Appendix 9

Appendix 11 - A2-L4's Patterns of Chinese Learning with C11

	Patterns	Descriptions
	1	1) 9-8 (W-2). In e-turn 35, A2-L4 made an error by saying "现在你有夏假对不对？" In e-turn 37, C11: summer holiday? In e-turn 38, C11: we call 『暑假』. In e-turn 39, C11: 我们有『暑假』.
	2	1) 5-9 (W-6). In e-turn 221, A2-L4: How do you say "dog fur"? In e-turn 222, C11: 狗毛！？
		2) 7-9 (W-7). In e-turn 232, A2-L4: How do I say. Every evening I walk my dog? In e-turns 233-239, C11 translated it into Chinese, and offered more expressions of "walk my dog", including "我和我的狗一起去散步", "我去遛狗", and the differences between "我和我的狗一起去散步" and "我去遛狗".
	3	1) 16-8 (W-3). In e-turn 46, A2-L4: 我老一下的时候。Does this sentence make sense? I want to say, 'When a bit older'. On 17-8 (W-4), in e-turn 50, C11: When a bit older we say "我再大一些".
		2) 16-8 (W-3). In e-turn 47, A2-L4: Do people say 重学 to mean, 'study hard' e.g. 我得重学在大学. On 17-8 (W-4), in e-turn 51, C11: study hard in Chinese "努力学习".
		3) 19-8 (W-4). In e-turn 55, A2-L4 made an error by saying "如果你觉得我可以写某勿办法更好，请告诉我。(if you think that i could say something in better way, please tell me). I'm pretty sure that last sentence of mine in correct haha. Thanks for all your help so far!" In e-turn 57, C11: 告诉我最合适的说法.
		4) 23-8 (W-4). In e-turn 83, A2-L4: 几个卫生. In e-turn 84: A2-L4: is the correct way of saying 'several toilets'? On 24-8 (W-5), in e-turns 87-92, C11 introduced three expressions of "toilet": "卫生间", "洗手间" and "厕所". She also differentiated that the first two were more civilized expressions.
4	**Subpattern 1**	There is no such evidence.
	Subpattern 2	1) 19-8 (W-4). In e-turn 61, C11: 真希望见到你的时候，你一口流利中文. In e-turn 62, A2-L4: 在未来不太远，我希望一口流利。 (not too far in the future I hope to be fluent in Chinese) In e-turn 63, C11: 我希望不久后我就能说流利的英文. In e-turn 64, C11: this is better. In e-turn 65, A2-L4:

Patterns	Descriptions
	[Sticker] 谢谢！ There is a mistake or typo in C11's e-turn 63: it should be "中文" rather than "英文".
	2) 24-8 (W-5). A2-L4 said that he read what C11 posted on WeChat "Moment" (similar to Facebook "Wall"), but he asked C11 to explain to him in English. In e-turn 115, C11: "没有问题". In e-turn 116, C11: 我们年轻人常常说 "木有问题". In e-turn 117, A2-L4: can you please repeat in English? I cannot understand %100. In e-turn 118, C11: That means "ok" 🤭 . In e-turn 119: 木有问题=ok?? In e-turn 120, C11: ok" equals to "木有问题", we young people usually say "木有问题", more fashion 😳 . In e-turn 121, A2-L4: hahaha 很有意思.
	3) 24-8 (W-5). In e-turns 123-124, A2-L4 asked (in English) C11 to translate what she posted on WeChat "Moment": "唯一一天这么晚，没想到还有这么多学虫不回家，终于明白自己为什么快奔三了还一事无成了😓 ". In e-turns 137-138, C11 translated the sentence into English. On 25-8 (W-5), in e-turn 139, C11: 奔三=二十多岁，快三十岁了we yong people usually use this word.
	4) 28-8 (W-5). C11 sent three e-turns (150-152): "刚刚去操场走了五圈回来", "有点累", and "收拾下去冲个澡". In e-turn 154, A2-L2: 听不懂 "刚刚去操场走了五圈回来" "收拾下去冲个澡". Then in e-turns 155, C11 translated the first sentence into "I have walked five laps just now" without the translation of the word "操场" . In e-turn 157, C11: five laps 五圈. In e-turn 158, C11: 操场. In e-turn 161, C11 send a picture of "操场". Probably because in this picture there are athletics track, A2-L4 asked in e-turn 162: 操场=athletics track? In e-turns 164 and 165, C11 gave him corrective feedback by saying that "操场是" "playground". Then in e-turn 167, A2-L4: How do you say track? Like in the Olympics. In e-turn 168, C11: track we say 跑道. In e-turn 169, A2-L4: 你今天晚上跑到[道]走了五圈回来？In e-turn 170, C11: 对.
	5) On 15-9 (W-8). In e-turn 289, C11: 我去健身啦. In e-turn 290, C11: 一会儿聊！Then more than three hours later, she sent a text message in e-turn 293, and four audio messages in e-turns 294-297. It is likely that she said something like "健身很容易就会很累" (Workout can make [me] feel tired very easily), because in e-turn 298 on 16-9 (W-8), that is, one hour after C11's audio messages, A2-L4 responded: 对，在健身容易快累. Then ine-turn 299, A2-L4: 健身= gym 对不对？In e-turn 300, C11: gym 体育场。 In e-turn 301, C11: 健身. In e-turn 302, C11: 做运动. In e-turn 303, A2-L4:

Patterns	Descriptions
潜	哦， 好谢谢. In e-turn 304, C11: 😁 . In e-turn 305, A2-L4: 你做什么健身/运动？In e-turn 306, A2-L4: 了. In e-turn 307, C11: 跳舞. 6) 13-10 (W-12). In e-turns 384 and 385, C11 said that Australia was big so there should be high speed train. In e-turn 388, C11: 修高铁这个工作有潜力. In e-turn 389, A2-L4: 修? In e-turn 390, C11: 嗯. In e-turn 392, A2-L4: 好！

Appendix 12 - A4-L4's Patterns of Chinese Learning with C13

Patterns	Descriptions
1 一是	1) 31-8 (W-6). A4-L4 made an error in Proposition 5, e-turn 17 by saying "我学***发文***". In e-turn 22, C13 asked him by saying "你为什么学习***法文呢?" 31-8 (W-6). A4-L4 made an error in Proposition 3, e-turn 23 by saying "我喜欢工作在 CITY 飞机场". In e-turn 24, C13 corrected him by saying: 应该是："我喜欢在 CITY 飞机场工作". In e-turn 25, C13 modeled the grammar "Subject+在 place+Verb" (see more in Table 23). 2) 1-9 (W-6). A4-L4 made an error in Proposition 2, e-turn 48 by saying "我听说CITY的咖啡那么好吃！"In e-turn 51, C13 corrected the error by saying "喝茶/咖啡". In e-turn 54, she further explained "好吃" and "好喝" with two examples. In e-turns 56, she modelled a structure: 好+听/看/吃/喝/闻. In e-turns 57-59, she provided sentences with "好听", "好看" and "好闻". 3) 1-9 (W-6). A4-L4 made an error in e-turn 50 by saying "我想您式吃***". In e-turn 53, C13: try （试）. 4) 7-9 (W-7). A4-L4 made an error in e-turn 79 by saying "'好啊' 比 '好吧'很客气吗?" On 8-9 (W-7), in e-turn 93, C13: A比B+adj(before adj, there's no adv like "很") 比如：我比他高。/ "好啊"比"好吧"客气。如果你想说（much more, much better），这样说：我比他高很多。/我比他高得多。 5) 7-9 (W-7). A4-L4 made an error in e-turn 80 by saying "我听说 北京的夏天很超市。 CITY 天气从不超市。"On 8-9 (W-7) in e-turn 87, C13 corrected him by saying "北京的夏天常常下雨，下雨的时候潮湿（cháoshī, wet），不下雨的时候不潮湿。北京的气候（qìhòu, climate）比较干燥(gānzào, dry)". 6) 7-9 (W-7). A4-L4 made an error in e-turn 82 by saying "在CITY 春天刚才来了！" On 8-9 (W-7), in e-turn 90, C13: 刚才（just now）/刚 （just） CITY的春天刚来. 7) 10-9 (W-7). A4-L4 made an error in Proposition 2, e-turn 94 by saying "我听说在北京很多中国人穿面具". On 11-9 (W-7), in e-turn 95, C13: 不是穿面具，是戴dài口罩（kǒuzhào）. In e-turn 96, C13: 口罩😄.

Patterns	Descriptions
已经	8) 13-9 (W-7). In e-turn 124, A4-L4: 我喜欢春天和秋天因为它不热和不冷。 In e-turn 128, C13: 我和你一样，喜欢不冷不热的天气。
	9) 13-9 (W-7). In e-turn 129, A4-L4: 我刚有*** [a language other than English]的话竞赛！！In e-turn 133, C13: ***语竞赛. In e-turn 135, C13: 你已经可以参加***语竞赛了， 太棒了！👍
	10) 23-9 (W-9). In e-turn 193, A4-L4: 原因之一我爱澳大利亚。❤️ In e-turn 203, C13: 这是我爱澳大利亚的原因之一。
	11) 23-9 (W-9). In preposition 3, e-turn 195, A4-L4: 幸亏我在家里整天！ In e-turn 204, C13: 幸亏我整天都在家里。
	12) 27-9 (W-9). In e-turn 230, A4-L4 made an error by saying "我不打足球我只喜欢看在电视". In e-turn 232, C13: 我只喜欢看电视😜 .
	13) 27-9 (W-9). In e-turn 233, A4-L4: 你可以表示一下我端午节的照片吗？ 😊 . In e-turn 235, C13: 给你发照片？
	14) 30-9 (W-10). In Proposition 1, e-turn 249, A4-L4 made two errors by saying "跟朋一起吃饭在饭馆儿". In e-turn 251, C13 corrected them: "跟朋一起去饭馆儿吃饭".
	15) 1-10 (W-10). In Proposition 2, e-turn 257, A4-L4 made two errors by saying "我式说澳大利亚的KTV和中国的同", and "可是很多澳大利亚人不特别去KTV". On 2-10 (W-10), in e-turn 258, C13: 我是说澳大利亚的KTV和中国的相同，可是澳大利亚人不常去KTV。
	16) 8-10 (W-11). In Propositions 1, 2, 4, 5, and 6, e-turn263, A4-L4 made errors: "我会和朋友去郊游，郊游的时候你们会午饭", "最近我和朋友一起见***留学生了。他们很客气了", "我们去CITY的动物园", "那天不但很热而且请了", and "我穿很多防晒". In e-turn 277, C13 corrected the errors in the same sequence: "我会和朋友去郊游，郊游的时候你们一起吃午饭", "最近我和朋友一起见***留学生了。他们很客气", "我们去CITY的动物园了", "那天不但很热而且晴朗", and "我穿了很多防晒衣".
	17) 11-10 (W-11). In e-turn 291, A4-L4 sent two propositions. Proposition 1: I will message you later. Proposition 2: 我会给您法很多照片!! In e-turn 294, C13: 发照片.
	18) 11-10 (W-11). In e-turn 297, A4-L4: 我不可以拍照片因为我的手机没有电池 😭 . On 12-10 (W-12), in e-turn 310, C13: 我不可以拍照片因为我的

273

Patterns	Descriptions
	手机没有电. In e-turn 311, C13: 电池battery, 没有电 power off。
	19) 11-10 (W-11). In e-turn 299, A4-L4: 但是我有一点视讯。On 12-10 (W-12), in e-turn 312, C13: 我有一点视频（shìpín）/录像（lùxiàng）。资讯的意思是新闻（news）.
	20) 11-10 (W-11). In e-turn 301, A4-L4: 每个人很高兴!! On 12-10 (W-12), in e-turn 313, C13: 每个人都很高兴。 汉语里常常说（每……都……）
	21) 11-10 (W-11). In e-turn 307, A4-L4: 您觉得日本的传统衣服和中国的同吗？On 12-10 (W-12), in e-turn 314, C13: 你觉得日本的传统服装和中国的一样（相同）吗？In e-turn 315, C13: "传统衣服"虽然是对的，但是常用的是"传统服装"（装zhuāng）. In e-turn 316, C13: 今天工作完以后我给你发中国汉族传统的服装😊一看就知道它们的不同了.
	22) 21-10 (W-13). In Proposition 1, e-turn 376, A4-L4: 我回去家的时候我看很漂亮风景！In e-turns 400 and 401, C13 modeled two structures: Verb+地方+来/去, Verb+人/东西+来/去, and "verb+来/去+人/东西", each had at least two sentences as examples.
	23) 21-10 (W-13). In Proposition 1, e-turn 379, A4-L4: 北京的输运好不好？In e-turn 380, A4-L4: 我觉得CITY 的输运不错和很便宜。In e-turn 385, C13: 不是输运，是运输. In e-turn 387, C13: 一般说"交通工具"/运输工具. In e-turn 391, C13: 北京的交通工具有公共汽车，地铁，的士.
	24) 29-10 (W-14). In e-turn 406, there were errors in the three propositions: 面市场有很多诸色的货郎。这个面市场延续两个周。两个日后它会完。In e-turn 414, C13: 面市场有很多商品。 这个面市场延续两周。两日后结束。
	25) 29-10 (W-14). In Proposition 1, e-turn 408, A4-L4: 你有没有车吗？ In e-turn 412, C13: 你有车吗？你有没有车?这是两种问题，不能一起说😊 .
	26) 29-10 (W-14). In e-turn 415, in the 9 propositions, there were errors in A4-L4's Propositions 1, 4, 5, 6, 7 and 8 by saying: "我毕业以候", "我回来澳大利亚的时候我应该找工作", "我想工作在CITY的机场", "如果我不可以的话, 我会旅游业", "为什么我要在那里工作的第一个原因是我最爱旅行和旅游", and "两个原因是我最喜欢学习很多话". In e-turn 417, C13 corrected the errors in sequence by saying "我毕业以后", "回澳大利亚以后我应该找工作", "我想在CITY的机场工作", "如果我不可以的话, 我会从事旅游业", "为什么我要在那里工作的第一个原因是我最爱旅行", and "第二个原因是我最喜欢学习各种语言".

Patterns	Descriptions
2	1) 31-8 (W-6). In e-turn 27, after C13 corrected A4-L4's error concerning the structure "Subject+在place+Verb", A4-L4 asked: 我怎么说 "I understand now"? In e-turn 28, C13: 我知道了。 Or 我明白了。 2) 19-9 (W-8). In e-turn 167, A4-L4: 我怎么说'I'll try my best?' In e-turn 177, C13: 我会尽我最大的努力. In e-turns 179 and 181, A4-L4 asked for the Pinyins of "尽" and "努力". In e-turn 182, C13: 尽（jìn）努力（nǔlì). 3) 27-9 (W-9). In Proposition 1, e-turn 239, A4-L4: 你怎么说 "show"? In Proposition 2, e-turn 239, A4-L4: 比如， Can you show me your photos? In e-turn 240, C13: 给我看看你的照片. In e-turn 242, C13: 给我+verb. In e-turn 243, C13: 当然可以给你看照片，不过我也在外边，回家以后给你发照片🤭.
3	1) 1-9 (W-6). In Proposition 1, e-turn 47, A4-L4: 我也觉得！(对不对？ 我想说： I think so too!) In e-turn 51, C13 corrected this error by saying "我也这么觉得。 （I think so.）" 2) 7-9 (W-7). In e-turn 77, A4-L4: 我不能唱歌！🙀但是我喜欢成唱歌唱很好。(对不对？ 我不知道). On 8-9 (W-7), in e-turn 85, C13: 我唱歌唱得不好，但是我希望我能唱好。 3) 7-9 (W-7). In e-turn 81, A4-L4: 我没有从不看雪。(对吗？). On 8-9 (W-7), in e-turn 89, C13: 我从来没有看过雪。（从来没有cónglái，never）（Verb+过，means your experience in the past, 比如：2008年，我去过北京。） 4) 10-9 (W-7). In Proposition 3, e-turn 94, A4-L4: '一样' 和 '同'同吗？ On 11-9 (W-7), in e-turn 100, C13 differentiated the the words, and in e-turn 102-103, C13 offered sentences as examples. In e-turn 103, A4-L4: 英文的意思是设么？ In e-turn 104, C13: "一样"和"相同"都是 the same. In e-turn 105, C13: "一样"更口语，"相同"更书面语（书面语，written language）. In e-turn 106, C13: "同"can't be used singly in the sentence, it should be put into a word first. like: 同学classmate，同屋roommate，相同same…. 5) 11-9 (W-7). In e-turn 97 (including 7 propositions), A4-L4: [P1] 你可以说这些差别吗？ [P2]很好 very good [P3]太好了too good [P4] 真的好 really good [P5] 那么好- 我不知道 [P6] 非常好 -？ [P7] 极好 – extremely good? In e-turns 100-102, 104-112 C13 differentiated the differences the words

Patterns		Descriptions
		that expressed different degrees of good.
		6) 29-10 (W-14). In e-turn 420, A4-L4: 谢谢您！您可能我的导游!!! 😁 . In e-turn 421, A4-L4: 可能是*对不对？[The "*" was used by the mentee to indicate that he guessed that there should be a "是"after "可能".] In e-turn 424, C13: 对.
	Subpattern 1	There is no such evidence.
4	**Subpattern 2**	1) 31-8 (W-6). A4-L4 made an error in Proposition 3, e-turn 34 by saying "你喜欢什么爱好？" In e-turn 35, C13: 应该说："你喜欢什么" or "你有什么爱好" 😛. In e-turn 36, A4-L4: 为什么您用 "有"？ C13 explained in e-turns 37-41.
		2) 2-9 (W-6). A4-L4 noticed that in C13's e-turn 63, there was "没关系，你忙吧", then in e-turn 64, he asked: "为什么您用吧？" C13 explained in e-turns 65-66.
		3) Because in the example of C13's e-turn 66 she used the expression "好吧", then in e-turn 67 (including 2 propositions), A4-L4 asked: [P1] '啊'和 '吧' 同吗？[P2] 好啊 and 好吧. On 3-9 (W-6) in e-turn 68 and on 5-9 (W-6) in e-turns 69-71, C13 explained the differences and similarities of the two expressions.
		4) 7-9 (W-7), in e-turn 79, A4-L4: 我还有一个问题。'好啊'比'好吧'很客气吗？ On 8-9 (W-7), in e-turn 86, C13 answered the question.
		5) 14-9 (W-8). In e-turn 141, A4-L4: 我感觉麻烦一点. In e-turn 142, C13: 我感觉有点麻烦😊 . In e-turn 143, A4-L4: 为什么？ In e-turn 145, A4-L4: Why do you need to put 点before the adjective? In e-turn 146, A4-L4: But not after? C13 explained with examples in many e-turns. (See more in Table 22)
		6) 23-9 (W-9). In e-turn 194, A4-L4: 今天很晴天。In e-turn 205, C13: 今天天很晴。 S+adv+adj. On 27-9 (W-9), in e-turn 211, A4-L4: 晴天不对吗？我的老师告诉我晴天是对。 In e-turn 213, C13: 今天是晴天，今天天很晴.
		7) 27-9 (W-9). In e-turn 230, A4-L4 made an error by saying "我喜欢足球一点". In e-turn 234, C13: 应该说"我不是特别喜欢足球". In e-turn 236, A4-

Patterns	Descriptions
	L4: 为什么说'是'？ On 30-9 (W-10), in e-turn 244, C13: "特别"是两个汉字（双音节），汉语里，常常是两个汉字和两个汉字一起，这样比较协调（xiétiáo），所以说"不是特别……"；也可以用别的adv，比如：我不太喜欢足球。意思都是"我对足球没有很大的兴趣".
	8) 30-9 (W-10). In e-turn 243, C13: "** [A4-L4's Chinese given name], 你学习很忙， 不忙功课的时候，你会做什么放松一下呢？你和朋友们常常有什么娱乐活动？" In e-turn 148, A4-L4 used two propositions to ask: '呢' 什么意思？ 你会做什么放松一下呢. In e-turn 253, C13: "呢"used in asking questions for purposes of emphasis，比如：你在做什么呢？你为什么不喜欢足球呢？这个问题怎么回答呢？……
	9) 15-10 (W-12). In e-turn 321, C13: 男的的服装是这样的: . In e-turn 322, C13 sent a picture of traditional Chinese clothing for men. In Proposition 1, e-turn 331, A4-L4: "男的的服装是这样的" . In Proposition 2, e-turn 331, A4-L4: 为什么您用两个 '的'？ In e-turns 334-340, C13 explained.
	10) 17-10 (W-12). In e-turn 354, C13: [澳大利亚的花]看起来很漂亮啊. On 21-10 (W-13), in A4-L4's e-turn 364, there are three propositions: 看起来的意思是'Looks'吗? 比如, 看起来今天天气很冷。 On 21-10 (W-13), in e-turn 381, C13: 看起来就是looks👍 .

Appendix 13 - Participants' Uses of PFs Other Than Emoji in the Three Pairs

Pair	Emoticon					Total	
	Simple				Complicated		
	E1	E2	E3	E4	E5	Quantity	Time(s)
A1-L4 & C11	A: 0 C: 4	A: 1 C: 1	A: 0 C: 1	A: 0 C: 7	A: 0 C: 0	A: 1 C: 13	A: 1 C: 13
A2-L4 & C11	A: 0 C: 1	A: 0 C: 0	A: 0 C: 0	A: 3 C: 2	A: 0 C: 0	A: 3 C: 3	A: 3 C: 3
A4-L4 & C13	A: 4 C: 0	A: 13 C: 0	A: 0 C: 0	A: 5 C: 1	A: 0 C: 0	A: 22 C: 1	A: 22 C: 1

Notes:
E1. One punctuation used not standardly
E2. One type of punctuation used for at least two times together
E3. One punctuation is used in one e-turn, without numbers, letters, words, or characters
E4. Combination of at least two types of punctuation marks, but without numbers, letters, words, or characters
E5. Combination of at least three types of punctuation marks, or with numbers, letters, words, or characters

| Emoji			A1-L4 & C11				
Types		Images	A1-L4		C11		
			Quantity	Time(s)	Quantity	Time(s)	
Still Emoji	QQ Emoji	😳	1	1	4	4	
		👍	1	1	6	4	
		❤️	0	0	1	1	
		😊	0	0	4	4	
		😁	0	0	6	6	
		🤭	0	0	14	9	
		😜	0	0	2	2	
		😭	0	0	1	1	
		😡	1	1	4	2	
		😣	1	1	0	0	
		🥺	0	0	1	1	
		😍	0	0	1	1	
		🧐	0	0	1	1	
		😎	1	1	0	0	
		🍚	1	1	0	0	
		😮	0	0	2	2	
		😵	0	0	1	1	
		🙏	1	1	1	1	
		Total	7	7	49	40	
	Unicode® Emoji	😩	1	1	0	0	
Animated		N/A	0	0	7	7	Uncertain: 8
Uncertain emoji			0	0	1	1	
Total			8	8	57	48	

Appendix 15 - Emoji Use in A2-L4 & C11

Emoji			A2-L4 & C11				
Types		Images	A2-L4		C11		
			Quantity	Time(s)	Quantity	Time(s)	
Still Emoji	QQ Emoji	😊	17	16	4	4	
		😋	0	0	5	5	
		🤭	1	1	7	7	
		😰	0	0	1	1	
		🌞	1	1	0	0	
		🤐	1	1	0	0	
		😭	0	0	1	1	
		😭	0	0	1	1	
		😁	0	0	2	2	
		👍	0	0	1	1	
		Total	20	19	22	22	
	Uncertain		2	2	0	0	Uncertain: 2
Animated Emoji		N/A	0	0	0	0	
Total			22	21	22	22	

Emoji		Images	A4-L4		C13		
			Quantity	Time(s)	Quantity	Time(s)	
Still Emoji	QQ Emoji		14	7	0	0	
			10	10	36	36	
			7	5	2	2	
			4	2	0	0	
			3	1	0	0	
			2	2	0	0	
			2	2	0	0	
			2	2	0	0	
			1	1	9	9	
			1	1	0	0	
			1	1	1	1	
			0	0	3	3	
			0	0	3	3	
			0	0	2	2	
			0	0	1	1	
			0	0	1	1	
			0	0	1	1	
		Total	47	34	59	59	
	Unicode® emoji		0	0	1	1	
			0	0	1	1	
			0	0	1	1	
			0	0	1	1	
			0	0	2	2	
			0	0	2	2	
			0	0	1	1	
		Total	0	0	9	9	
Animated Emoji		N/A	1	1	1	1	Uncertain : 2
Total			48	35	69	69	

Appendix 17 - Participants' Uses of PFs in the Three Pairs in Level 4 Chronologically

Pairs	Participants' Use of PFs	Notes
A1-L4 & C11	C 😊 -- C 👍👍👍 ❤️ -- C 😊 -- C 😊 -- C [表情] – C 😊 -- C 😄 --A Haha-- A 😊 -- C 😊 -- C 🤭🤭🤭 -- C 😊 -- C 🤭🤭🤭 -- C 😛 -- C 学会怎么用汉语说，告诉我~ -- C 🤭 -- C 🤭 -- C 😊 -- C 咖啡？！ -- C 你的最爱？！ -- C 😿 -- C [Sticker Gallery] -- C 为什么？！ -- C 👍 -- C [Sticker Gallery] -- C [Sticker Gallery] -- C 😳😳😳 -- A 😤 -- C 😳 -- C 😍 -- C 👍 -- C 👍 -- C 🤭 -- C 😳 -- C [Sticker Gallery] -- C [Sticker Gallery] -- A 澳大利亚菜!!! -- A 😎 -- C 😊 -- A 🍚 👍 ---- C 🤭 -- C ??? – C 澳大利亚白天八度？！ -- C [Sticker Gallery] ---- C sunset 时间 6：05pm ?! -- C 这么早就黑天了？！ -- C 🤭 -- A 😫 -- C 🤭 -- C 😳 -- C 😁 -- C 🤭 -- C 😛 -- C 😳 -- C [Sticker Gallery] -- A 😭 -- C 🤭 -- C 哇哦~ -- C 😭 -- C 和考拉一样萌萌哒~ -- C 😁 -- C 😳 -- C 😁 -- C <Les Miserables>和<x-战警>都是 Hugh Jackman 演的啊？！ -- C 我都看过!!! 😁 -- C 知道啦~ -- C 😄 -- C 😳 -- A 😳	😫 appears in the email on Mac, but when copied and pasted it into a word file, it appears as □. When □ is copied form the word file and pasted in the WeChat for Mac, it appears as 😫.
A2-L4 & C11	C 😊 -- A 😊 -- C 😊 -- C 😊 -- A 😊 -- C 🤭 -- A [Sticker] -- A 🤭 -- C 😊 -- A :) -- C 🤭 -- A 这么晚！？ -- C 🤭 -- C 😊 -- C 🤭 -- C 😳 -- C 😊 -- C 😊 -- A 😊 -- A 😊 + 🌞 😊 -- A :) -- A 😳 -- A 😊 -- C 😿🎁 -- C 😁 -- C 是滴~ -- C 🤭 -- C 你刚刚起床啊？！ -- A 😊 -- C 狗毛！？ -- C 🤭 --A 😊 -- A 😊 -- A 😊 -- C 😊 -- A [Sticker] -- A 😳 -- A 😊 -- C 😁 -- C 🤭 -- A 😊 -- A 😊 -- C 👍 -- C 😊 -- A 😊 -- A 😊 -- A 😊	
A4-L4 & C13	C 😳 -- C 😊 -- C 😳 --A 我的中文不好。。。 --A 😍 -- C 😊 -- C 😛 -- A :) -- C 😳 -- C 👍 --A 很	In the email, the emoji for

282

Pairs	Participants' Use of PFs	Notes
	多功课。。。 -- C 😛+😛 -- C 😊 -- C 😊 -- C 👌 -- C 😛 -- C 😊 -- C 😊 -- C 😊 -- C 😊 -- A 😆 -- C 😊 -- C 😊 -- A 😆 😆 -- A 😊 -- A 😭 -- A 好哇！！ -- C ^_^ -- C 😊 -- C 😃 -- C 😊 -- C 😊 -- C 😊 -- A 😊 -- A 我刚有日文的话竞赛！！ -- C 😊 -- C 👍 -- C 🐛 -- A 😍 -- C 😊 -- C 😊 -- A 😁✌ -- A 😊 -- C 👍 -- A :) -- C 😊 -- C 😊 -- A 😝 -- C 😝 -- C 🐨+😁 -- C 😊 -- A 😁✌ -- A ❤ -- A :) -- C 😊 -- C 😊 -- A 😊 -- C 😊 -- C 😊 -- C [Sticker Gallery] -- C 😛 -- A 😭😭 -- A [Sticker Gallery] -- C 😛 -- A 😊 -- A 😊 -- C 😊 -- A 那么好吃！！ -- C 😊 -- A :) -- A 😊 -- A :) -- C 😝 -- C 🍁 -- A 😊 --A 我会给您法很多照片！！ -- A 😊 -- C 😊 -- A 😊 -- A 😭 -- A 每个人很高兴！！ -- C 😊 -- C 😊 -- A 有朝，我想试穿中国的传统服装！！ -- C 🍎 -- C 🍎 -- A 我也怎么觉得！！ -- C 😁 -- A 😊 -- A 我现在在面市场！！ -- A 😁😁😁 -- 😊 -- C 😊 -- C 😊 -- A 😭😭😭 -- A 😊 -- C 👍 -- A 但是我感觉的士很贵！！ -- A 我也怎么觉得！！ -- C 😛 -- C 🚲 -- 😎 -- C 🐛 -- C 😊 -- C 😛 -- A 我坐公共汽车的时候我有时感觉累！！ -- A 😭😭 😭😭 -- A 😭😭 😭 -- C 🚲 😛 -- C 😊 -- C 😛 -- A 休息休息~ --A 😊 -- C 😛 -- C 🙏 -- C 😊 -- A 您可能我的导游！！！😁 --A 格勒格勒格勒~ -- A 😳😳😳 -- A 😁 -- A 我觉得那个化那么漂亮！！ -- A 😭	facial mask, thumbs up, koala, maple leaf, apple, bicycle, and praying, all appear as □, but when copied and pasted into WeChat for Mac and WeChat for iOS, they appear as images. However, the two apple images appear as green in WeChat for Mac, whereas red in WeChat for iOS. The mentee said in the interview that "格勒格勒格勒格勒" is a typo, which should be "哈哈哈哈哈哈哈" (hahahahahaha).

Notes:
1) A: mentee; C: mentor

2) To make the presentation of the five participants' uses of PFs clear and particularly to indicate the repetitions, if more than one emoji is used in an e-turn (or a proposition) consecutively, they would be listed together as the order as they were in the original chat logs; whereas if more than emoji appears in an e-turn (or a proposition) in different locations, such as at the beginning, in the middle, or at the end, then a "+" will be inserted between them to indicate that they are used separately.

Appendix 18 - Two Mentors' Compliment(s) to Their Mentee(s)

Mentor	Message type	Mentee	Date & Week	Number of e-turn/ proposition	Content	Translation	Context
C11	Pure text	A1-L4	11-9 (W-7)	e-turn 574	哦你太棒了	Oh well done	She sent some audio messages in the previous e-turns and asked if he understood. The mentee said he understood. Then she complimented him.
		A2-L4	20-8 (W-4)	e-turn 72	太棒了	Well done	In the previous e-turns, she sent some audio messages. The mentee heard of a child's voice then he asked if it was her child. She complimented him by identifying this, but she explained later that it was her big sister's child.
			17-9 (W-8)	e-turn 318	你学的很快！	You are learning very fast!	In the previous e-turn 317, the mentee used "我同意你的观点" (*I agree with you*) that he learned from the mentor in W-6, the mentor compliments him.
	Pure PF(s)	A1-L4	NA	NA	NA	NA	NA
		A2-L4	NA	NA	NA	NA	NA
	Mixed	A1-L4	2-9 (W-6)	e-turn 215	啤酒 足球 好生活👍	Beer Soccer Good life 👍	He sent a picture which showed that he was drinking beer when watching football match. There is space between the textual characters, which can be interpreted as: Drinking beer when you are watching a soccer match, your life is really good 👍
				e-turn 286	够了👍	Enough👍	In the previous e-turns, he sent a picture of his bedroom, where there were table, chair, desk and bed. This message conveys her admiration: I admire you because you have such a big bedroom.
				e-turn 302	对！你很棒！👍	Yes! Well done! 👍	It happens when she sent a picture of grape seeds and grape skin that she was eating and asked him to guess what it was, then he gave correct answer. Then she complimented him.
		A2-L4	17-9 (W-8)	e-turn 325	C11 1:57 am 对👍	Yes 👍	In e-trun 323, she said after mastered basic (common) language, he could understand fashionable words, finally he could talk with fashionable and humourous words. The mentee correctly paraphrased what she said in e-turn 324, then she complimented him.

		Pure text	A4-L4	NA	NA	NA	NA	NA
C13	**Pure PF(s)**			27-9 (W-9)	e-turn 217	🥰	🥰	In e-turn 194, he made an error in " 今天很晴天", then she corrected him. After he understood how to use "晴天"correctly, she complimented him.
	Mixed			31-8 (W-6)	e-turn 21	你学了很多语言，<mark>很棒</mark>👍	You've learned many languages, great 👍	He introduced the languages that he was studying, then she complimented him.
				13-9 (W-7)	135	你已经可以参加日语竞赛了，<mark>太棒了！</mark>👍	You've already been able to participate in Japanese speech context, awesome! 👍	He told her that he just participated in a Japanese speech contest, then she complimented him.
				19-9 (W-8)	185	🥰 <mark>学得真好！</mark>	🥰 (You've) learned really well!	He asked her how to say "I will try my best" in Chinese, after she told him in e-turn 177, he used it in e-turn 184. Then she complimented him.
				21-10 (W-13)	381	看起来就是looks👍	看起来 does mean looks 👍	He asked if what she used "看起来" on 17 October meant "looks". She complimented him by giving him affirmative feedback.

Appendix 19 - Three Mentees' Expressions of Appreciation

Mentee	Mentor	Message type	Date & Week	Number of e-turn/ proposition	Content	Translation	Context
A1-L4	C11	Pure text	12-8 (W-3)	e-turn 19	谢谢。明天聊天！	Thanks. Let's chat tomorrow!	In e-turn 14 he promised that he would chat with her in 30 minutes because he needed to drive, but in e-turn 18 he apologized that he did not keep his promise just because he drove for a long time, and it had been 9pm and he would go to sleep and would get up at 5.30am. He also said that he felt that the mentor was very nice and would help him a lot. He then expressed his willingness to help her with English learning.
			14-8 (W-3)	e-turn 62	谢谢，可是我的听和说得不很好。	Thanks, but my listening and speaking (skills) are not good.	He thanked her for complimenting him knowing many Chinese words and being able to make long sentences.
			14-8 (W-3)	e-turn 71	谢谢	Thanks	This is his response to her two audio messages, which could be inferred from her text messages that she was asking him which kind of messages he would prefer to receive: in Chinese or in English, text messages or audio messages. First, he expressed his appreciation, and then he said he preferred to receive Chinese messages, and both text and audio messages would be fine.
				e-turn 82	谢谢你。你的英文已经非常好。	Thank you. Your English has been very good.	He thanked her because she said that her task at that moment was to help him with Chinese language learning, so she did not want to practise English with him.
			11-9 (W-7)	e-turn 629	谢谢	Thanks	He thanked her after she corrected his error of "99 百分", which he thought would be correct.
		Pure PF(s)	NA	NA	NA	NA	NA
		Mixed	NA	NA	NA	NA	NA
A2-L4	C11	Pure text	9-8 (W-2)	e-turn 41	啊谢谢	Ah thanks	He thanked her for correcting his word "夏假".
			19-8 (W-4)	e-turn 55	谢谢你帮我，我觉得你真的有用！	Thank you for helping me, I think that you are really helpful!	He thanked her for telling him how to say "when I get a bit older" and "I must study hard in the uni".

			24-8 (W-5)	e-turn 93	真的好，<mark>谢谢！</mark>	That's really good, thanks!	He thanked her for telling him how to say "several toilets" in Chinese.
			3-9 (W-6)	e-turn 182	<mark>谢谢</mark>	Thanks	She sent him a picture of grapes followed with Chinese characters of grapes. He thanked her for sending him an audio message to tell him the pronunciation of "grape" in Chinese.
			7-9 (W-7)	e-turn 240	很好！<mark>谢谢！</mark>	Great! Thanks!	He thanked her for telling him how to say "Every evening I walk my dog", and differentiating the semantic differences between "我去遛狗"(walk my dog) and "我和我的狗一起去散步"（My dog and I take a walk together）.
			16-9 (W-8)	e-turn 303	哦，<mark>好谢谢</mark>	Oh, good thanks	He thanked her for telling him whether "gym" meant "健身". He thought "健身=gym", but she contended: "gym 体育场" (gym [means] stadium)，and "健身" meant "做运动" (*to do exercise, or to workout*). In fact, she made a mistake: "gym" means "健身房" in Chinese.
			17-9 (W-8)	e-turn 328	哈哈<mark>谢谢</mark>	HahaThanks	He thanked her because she promised in e-turns 326-327 that she was a bit busy in that week but she would reply as soon as possible when she was available.
		Pure PF(s)	NA	NA	NA	NA	NA
		Mixed	19-8 (W-4)	e-turn 65	[Sticker]<mark>谢谢！</mark>	[Sticker] Thanks!	[Sticker] is an emoji but it remains uncertain. He thanked her for telling him how to say "not too far in the future I hope to be fluent in Chinese".
			16-9 (W-8)	e-turn 319	你教我那些😊	You taught me those 😊	C11 used the expression "我同意你的观点" (*I agree with you*) on 5 September (W-6), and the mentee used this message on 16 September (W-8), the mentor praised him for it by saying "你学的很快！" (*You've learned so fast!)* Then the mentee replied by saying "你教我那些😊 "
A4-L4	**C13**	**Pure text**	31-8 (W-6)	e-turn 27	啊！<mark>谢谢您</mark>！我怎么说"I understand now"？	Ah! Thank you! How can I say "I understand now"?	He expressed appreciation after she corrected his error in e-turns 24 and 25 with syntactical structure: S+在+place+verb
				e-turn 29	<mark>谢谢</mark>您！	Thank you!	He thanked her after she answered his question regarding how to say "I understand now".
				P2 in	啊！我知道了。<mark>谢</mark>	Ah! Got it. Thank you *	He thanked her after she explained how to used "A 比 B

				e-turn 94	谢 *老师！	Laoshi!	+adjective" to make comparisons, and the differences between "好啊"and "好吧"
				12-9 (W-7)	e-turn 116	您帮我帮太方便了！谢谢 *老师！	You helped me so conveniently! Thank you * Laoshi!	He thanked her after she: corrected his error regarding the word "facial mask", differentiated some Chinese words which indicate "good" with varying degrees, and differentiated two synonyms "一样" and "相同".
			14-9 (W-8)	e-turn 148	我明白了！谢谢您	Got it! Thank you!	He thanked her after she corrected his error in using "有点儿+adjective" and "adjective+一点儿". NB: in e-turn 150, he used "啊！" to convey his excitement of knowing the differences between the two expression, and further in e-turn 154, he used "啊啊啊啊！我懂容易" (*Ahahahah! [In this way I understood easily]*) to express that he was very excited to know the differences. And in e-turn 156 (also in this table), he used mixed text to express his such excitement.
			19-9 (W-8)	e-turn 166	谢谢您！	Thank you!	This is his response to her care and reminding in e-turn 165, where she suggested that he make good preparation for his three upcoming exams, but she reminded him to alternate work with rest. He expressed his appreciation for her care and reminding.
			15-10 (W-12)	P1 in e-turn 330	谢谢您！这些照片很有意思！	Thank you! These pictures are very interesting!	He thanked her for sending him pictures of Chinese traditional clothing.
			17-10 (W-12)	e-turn 345	谢谢 * 老师！	Thank you * Laoshi!	He thanked her for sending him a picture where there were cartoon figures wearing traditional Chinese clothing. And he later confirmed that the picture was very beautiful in e-turn 347.
		Pure PF(s)	NA	NA	NA	NA	NA
		Mixed	14-9 (W-8)	e-turn 156	谢谢您 😁 ✌️	Got it! Thank you 😁 ✌️	He thanked her for her differentiation of "一点儿" and "有点儿". Also refer to his thank to her in e-turn 148 with pure text message in this table.
			29-10 (W-14)	e-turn 420	谢谢您！您可能我的导游！！！ 😁	Thank you! Probably you can be my tour guide!!!	He thanked her for correcting his errors in his future plans, her wishes for his plans, and in particular, for her words: "welcome to China".

Appendix 20 - Mentees' Apology and/or Explanation

Mentee	Mentor	Date & Week	Number of e-turn/ proposition	Content	Translation	Context
A1-L4 😊	C11	12-8 (W-3)	e-turn 14	对不起，我需要开车。三十分钟可以聊天儿	Sorry, I need to drive. (Let's) chat in 30 minutes	This takes place in their first conversation.
		12-8 (W-3)	e-turn 18	你好，对不起，我开车很长时间。	Hi, sorry, I drove for a long time.	In e-turn 14, he said he would be able to chat with her in 30 minutes, but he drove more than 30 minutes, so he apologised for it. Then he said that he would chat with her the next day.
		2-9 (W- 3)	e-turn 22	我想说，如果我们聊天，我把大的时间回复，对不起，我有很忙的日程。	I would like to say, if we chat, it takes me a lot of time to reply, sorry, I have very busy agenda.	He finally did not chat with her on 13 August. He initiated new conversation on 2 September and explained in this way.
			e-turn 360	对不起	Sorry	It was dinner time in Beijing and after she said "吃完饭再聊 😊 " (*Will continue chatting with you after dinner*)，he said sorry to her.
A2-L4	C11	16-8 (W-3)	e-turn 48	对不起我给你发短信这么晚。我希望我没有起床你	Sorry for texting you so late. I wish I would not wake you up	He sent 4 messages after 10.25pm, and e-turn 48 was sent at 11.49pm (AEST). Because of the time difference between Beijing and the CITY, actually it was 9.49pm, and the mentor replied at 1.17pm (AEST) the next day. See the mentor's apology and explanation in Appendix 18.
		19-8 (W-4)	e-turn 55	我很抱歉回复你真么晚。	I'm really sorry to text you back so late.	He did not reply to the mentor's messages sent on 17 August until 19 August.
A4-L4	C13	30-8 (W-5)	e-turn 6	对不起	Sorry	After the mentor-mentee relationship was established on 26 August, she sent her two messages, but he did not respond until 30 August. He explained in e-turn 5 that he had been busy those days.
		2-9 (W-6)	Ps 1-3 in e-turn 62	你可以等一下吗？ 我很忙, 对不起。😹 我有很多功课	Can you wait a minute? I'm very busy, sorry. 😹 I have many assignments to do	On 1 September, the last 11 e-turns all sent by her, nearly 24 hours later, he responded by saying sorry and explaining the reasons.
		6-9 (W-6)	P1 and P2 e-turn 72	老师！对不起。我这个周末有义务的工作，所以我很忙了。	Teacher! Sorry. I'll do voluntary work this weekend, so I'll be	He had not responded to her messages since 3 September. But she sent him messages on 3 and 5 September. In the following two e-turns (e-turn 73), he promises: "我会 'reply' 您明天。" (*I'll reply to*

					very busy. 😫 😫 😫	*you tomorrow*)
		21-10 (W-13)	P10 in e-turn 366	我不能讲。<mark>对不起</mark>😭 😭 😭	I can't explain. Sorry 😭 😭 😭	In this e-turn, the mentee tries to explain traditional Chinese characters, simplified Chinese characters, and the differences between Chinese characters and Japanese Kanji.
		29-10 (W-14)	e-turn 410	我忙死了。某甲救我！😭 😭 😭	I'm deadly busy. Who can rescue me! 😭 😭 😭	This is his response to C13's question (in e-turn 404) concerning if he has been busy since they have not chatted for a week. This is an explanation.

Appendix 21 - Mentor's Apology and/or Explanation

Mentor	Mentee	Date & Week	Number of e-turn/ proposition	Content	Translation	Context
C11	A1-L4	17-9 (W-8)	e-turn 645	这周有点忙	I'm a bit busy this week	She responds to A1-L4's messages less than 5 hours later.
			e-turn 646	论文开题了	My thesis proposal presentation has been done	
			e-turn 647	我一有时间就会及时回复你	I'll reply to you in time as long as I have time.	
C11	A2-L4	9-8 (W-2)	e-turn 33	不好意思，这几天回老家了，今天回北京，刚刚在路上不方便发信息。	Sorry, I went back to my hometown for a few days, I'm on my way to Beijing, it's not convenient to text you just now.	She responded to his previous messages less than 5 hours later.
		17-8 (W-4)	e-turn 54	回复你晚了，很抱歉！	Sorry for the late reply!	She responded less than 2 hours later.
C13	A4-L4	31-8 (W-6)	e-turn 18	不好意思，今天工作太忙了。	Sorry, I'm too busy at work.	She sends this message at 15.52pm (AEST). and it was responding to the mentee's messages sent at 1.59am (AEST).
		28-10 (W-14)	e-turn 404	**，（the mentee's Chinese given name），最近是不是很忙啊？我最近工作比较忙，没有跟你聊天儿，不好意思 😝	**, Have you been busy recently? I've been pretty busy, so I haven't chatted with you, sorry 😝	Their previous conversation took place on 21 October. C13 initiated new conversation with this message one week later.

References

Akyol, Z., Arbaugh, J. B., Cleveland-Innes, M., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. (2009). A response to the review of the community of inquiry framework. *Journal of Distance Education, 23*(2), 123-136.

Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time: Understanding the progression and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks, 12*(3-4), 3-22.

Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships in everyday life. *Emotion, 8*(3), 425-429. https://doi.org/10.1037/1528-3542.8.3.425

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks, 5*(2), 1-17.

Austin, J. (1962). *How to do things with words* Clarendon Press.

Baron, N. S. (1984). Computer-mediated communication as a force in langauge change. *Visible Language, 18*(2), 118-141.

Biocca, F., & Harms, C. (2002). Defining and measuring social presence: Contribution to the networked minds theory and measure. The 5th International Workship on Presence 2002, Porto: University Fernando Pessoa.

Boston, W. E., Ice, P., Diaz, S. R., Richardson, J., Gibson, A. M., & Swan, K. (2009). An exploration of the relationship between indicators of the community of Inquiry framework and retention in online programs. *Journal of Asynchronous Learning Networks, 13*(3), 67-83.

Braun, V., & Clarke, V. (2012). Thematic Analysis. In H. E. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. E. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: quantitative, qualitative, neuropsychological, and biological* (pp. 57-71). American Psychological Association. https://doi.org/10.1037/13620-004

Burbules, N. (1993). *Dialogue in teaching: Theory and practice*. Teachers College Press.

Carr, S. (2000). As distance education comes of age, the challenge is keeping the students. *The Chronicle of Higher Education, 46*(23), 39-41.

Chen, L., Wang, Y., & Rodway, C. (2021). Social strategy use in online Chinese learning. *Computer Assisted Language Learning*, 1-28. https://doi.org/10.1080/09588221.2021.1880442

Cherny, L. (1995). *The MUD register: Conversational modes of action in a text-based virtual reality* [Unpublished PhD thesis, Standford University].

Cleveland-Innes, M., & Campbell, P. (2012). Emotional presence, learning, and the online learning environment. *International Review of Research in Open and Distance Learning, 13*(4), 269-292. http://ez.library.latrobe.edu.au/login?url=https://search-

proquest-com.ez.library.latrobe.edu.au/docview/1634473258?accountid=12001

Constantin, L. (2015). *Thousands of iOS apps infected by XcodeGhost*. Retrieved 12 October from https://www.computerworld.com/article/2985540/apple-ios/thousands-of-ios-apps-infected-by-xcodeghost.html

Cook, J., Pachler, N., & Bradley, C. (2008). Bridging the gap? Mobile phones at the interface between informal and foraml learning. *Jounal of the Research Center for Educational Technology, 4*(1), 3-18.

Daft, R. L., & Lengel, R. H. (1984). Organizational information requirements, media richness and structural design. *Management science, 32* (5), 554-571. http://links.jstor.org/sici?=0025-1909%28198605%2932%3C554%3AOIRMRA%3E2.0.CO%3B2-Q

Danesi, M. (2016). *The Semiotics of Emoji: The Rise of Visual Language in the Age of the Internet*. Bloomsbury Publishing Plc.

Darics, E. (2013). Non-verbal signalling in digital discourse: The case of letter repetition *Discourse, Context and Media 2*, 141-148.

Derks, D., Bos, A. E. R., & Von Grumbkow, J. (2008). Emoticons in computer-mediated communication: Social motives and social context. *CyberPsychology & Behavior, 11*(1), 99-101. https://doi.org/10.1089/cpb.2007.9926

Dimson, T. (2015). *Emojineering Part 1: Machine learning for emoji trends*. Retrieved 2 May from https://engineering.instagram.com/emojineering-part-1-machine-learning-for-emoji-trendsmachine-learning-for-emoji-trends-7f5f9cb979ad

Dresner, E., & Herring, S. C. (2010). Functions of the nonverbal in CMC: Emoticons and illocutionary force. *Communication Theory, 20*, 249-268. https://doi.org/10.1111/j.1468-2885.2010.01362.x

Dunlap, J., Bose, D., Lowenthal, P. R., York, C. S., Atkinson, M., & Murtagh, J. (2015). What sunshine is to flowers: A literature review on the use of emoticons to support online learning. In M. Gartmeier & S. Y. Tettegah (Eds.), *Emotions, desisn, learning and technology* (pp. 163-182). Elsevier Science.

Eggins, S., & Slade, D. (1997). *Analyzing casual conversation*. Cassell.

Fahlman, S. E. (n.d.-a). *Original Bboard Thread in which :-) was proposed*. Retrieved 2 May from http://www.cs.cmu.edu/~sef/

Fahlman, S. E. (n.d.-b). *Smiley Lore   :-)*. Retrieved 2 May from http://www.cs.cmu.edu/~sef/sefSmiley.htm

Friesen, W. V., & Ekman, P. (1983). *EMFACS-7: Emotional facial action coding system*. University of California Press.

Garrison, D. R. (2009). Communities of inquiry in online leanring. In P. Rogers, G. Berg, J. Boettcher, C. Howard, L. Justice, & K. Schenk (Eds.), *Encyclopedia of distance learning* (second ed., pp. 352-355). IGI Global. https://doi.org/10.4018/978-1-60566-198-8.ch052

Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice* (2nd ed.). Routledge.

Garrison, D. R. (2016). *Thinking collaboratively: Learning in a Community of Inquiry*. Routledge.

Garrison, D. R. (2017). *E-learning in the 21st century: A community of inquiry framework for research and practice*. Routledge.

Garrison, D. R., & Anderson, T. (2003). *E-learning in the 21st Century: A framework for research and practice*. RoutledgeFalmer. https://books.google.com.au/books?id=wRQnQtUUTXoC&q=social+presence#v=snippet&q=social%20presence&f=false

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education, 15*(1), 7-23. https://doi.org/10.1080/08923640109527071

Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education, 13*(1), 31-36. https://doi.org/10.1016/j.iheduc.2009.10.002

Griffiths, S. (2015, 02:47 AEDT, 15 August 2015). *Can YOU decipher these emoji messages? Translators from 11 regions misunderstand 'universal' symbols - with hilarious results*. Retrieved 3 May from http://www.dailymail.co.uk/sciencetech/article-3196583/Can-decipher-emoji-messages-Translators-11-regions-misunderstand-universal-symbols-hilarious-results.html

Gunawardena, C. N. (1995). Social presence theory and implications for interaction and collaborative learning in computer conferences. *International Journal of of Educational Telecommunications, 1*(2/3), 147-166.

Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American Journal of Distance Education, 11*(3), 8-26. https://doi.org/10.1080/08923649709526970

Halvorsen, A. (2012). Patterns of emoticon usage in ESL students' discussion forum writing. *CALICO Journal, 29*(4), 694-717.

Hern, A. (2015). *Don't know the difference between emoji and emoticons? Let me explain*. Retrieved 6 July from https://www.theguardian.com/technology/2015/feb/06/difference-between-emoji-and-emoticons-explained

Herring, S. C. (1999). Interactional coherence in CMC. *JOurnal of Computer-Mediated Communication, 4*(4), 1-13. https://doi.org/10.1111/j.1083-6101.1999.tb00106.x

Herring, S. C. (2001). Computer-Mediated Discourse. In D. Tannen, D. Schiffrin, & H. Hamilton (Eds.), *The Handbook of Discourse Analysis* (pp. 612-634). Blackwell.

Herring, S. C. (2003, September 8). *Dynamic topic analysis of synchronous chat* Symposium on New Resersach for New Media, University of Minnesota, Minneapolis. http://ella.slis.indiana.edu/~herring/dta.2003.pdf

Herring, S. C. (2004a). Computer-mediated discourse analysis: An approach to researching online behavior. In S. A. Barab, R. Kling, & J. H. Gray (Eds.), *Designing for virtual communities in the service of learning* (pp. 338-376). Cambridge University Press.

Herring, S. C. (2004b). Slouching toward the ordinary: Current trends in computer-mediated communication. *New Media & Society, 6*(1), 26-36. https://doi.org/10.1177/1461444804039906

Herring, S. C. (2007). A faceted classification scheme for computer-mediated discourse. *Language@Internet, 4*, Article article 1. http://www.languageatinternet.org/articles/2007

Herring, S. C. (2010). Computer-Mediated Conversation: Introduction and overview. *Language@Internet, 7*, Article 2. http://www.languageatinternet.org/articles/2010

Herring, S. C. (2013a). Discourse in Web 2.0: Familiar, reconfiruged, and emergent. In D. Tannen & T. A. Marie (Eds.), *Discourse 2.0: Language and new media* (pp. 1-25). Georgetown University Press.

Herring, S. C. (2013b). Grammar and electronic communication. In C. A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics*. Blackwell Publishing Ltd. https://doi.org/10.1002/9781405198431.wbeal0466

Herring, S. C. (2015). New frontiers in interactive multimodal communication. In A. Georgopoulou & T. Spilloti (Eds.), *The Routledge handbook of language and digital communication* (pp. 398-402). Routledge.

Herring, S. C., & Androutsopoulos, J. (2015). Computer-mediated discourse 2.0. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The handbook of discourse analysis* (2nd ed., pp. 127-151). John Wiley & Sons, Inc.

Herring, S. C., & Nix, C. G. (1997). *Is "serious chat" an oxymoron? Academic vs. social uses of Internet Relay Chat* The American Association of Applied Linguistics Annual Conference, Orlando, Florida. http://ella.slis.indiana.edu/~herring/aaal.1997.pdf

Hostetter, C., & Busch, M. (2006). Measuring up online: The relationship between social presence and student learning satisfaction. *Journal of Scholarship of Teaching and Learning, 6*(2), 1-12.

Houston, J. E. (Ed.). (1984). *Thesaurus of ERIC Descriptors* (10th ed.). Oryx Press.

Huang, B., & Liao, X. (Eds.). (2017). *现代汉语* (6th ed.). Higher Education Press.

Huang, X. (2019). WeChat-based teaching for an immersion cultural exchange program–a case study in CFL. *Smart Learning Environments, 6*(1), 1-21. https://doi.org/10.1186/s40561-019-0087-0

Hughes, C. (2019). *Smartphone ownership in Australia as of March 2018, by age*. Retrieved 5 March from https://www.statista.com/statistics/730101/australia-smartphone-

ownership-by-age/

Jahng, N., Nielsen, W. S., & Chan, E. K. (2010). Collaborative learning in an online course: A comparison of communication patterns in small and whole group activities. *Journal of Distance Education, 24*(2), 39-58.

Jiang, W., & Li, W. (2018). Linking up learners of Chinese with native speakers through WeChat in an Australian tertiary CFL curriculum. *Asian-Pacific Journal of Second and Foreign Lnaguage Education, 3*(14), 1-16. https://doi.org/10.1186/s40862-018-0056-0

Jin, L. (2018). Digital affordances on WeChat: Learning Chinese as a second language. *Computer Assisted Language Learning, 31*(1-2), 27-52. https://doi.org/10.1080/09588221.2017.1376687

Jones, A., Gaved, M., Kukulska-Hulme, A., Scanlon, E., Pearson, C., Lameras, P., Dunwell, I., & Jones, J. (2014). Creating coherent incidental learning journeys on smartphones using feedback and progress indicators: The SCAMP framework. *International Journal of Mobile and Blended Learning, 6*(4), 75-92.

Kalman, Y. M., & Gergle, D. (2014). Letter repetitions in computer-mediated communication: A unique link between spoken and online language. *Computers in Human Behavior, 34*, 187-193. https://doi.org/http://dx.doi.org/10.1016/j.chb.2014.01.047

Kapidzic, S., & Herring, S. C. (2011). Gender, communication, and self-presentation in teen chat- rooms revisited: Have patterns changed? . *JOurnal of Computer-Mediated Communication, 17*(1), 39-59.

Kelly, R., & Watts, L. (2015). *Characterising the inventive appropriation of emoji as relationally meaningful in mediated close personal relationships* Experiences of Technology Appropriation: Unanticipated Users, Usage, Circumstances, and Design, Oslo, Norway. https://purehost.bath.ac.uk/ws/portalfiles/portal/130966701/emoji_relational_value.pdf

Kerka, S. (2000). *Incidental learning: Trends and issues Alert No.18*. http://www.eric.ed.gov/pdfs/ed446234.pdf

Kim, D., Frank, M. G., & Kim, S. T. (2014). Emotional display behavior in different forms of computer mediated communication. *Computers in Human Behavior, 30*, 222-229. https://doi.org/http://dx.doi.org/10.1016/j.chb.2013.09.001

Kukulska-Hulme, A. (2014). *Mobile, wearable, companionable: Emerging technolog- ical challenges and incentives for learning* Jogos e Mobile Learning (2014) Coimbra, Portugal. https://www.researchgate.net/profile/Celio_Marques/publication/277312581_Atas_do_2_Encontro_sobre_Jogos_e_Mobile_Learning/links/56641bd908ae15e74632bc02/Atas-do-2-Encontro-sobre-Jogos-e-Mobile-Learning.pdf#page=12

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL, 20*(03), 271-289.

Le, H., Janssen, J., & Wubbels, T. (2018). Collaborative learning practices: Teacher and

student perceived obstacles to effective student collaboration. *Cambridge Journal of Education, 48*(1), 103–122. https://doi.org/10.1080/0305764X.2016.1259389

Lee, L. (1998). *Structural features of Chinese language: Why Chinese spoken language processing is special and where we are* International Symposium on Chinese Spoken Language Processing (ISCSLP 1998), Singapore. https://www.isca-speech.org/archive_open/archive_papers/iscslp1998/AKeynoteSpeech-1.pdf

Leech, G. (1983). *Principles of pragmatics*. Longman.

Leech, G. (2014). *The Pragmatics of Politeness*. Oxford University Press.

Li, C. (2016). 基于微信公众平台的汉语口语教学探讨—以华侨大学为例 [An Analysis of Spoken Chinese Teaching based on the WeChat Public Platform] *中文教学现代化学报 [The Journal of Modernization of Chinese Language Education] 5*(1), 1-8.

Li, X., & Du, J. (2012). "对不起"与"不好意思"的语用分析 [Pragmatic Analysis on the Words "dui bu qi" and "bu hao yi si"]. *Journal of Tongren University, 14*(3), 45-47, 57.

Lightbown, P. M., & Spada, N. M. (2013). *How languages are learned* (4 ed.). Oxford University Press.

Lim, S. S., & Basnyat, I. (2016). Face and online social networking In S. S. Lim & C. Soriano (Eds.), *Asian perspectives on digital culture: Emerging phenomena, enduring concepts* (pp. 17-32). Routledge.

Liu, G., & Lo Bianco, J. (2007). Teaching Chinese, teaching in Chinese, and teaching the Chinese. *Language Policy, 6*(1), 95-117. https://doi.org/10.1007/s10993-006-9041-4

Liu, L., Preotiuc-Pietro, D., Samani, Z. R., Moghaddam, M. E., & Ungar, L. (2016). *Analyzing personality through social media profile picture choice* The Tenth International AAAI Conference on Web and Social Media (ICWSM 2016), Cologne, Germany.

Liu, X. (2000). *对外汉语教育学引论*. Beijing Language University Press.

Livingstone, D. W. (2001). *Adults' Informal Learning: Definitions, Findings, Gaps, and Future Research*. Retrieved 18 June from https://files.eric.ed.gov/fulltext/ED452390.pdf

Lo, S.-K. (2008). The nonverbal communication functions of emoticons in computer-mediated communication. *CyberPsychology & Behavior, 11*(5), 595-597. https://doi.org/10.1089/cpb.2007.0132

Locke, T., & Daly, N. (2007). Towards congeniality: The place of politeness in asynchronous online discussion. *International Journal of Learning, 13*(12), 121-134.

Looi, C.-K., Seow, P., Zhang, B. H., So, H.-J., Chen, W., & Wong, L.-H. (2009). Leveraging mobile technology for sustainable seamless learning: A research agenda. *British Journal of Educational Technology*, 1-16. https://doi.org/doi:10.1111/j.1467-8535.2008.00912.x

Luo, H., & Gui, M. (2021). Developing an effective Chinese- American telecollaborative learning program: an action research study. *Computer Assisted Language Learning, 34*(5-6), 609-636. https://doi.org/10.1080/09588221.2019.1633355

Luo, H., & Yang, C. (2016). Using WeChat in teaching L2 Chinese: An exploratory study. *Journal of Technology and Chinese Language Teaching, 7*(2), 82-96. http://www.tclt.us/journal/2016v7n2/luoyang.pdf

Luo, T. (2013). Web 2.0 for language learning: Benefits and challenges for educators. *International Journal of Computer-Assisted Language Learning and Teaching, 3*(3), 1-17. https://digitalcommons.odu.edu/stemps_fac_pubs/17

Lv, B. (1983). 谈谈对外汉语教学的性质和特点. *Language Teaching and Linguistic Studies*(2), 4-24.

Lv, Y. (2014). 微信公众平台在辅助对外汉语课堂教学中的应用研究 [The application of WeChat public platform in teaching Chinese as a second language]. *中文教学现代化学报 [The Journal of Modernization of Chinese Language Education], 3*(2), 51-57.

Lv, Y. (2016). *基于微信的对外汉语移动教学应用研究—以《报刊阅读》课为例 [A WeChat-based Appllication Research on Mobile Teaching in TCSL: Newspaper Reading as an Example]* [Master's thesis, Beijing Language University, Beijing].

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work'. *Learning, media and technology, 34*(2), 141-155. https://doi.org/10.1080/17439880902923606

Manca, S., & Ranierit, M. (2013). Is it a tool suitable for learning? A critical review of the literature on Facebook as a technology-enhanced learning environment. *Journal of computer assisted learning 29*(6), 487-504.

McAndrew, P., Godwin, S., & Santos, A. (2009). Research 2.0: How do we know about the users that do not tell us anything? In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and research designs* (pp. 277-288). Peter Lang.

McCulloch, G. (2018). *What we can learn about gesture by studying emoji*. Retrieved 14 November 2018 from https://docs.google.com/presentation/d/1tFZ03Msscn6t4mOIaj5qerJPiLn5W5-0aaGSUgoLmwk/edit#slide=id.p

McCulloch, G., & Gawne, L. (2018). Emoji grammar as beat gestures. In S. Wijeratne, E. Kiciman, H. Saggion, & A. Sheth (Eds.), *Proceedings of the 1st International Workshop on Emoji Understanding and Applications in Social Media (Emoji2018)* (Vol. Stanford, CA, USA, 25-JUN-2018.). http://ceur-ws.org/Vol-2130/short1.pdf

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.doc

Mehrabian, A. (1969). Some referents and measures of nonverbal behavior. *Behavior Research Methods & Instrumentation, 1*(6), 203-207.

Miller, H., Thebault-Spieker, J., Chang, S., Johnson, I., Terveen, L., & Hecht, B. (2016). *"Blissfully happy" or "ready to fight": Varying Interpretations of Emoji*. Association for the Advancement of Artificial Intelligence. Retrieved 12 April from

https://grouplens.org/site-content/uploads/Emoji_Interpretation_Paper.pdf

Ng, W. (2013). Conceptualising mLearning literacy. *International Journal of Mobile and Blended Learning, 5*(1), 1-20.

Ng, W. (2015). *New digital technology in education: Conceptulasing professional learning for educators*. Springer.

Ng, W. (2016). Sustaining mobile learning at a personal level: Mobile digital literacy. In W. Ng & T. M. Cummning (Eds.), *Sustaining Mobile Learning: Theory, Research and Practice* (pp. 85-107). Routledge.

Ng, W., & Nicholas, H. (2013). A framework for sustainabe mobile learning in schools. *British Journal of Educational Technology, 44*(5), 695-715.

Ng, W., & Nicholas, H. (2016). Sustaining innovation in learning with mobile devices: Key challenges. In W. Ng & T. Cumming (Eds.), *Sustaining mobile learning: Theory, research and practice* (pp. 1-25). Routledge.

Nicholas, H., & Starks, D. (2014). *Language education and applied linguistics: Bridging the two fields*. Routledge.

Nippard, E., & Murphy, E. (2007). Social presence in the web-based synchronous secondary classroom. *Canadian Journal of Learning and Technology, 33*(1). https://files.eric.ed.gov/fulltext/EJ1073882.pdf

Novak, P. K., Smailović, J., Sluban, B., & Mozetič, I. (2015). Sentiment of Emojis. *PloS ONE, 10*(12), 1-22. https://doi.org/10.1371/journal.pone.0144296

Nowak, K. L., & Biocca, F. (2003). The effect of the agency and anthropomorphism on users' sense of telepresence, copresence, and social presene in virtual environments. *Presence: Teleoperators and Virtual Environments, 12*(5), 481-494.

Oxford University Press. (2005). Mentor. In *Oxford Advanced Learner's Dictionary*

Pachler, N. (2009). Research methods in mobile and informal learning: Some issues In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching Mobile Leanring: Frameworks, tools and research designs* (pp. 1-15).

Pamintuan, C. F., Mallari, D. G., Garcia, N. T., Galang, J. P., & Buduan, R. M. B. (2018). The use of WeChat application on CFL learners' vocabulary acquisition. *TESOL International Journal, 13*(4), 26-38.

Pasfield-Neofitou, S. (2007). Textual features of intercultural internet chat between learners of Japanese and English. *CALL-EJ Online, 9*(1). http://callej.org/journal/9-1/pasfield-neofitou.html

Pasfield-Neofitou, S. (2011). Online domains of language use: Secod language learners' experiences of virtual community and foreignness. *Language learning & technology, 15*(2), 99-108.

Pasfield-Neofitou, S. (2012). *Online Communication in a Second Language: Social Interaction, Language Use, and Learning Japanese*. Channel View Publications Ltd.

Patterson, B., & McFadden, C. (2009). Attrition in online and campus degree programs. *Online Journal of Distance Learning Administration, 12*(2). https://www.westga.edu/~distance/ojdla/summer122/patterson112.html

Pavalanathan, U., & Eisenstein, J. (2015). *Emoticons vs. emojis on Twitter: A casual inference approach* AAAI Spring Symposium 2016, https://arxiv.org/pdf/1510.08480.pdf

Pavalanathan, U., & Eisenstein, J. (2016). More emojis, less :) The competition for paralinguistic function in microblog writing. *First Monday, 21*(11). https://doi.org/10.5210/fm.v21i11.6879

Pennycook, A. (1985). Actions speak louder than words: Paralanguage, communication, and education. *TESOL Quarterly, 19*(2), 259-282. http://www.jstor.org/stable/3586829

Plutchick, R. (2003). *Emotions and life: Perspectives form psychology, biology, and evolution*. American Psychological Association.

Provine, R. R., Spencer, R., & Mandell, D. (2007). Emotional expression online: Emoticons punctuate website text messages. *Jounal of Language and Social Psychology, 26*(3), 299-307.

Qi, G. Y., & Wang, Y. (2018). Investigating the building of a WeChat-based community of practice for language teachers' professional development. *Innovation in Language Learning and Teaching, 12*(1), 72-88. https://doi.org/10.1080/17501229.2018.1418635

Rezabek, L., & Cochenour, J. (1998). Visual cues in computer-mediated communication: Supplementing text with emoticons. *Journal of Visual Literacy, 18*(2), 201-215. https://doi.org/10.1080/23796529.1998.11674539

Rossignol, J. (2015). *What you need to know about iOS Mmalware XcodeGhost*. Retrieved 12 October from https://www.macrumors.com/2015/09/20/xcodeghost-chinese-malware-faq/

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (1999). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education, 14*(2), 50-71.

Schauer, G. (2009). *Interlanguage pragmatics development: The study abroad context*. Continuum.

Scherr, S. A., Polst, S., Müller, L., Holl, K., & Elberzhager, F. (2019). The perception of emojis for analyzing app feedback. *International Journal of Interactive Mobile Technologies, 13*(2), 19-36. Retrieved 24 February, 2019, from https://online-journals.org/index.php/i-jim/article/view/8492/5478

Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge University Press.

Searle, J. R. (1979). *Expression and meaning: Studies in the theory of speech acts*. Cambridge University Press.

Segalin, C., Celli, F., Polonio, L., Kosinski, M., Stillwell, D., Sebe, N., Cristani, M., & Lepri, B. (2017). *What your Facebook profile picture reveals about your personality* The 2017

ACM on Multimedia Conference, Mountain View, CA, USA. https://doi.org/10.1145/3123266.3123331

Sharples, M. (2009). Methods for evaluating mobile learning. In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and research designs* (pp. 17-39).

Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers & Education, 52*(3), 543-553. https://doi.org/10.1016/j.compedu.2008.10.007

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunication*. Wiley.

Steinmetz, K. (2015, 16 November, 2015). *Oxford's 2015 Word of the Year Is This Emoji*. Retrieved 1 August from http://time.com/4114886/oxford-word-of-the-year-2015-emoji/

Sun, L. (2011). 话语标记"不好意思"的历时演变及功能 [The Diachronic Evolution and Function of Discourse Marker "Buhaoyisi"]. *Language and Translation*(4), 22-25.

Sung, K. Y., & Poole, F. (2017). Investigating the use of a smartphone social networking application on language learning. *JALT CALL Journal, 13*(2), 97-115.

Swan, K., Richardson, J. C., Ice, P., Garrison, D. R., Cleveland-Innes, M., & Arbaugh, J. B. (2008). Validating a measurement tool of presence in online communities of inquiry. *E-mentor, 2*(24), 1-12. Retrieved 17 July, 2018, from http://www.e-mentor.edu.pl/_xml/wydania/24/543.pdf

Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks, 9*(3), 115-136.

SwiftKey. (2015). *SwiftKey Emoji Report*. https://www.scribd.com/doc/262594751/SwiftKey-Emoji-Report

SwiftKey. (2016). *The linguistic secrets found in billions of emoji -SXSW 2016 presentation*. Retrieved 29 July from https://www.slideshare.net/SwiftKey/the-linguistic-secrets-found-in-billions-of-emoji-sxsw-2016-presentation-59956212

Thomas, J. (1983). Cross-cultural pragmatic failure. *Applied Linguistics, 4*(2), 91-112. https://doi-org.ez.library.latrobe.edu.au/10.1093/applin/4.2.91

Thorne, S. L. (1999). *An activity theoretical analysis of foreign language electronic discourse* [Unpublished doctoral thesis, University of California, Berkeley].

Ting-Toomey, S., Gao, G., Trubisky, P., Yang, Z., Kim, H. S., Lin, S. L., & Nishida, T. (1991). Culture, face maintenance, and styles of handling interpersonal conflict: A study in five cultures *International Journal of Conflict Management 2*(4), 275–296. https://doi.org/https://doi.org/10.1108/eb022702

Tossell, C. C., Kortum, P., Shepard, C., Barg-Walkow, L. H., Rahmati, A., & Zhong, L. (2012). A longitudinal study of emoticon use in text messaging from smartphones. *Computers in Human Behavior, 28*, 659-663. https://doi.org/10.1016/j.chb.2011.11.012

Trager, G. L. (1958). Paralanguage: A first approximation. *Studies in Linguistics, 13*, 1-11.

Traxler, J. (2010). Sustaining mobile leanring and its institutions. *International Joural of Mobile and Blended Learning, 2*(4), 58-65.

Trinder, J., Roy, S., & Magill, J. (2009). Using automatic logging to collect information on mobile device usage for learning. In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and research designs* (pp. 241-256).

Tu, C. H. (2000). On-line learning migration: From social learning theory to social presence theory in CMC environment. *Journal of network and computer applications, 23*(1), 27-37, Article jnca.2000.0099. http://www.idealibrary.com

Tu, C. H., & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *The American Journal of Distance Education, 16*(3), 131-150.

Utz, S. (2000). Social information processing in MUDs: The development of friendships i virtual worlds. *Journal of Online Behavior, 1*(1).

Van't Hooft, M. (2009). Researching informal and mobile learning: Leveraging the right resources. In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and researh designs* (pp. 169-180).

Vandergriff, I. (2013). Emotive communication online: A contextual analysis of computer-mediated communication (CMC) cues. *Journal of Pragmatics, 51*, 1-12. https://doi.org/http://dx.doi.org/10.1016/j.pragma.2013.02.008

Vandergriff, I. (2016). *Second-language discourse in the digital world: Linguistic and social practices in and beyond the networked classroom* John Benjamins Publishing Company.

Vavoula, G. (2009). Issues and requirements for mobile leanring research. In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and research designs* (pp. 339-349).

Wali, E., Oliver, M., & Winters, N. (2009). Aye they doing what they think they're doing? Tracking and triangulating students' learning activities and self reports. In G. Vavoula, N. Pachler, & A. Kukulska-Hulme (Eds.), *Researching mobile learning: Frameworks, tools and research designs* (pp. 317-335).

Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (pp. 529-563). Sage.

Walther, J. B., Slovacek, C. L., & Tidwell, L. C. (2001). Is a picture worth a thousand words?Photographic images in long-term and short-term computer-mediated communication. *Communicaiton Research, 28*(1), 105-134.

Wang, Y., Fang, W.-C., Han, J., & Chen, N.-S. (2016). Exploring the affordances of WeChat for facilitating teaching, social and cognitive presence in semi-synchronous language exchange *Australian Journal of Educational Technology, 32*(4), 18-37.

Wang, Z. (2015). Effects of Using WeChat in an Experimental CFL Program. *Open Education*

Research, 21(2), 113-119.

Wen, Y. (2019). *Computer-supported collaborative Chinese second language learning: Beyond brainstorming*. Springer.

Wu, J. G., & Miller, L. (2021). Raising native cultural awareness through WeChat: a case study with Chinese EFL students. *Computer Assisted Language Learning*(4), 552-582. https://doi.org/10.1080/09588221.2019.1629962

Wu, Y. C. J., Chang, W. H., & Yuan, C. H. (2015). Do Facebook profile pictures reflect user's personality? *Computers in Human Behavior, 51*, 880-889. https://doi.org/10.1016/j.chb.2014.11.014

Xu, Q., & Peng, H. (2017). Investigating mobile-assisted oral feedback in teaching Chinese as a second language. *Computer Assisted Language Learning, 30*(3-4), 173-182. https://doi.org/10.1080/09588221.2017.1297836

Xue, S., & Churchill, D. (2019). A review of empirical studies of affordances and development of a framework for educational adoption of mobile social media. *Educational Technology Research and Development, 67*(5), 1231-1257. https://doi.org/10.1007/s11423-019-09679-y

Xue, Y. (2017). *Understanding relationship building in learning Chinese as an additional language on WeChat: Resolving methodological challenges* 7th Annual International Conference on Education and e-Learning (EeL) Proceedings, Singapore.

Yi, M. (2005). 交际心态与谦敬用语—兼谈"对不起"被"不好意思"替代 [Psychology of communication and humble words: About "Duibuqi" Replaced by "Buhaoyisi"]. *Applied Linguistics*(2), 93-96.

Zeng, M. J. (2017). *Thinking of taking up WeChat? Here's what you need to know*. Retrieved 18 January from https://theconversation.com/thinking-of-taking-up-wechat-heres-what-you-need-to-know-88787

Zhang, Z. (1984). 谈汉语个别教学及其教材. *语言教学与研究 [Language Teaching and Linguistic Studies]*(3), 57-67.

Zhao, J. (2006). 从对外汉语教学到汉语国际推广. In Q. Li (Ed.), *对外汉语教学学科理论研究* (pp. 1-38). Commercial Press.