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# Intermediate-Level Chinese Language Learners' Social Communication in Chinese on Facebook: A Mixed Methods Study

Shenggao Wang

*University of South Florida, swang5@mail.usf.edu*

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Intermediate-Level Chinese Language Learners' Social Communication in Chinese  
on Facebook: A Mixed Methods Study

by

Shenggao Wang

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Secondary Education  
College of Education  
and  
Department of World Languages  
College of Arts & Sciences  
University of South Florida

Major Professor: Camilla Vasquez, Ph.D.  
Wei Zhu, Ph.D.  
Eric Shepherd, Ph.D.  
Glenn Smith, Ph.D.

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## **Abstract**

With Facebook widely embraced by college students, exploring its educational uses has piqued both educators' and researchers' interest (Mills, 2011; Reinhardt & Zander, 2011; Thorne, 2011). Drawing on a functional perspective of language use, this study explored what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook and whether conducting weekly social communication in Chinese on Facebook impacted their writing ability. A mixed methods design was adopted. A qualitative approach addressed discourse functions of student communication on Facebook. The qualitative data were mainly collected from nine students' Facebook posts during one semester. A quasi-experimental design was employed to examine whether there was any difference in the quantity and quality of the written texts produced by two groups (N=18) of intermediate-level Chinese language learners. Over the semester, students in the experimental (E) group wrote weekly comments and updates in Chinese on the designated Facebook group page, while students in the control (C) group did not post on the Facebook page. Three writing tasks were administered at the beginning, middle, and end of the semester. These tasks were brief essays which asked students to use Chinese to write about personal information, university life, future plans and goals.

Qualitative findings revealed that the participants used 22 types of discourse functions during their social communication on Facebook. The highest percentage of discourse function was *asking questions*. The next two frequently used discourse functions were *expressing opinions* and *describing events or activities unrelated to campus*. Other discourse functions listed among the top 10 were *sharing similar experiences or perspectives*, *expressing likes and dislikes*, *expressing wishes*, *making explanations* and *expressing thanks*. When asking questions, the participants mainly used Q-word or *Wh-* questions and polar questions during their communication and interaction. Alternative questions were seldom used. With regard to question functions, findings revealed that more than half of all the questions were asked to request information. Rhetorical questions were the least and rarely used. In addition, more than half of the total questions were not responded to. All these findings demonstrated that Facebook provided the students with an optional platform to practice situational and functional use of the target language.

Quantitative results revealed that there was a significant difference in writing quantity (i.e. the number of Chinese characters produced) between the two groups. While there was no significant difference between the two groups in the first writing task, the E group produced significantly more Chinese characters than the C group in the later writing tasks. In terms of the writing quality, results indicated that both groups showed an improvement from the first to the final task, but no significant differences were found between the two groups in all three writing tasks. In view that the small sample size might have some impact on the outcome of the participants' writing quality, the results are somewhat more promising in the area of quantity.

## **Chapter I Introduction**

### **Background of the Study**

During the past decade, web technology has experienced a remarkable shift from Web 1.0 to Web 2.0 technology. The major difference is that Web 1.0 only allows readers to browse information, but Web 2.0 technology grants users to generate information which makes the web more dynamic than before (Warschauer & Grimes, 2007). The shift of a linear flow of information towards social interaction and information sharing has made the current web revolutionary (Godwin-Jones, 2008). As Warschauer and Grimes (2007) point out, millions of people now use Web 2.0 technology to interact, collaborate, network, and entertain through blogs, wikis, social networking tools, and multiplayer games. Among tons of Web 2.0 technologies (Go2Web20, <http://www.go2web20.net>), social networking tools are particularly favored by people from all walks of life in the United States. A study conducted in 2010 showed that 73% of teens and young adults in the United States used social networking tools (Lenhart, Purcell, Smith, & Zickuhr, 2010).

Among different types of social networking tools, Facebook is currently the most popular one for American college students (ECAR, 2011; McBride, 2009), and it is the largest multilingual social networking site on the Internet (Grosbeck, Bran, & Tiru, 2011). Facebook was originally created for college students in 2004. Now, it has reached out far beyond educational settings and it is increasingly making a global impact (Facebook,

2012). According to Facebook statistics (Facebook, 2012), to date, it has more than 900 million monthly active users; over 75% of registered users are outside of the United States. It offers more than 70 languages that can be selected for use. Though Twitter, a micro-blogging service and a social networking tool as well, has also received popularity worldwide, college students in the U.S. who use Twitter are not as many as those who use Facebook (Johnson, 2011). A national study conducted by EDUCAUSE Center for Applied Research showed that 90% of undergraduate students used Facebook and only 37% used Twitter (ECAR, 2011). In the present study, only two students among the total 24 students were not using Facebook according to the pre-treatment survey. As for LinkedIn, it is a professional network mainly serving professionals from a variety of fields and industries (LinkedIn, <http://press.linkedin.com/about>). In view of the wide popularity of Facebook among college students, it would be logical to leverage the current college students' heavy reliance on this social networking platform in support of language learning (Godwin-Jones, 2008; Kabilan, Ahmad, & Abidin, 2010). Particularly, since Facebook can enhance communication and human interaction, this fundamental attribute can be potentially harnessed for language learning (Godwin-Jones, 2008). Applied linguists and second language (L2) educators have noted that social networking tools such as Facebook hold great potential for L2 pedagogy because the use of these tools is an everyday literacy practice for millions of people, which warrants its inclusion in L2 curricula (Blattner & Fiori, 2009; McBride, 2009; Reinhardt & Zander, 2011; Stevenson & Liu, 2010; Thorne & Reinhardt, 2008).

## **Rationale of the Study**

Regarding Facebook's educational value and potential, a number of studies have been conducted on college students' general use of Facebook and the application of Facebook for educational purposes (Grosbeck, et al., 2011; Madge, Meek, Wellens, & Hooley, 2009; Pempek, Yermolayeva, & Calvert, 2009). According to the findings of this research, college students enjoyed using Facebook as a means of making new friends and maintaining contact with old friends. Though using Facebook was part of their daily routines, many students spent more time browsing than actually posting updates. In addition, the findings showed that students used Facebook mainly for social interactions rather than for academic purposes. In terms of the educational use of Facebook, some studies have been conducted in investigating student perceptions of using Facebook for educational purposes (e.g. Kabilan, et al., 2010), student perceptions of instructor presence on Facebook (e.g., Mazer, Murphy, & Simonds, 2009), the impact of the instructor's self-disclosure on Facebook on student-teacher relationship and on student motivation (Aubry, 2009; Mazer, Murphy, & Simonds, 2007), the formation and maintenance of social capital (Ellison, Steinfield, & Lampe, 2007; Steinfield, Ellison, & Lampe, 2008), and privacy and ethical issues (Foulger, Ewbank, Kay, Popp, & Carter, 2009). Among all these studies, few of them have been conducted in the second or foreign language learning contexts. Therefore, it is necessary to explore how Facebook could be appropriately and effectively used to facilitate L2 learning<sup>1</sup>, and particularly whether Facebook could be used to improve L2 learners' writing ability. To date, little research has been conducted in this regard (Bloch, 2008; Kabilan, et al., 2010).

In addition, Chapelle (1997) claimed that research in computer-assisted language learning (CALL) should address two critical issues: (1) what kind of language the learner engages in during CALL activities and (2) how good the language experience is in CALL for L2 learning. In her subsequent work, Chapelle (2000) persistently underscored the significance of the study of language output in CALL research and suggested “that a meaningful definition of CALL activities requires descriptive research documenting the language and interactions that learners engage in during CALL use” (p. 222). Though more than a decade has passed, these issues are still relevant today. Since Chapelle’s (1997, 2000) call, some research has been undertaken to describe discourse functions and syntactic features of learner discourse in computer-mediated communication (CMC). Some of this research investigated the kind of discourse functions learners performed in the CMC context (Chun, 1994; Darhower, 2002), compared discourse functions of learner output between synchronous CMC discussions and face-to-face classroom discussions (Kern, 1995), and compared discourse functions of learner output in synchronous and asynchronous communication modes (Sotillo, 2000). Findings of these studies have demonstrated that CMC could provide learners with the opportunity to produce different kinds of discourse. However, the technology used in this research was either specialized learning software program embedded with synchronous communication functions such as *InterChange* or chat rooms in a learning management system such as WebCT. Compared with what the current students are actually using in technology, those communication media are far from their daily lives. To date, little empirical research has been undertaken to investigate what kinds of discourse foreign language learners perform when a social networking tool (i.e. Facebook) is used to facilitate their target language

learning in view that using social networking tools is almost a norm to the current college students, and so has been yet to examine whether functional use of the target language in this technological environment could impact learners' writing ability in the target language.

Moreover, although communicative language teaching approach (Nunan, 1987, 1989; Richards & Rodgers, 2001; Widdowson, 1990), task-based language teaching method (Nunan, 1989, 2004) and performance-based language pedagogy (Walker, 2010) are dominating the current L2 classroom teaching, not every student can receive the equal time and opportunity to practice using the target language in limited class hours. More active and more capable students are often at an advantage than those shy and less capable students in various communicative activities in the classroom. In a CMC context, however, language learners can be provided with equal opportunities to have direct interaction with both the teacher and other learners (Warschauer, 1996). All language learners have freedom to initiate discussion and to control discussion topics. In addition, in the field of second language acquisition (SLA), prior research in both classroom and CMC settings has long predominantly examined highly-structured and tightly-controlled tasks as pedagogical interventions in which any aspect of L2 learning has been perceived as part of "serious business of language learning" (Belz, 2002). So far, the question of how free communication with the target language in a natural online setting affects opportunities for language acquisition, particularly for learning Chinese, has been rarely explored, despite the reported benefits of CMC use for language practice outside of the classroom. In other words, little research has examined whether a freer and less structured task (Lamy, 2007) in the CMC context, particularly when such a task happens

in an online social environment, could benefit students' language ability. In this study, learners of Chinese were encouraged to freely communicate personally relevant topics in Chinese on Facebook, and discourse functions of the students' free communication in Chinese were explored. By "free" in all the above mentioned, it mainly means the topics students would like to communicate were determined by the students themselves. In addition, "free" also means there was no time and space constraints, no anxiety from their own and no pressure from their peers and the instructor.

Additionally, in the field of CALL, research is still dominated by investigations of just a few target languages: English, Spanish, French, and German. Considerably less research has been conducted on integrating educational technology into the less commonly taught languages such as Chinese as a Foreign Language (Felix, 2005, 2008; Wang & Vasquez, 2012; Zhao, 2003). The enrollments in Chinese language courses on US college campuses have been continuously increasing during the past 10 years. According to Modern Language Association (MLA) survey report (Furman, Goldberg, & Lusin, 2009), Chinese language learners on US college campuses increased 51% in 2006 (51,582 students) compared with 2002 (34,153 students), and the increase continued with 18.2% from 2006 (51,582 students) to 2009 (60,976 students). Therefore, more research is needed to guide teaching practices in order to better serve and meet the needs of the increasing number of Chinese language learners in the American educational contexts.

### **Theoretical Foundations**

This study is mainly grounded in two strands of theoretical knowledge: Halliday's functional perspective of language and learner-centered approach to the use of



technology. This section elaborates how this theoretical knowledge relates to the key concepts and constructs of this study.

**Functional perspective of language.** Halliday's (1978) systemic functional linguistics (SFL) theory was chosen as the theoretical foundation for this study. SFL sees language as a system of meanings and as a resource for people to choose to use in situations. In this theory, each element of language is explained by reference to its function in the total linguistic system (Halliday, 1993). The function of language is viewed as central, namely, what people do with language and how language mediates meaning (Young, 2008). This functional perspective of language is often compared with a structural view of language, which is formal and rule-oriented. The differences between these two views of language have been elaborated by Halliday and Martin (1993) as follows: "SFL is oriented to the description of language as a resource of meaning rather than a system of rules .... SFL is concerned with texts, rather than sentences, as the basic unit through which meaning is negotiated ... SFL focuses on ... relations between texts and social contexts rather than on texts as decontextualized structural entities in their own right (p. 22)". That is to say, systemic functional linguistics considers how people use language as a resource for making meaning in social contexts, rather than as a set of rules in decontextualized situations (Halliday & Martin, 1993). Eggins (2004) summarizes SFL theoretical claims about language as "1) language use is functional; 2) the function of language is to make meanings; 3) these meanings are influenced by the social and cultural context in which they are exchanged; and 4) the process of using language is a process of making meaning by choosing" (p. 2).

In view that language use is functional, learning a second language is then learning how to function with the target language in specific situations (Kramersch, 1986). Therefore, the goal of second language teaching, to a certain degree, is to enable students to take part in the “normal give-and-take of target language conversation” (Kramersch, 1986, p. 366). This “give-and-take” interaction involves functional uses of the target language in cultural contexts, such as making suggestions, agreeing, disagreeing, asking for information, etc. Because successfully and appropriately performing these functions involves fairly complex processes, which necessitate grammatical as well as sociocultural and sociolinguistic knowledge (Cohen, 1996; Koester, 2002), this study is concerned with the linguistic realization of different discourse functions.

In alignment with the functional view of language and language learning, this study explores the discourse functions of intermediate learners’ language used on Facebook during their social communication in Chinese. Facebook in this study was used to provide students with a familiar technological platform to practice using Chinese language for “authentic”<sup>2</sup> communication in view that Facebook is already a major part of current college students’ lives (though students who are learning a second language seldom use the target language to communicate with their friends in their Facebook routines). Students conducted social communication in Chinese on a class Facebook group page.

**Learner-centered approach to the use of technology.** In addition to systemic functional linguistics, a learner-centered approach to the use of technology also provides a conceptual basis for this study. The learner-centered approach focuses on how to use technology to promote student learning, and the major questions in this approach concern

how to adapt technologies as aids to human learning (Mayer, 2005). The learner-centered approach to the use of technology is typically distinguished with the technology-centered approach which mainly focuses on the power of state-of-the-art technology, and the major questions in the technology-centered approach concern the accessibility of technology for students and in classrooms (Mayer, 2005). Regarding the effect of technology on student learning, a debate has long existed with one side arguing that technology per se has little or no effect on learning and the other side arguing that certain technologies afford unique instructional opportunities that can promote learning (Kern, 2006; Mayer, 2005). Nevertheless, both sides agree that it is not the technology that results in learning but rather how the technology is used that leads to learning (Kern, 2006; Mayer, 2005). These concepts also apply to the use of Facebook for student learning. Facebook is fundamentally used for social interaction. Facebook itself does not provide students with any language learning resources or language learning aids. However, when Facebook is adopted for language learners to practice using the target language, it can “bring a popular out-of-school literacy practice into a schooled space” (Reid, 2011, p. 60) in view that Facebook has already been part of the current college students’ lives. In this “schooled space”, students could build or further enhance relationships, communicate with each other through sharing experiences, congratulating each other’s achievements, extending birthday wishes, exchanging feelings and information, and talking about their studies, assignments, and tests (Reid, 2011). When all these social interactions are conducted in the target language, they can offer language learners situational contexts to apply what have been learned in the language classroom. Consequently, language learning may take place in outside-classroom applications.

Researchers in this area, therefore, call for more research to be conducted in order to better understand how various technology-supported instructional methods affect learning outcomes.

### **Purpose of the Study**

The purpose of this study was twofold. First, it was intended to explore what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook, and how they interacted with each other through asking questions in particular. Second, it was aimed to examine whether regularly functional use of the target language (Chinese) on Facebook impacted students' writing ability. A mixed methods design was adopted. A qualitative analysis addressed discourse functions of student communication on Facebook. A quasi-experimental design was employed to compare whether there was significant difference in quantity and quality of writing texts produced by two groups of students. The majority of technology-related research in language learning has been focused on the learners' perceptions (Felix, 2005, 2008). Not much research has examined the effectiveness of the use of technology by using a comparison or control group (e.g. del Puerto & Gamboa, 2009; Felix, 2005, 2008; Levy, 2002). For these purposes, the following research questions guided the current study.

### **Research Questions**

1. What kind of discourse do intermediate-level Chinese language learners use when they conduct social communication in Chinese on Facebook?

- 1.1 What kind of discourse functions do intermediate-level Chinese language learners perform when they conduct social communication in Chinese on Facebook? What is the distribution of those discourse functions?
- 1.2 What type of questions do intermediate-level Chinese language learners use during their social communication? What kind of functions do different types of questions perform? How are different types of questions and their functions distributed? To what extent are those questions answered by other students?
- 1.3 What are the characteristics of those questions that the learners posed most?
2. Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability?
  - 2.1 Is there any difference in quantity of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?
  - 2.2 Is there any difference in quality of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?

### **Significance of the Study**

This mixed methods study is considered to be a meaningful endeavor for the following reasons. First and foremost, using Facebook is already a part of most U.S. college students' daily lives. However, few empirical studies have been conducted to investigate how to best utilize Facebook to facilitate second language learning. This study attempts to make such a contribution. Second, past research on discourse functions either looked at language functions students performed in the traditional CMC context, such as

adopting specialized learning software, or compared the language functions in the CMC context with those in the face-to-face context. Compared with what the current college students are actually using in technology, those communication media are far from the students' daily lives. In view that using social networking tools is almost a norm to most of the current college students, this study explored learner language functions on one social networking tool—Facebook—where students communicated and interacted with each other after class. Third, the quasi-experimental section of this study examined the effect of free posting and free interaction on Facebook on L2 learners' writing ability. A plethora of studies have been conducted on examining the effectiveness of CALL on second language learning. However, many studies which claimed to have investigated the effectiveness of using a type of technology based their findings solely on surveys of student perceptions (Felix, 2005, 2008). Experimental studies are needed to add knowledge to our understanding of pedagogical use of social media. Particularly limited knowledge exists whether online written communication practices in the target language could be transferred to improvement of the writing ability in the target language. Furthermore, almost no empirical studies have examined whether a freer and less structured communication task (Lamy, 2007) could benefit students' writing ability. In the field of second language acquisition (SLA), prior studies in both classroom and CMC settings have long predominantly examined carefully-structured and well-controlled tasks or activities as pedagogical interventions in which any aspect of L2 learning has been perceived as part of "serious business of language learning" (Belz, 2002). In this study, the researcher attempted to investigate whether a freer and less structured communicative task was conducive to the improvement of L2 writing ability. In a social space like

Facebook, it might not be suitable to add constraints to students' expressions when it is adopted for pedagogical purposes. As Thorne (2003) suggests, language educators should choose the right technological tool for the right job when they consider integrating technology into the language learning process. Therefore, a free communicative task would be a fit to a free and open social space. In addition, this study will make a contribution to research on Chinese as a foreign language (CFL). Though enrollments into Chinese language courses are growing quickly with the increase of China's influence in the current world, research on CFL, however, is still underrepresented in the United States when compared with research on more commonly taught languages such as English, Spanish, French, and German. Particularly, there is a scarcity of empirical research on computer-assisted L2 Chinese learning (Felix, 2008; Liao, 2010; Zhao, 2003).

## **Chapter II Literature Review**

In this section, I review the relevant literature that is closely related to the issues in this study. This focused literature review has been synthesized and organized into six themes: a) social communication and second language learning, b) discourse functions of learners' language in the CMC context, c) application of Facebook in the language learning contexts, d) language features in CMC and transferability of CMC to language proficiency, e) computer-assisted L2 writing and writing performance, and f) CALL research on learning Chinese as a foreign language.

### **Social Communication and Second Language Learning**

In the discipline of education, Rourke and Anderson (2002) defined social communication in the CMC context as social expressions such as expressing emotions, expressing appreciation, complimenting, self-disclosure, addressing others by name, using humor, salutations, etc. This definition was contextualized in their research which explored the relationship between asynchronous, text-based forms of social communication and students' perceptions of the social climate of computer conferencing. According to Rourke and Anderson (2002), those social expressions were indispensable in setting up a supporting and cooperative environment which facilitated higher-order learning in a community of inquiry. Based on the observations of what students communicated with each other on Facebook in a pilot study, I noticed that most of



students' communication on Facebook was predominantly a type of phatic communion which can be characterized as a type of language used in free, aimless, and social interactions in order to create group cohesion (Coupland, Coupland, & Robinson, 1992; Malinowski, 1972). Combining Rourke and Anderson's (2002) conceptualization of social communication and the definition of phatic communion, I operationalize social communication in this study as communication conducted by college language learners in the target language through engaging in self-disclosure, maintaining and promoting interpersonal relationships, building and reinforcing rapport and trust, and sharing any information among them in a social group on Facebook.

To date, not many studies have been conducted on social communication with phatic communion as a focus in language learning contexts (Holmes, 2000; Luk, 2004; Tharp-Wiesauer, 2002). Among the existing studies, some of them were conducted at work places or in social settings and some in second or foreign language classrooms. For example, Holmes' (2000) study was conducted in a variety of workplaces in New Zealand in order to identify potentially problematic areas for English-to-speakers-of-other-languages (ESOL) learners. In the study, Holmes (2000) analyzed the features of effective interpersonal communication and discussed the topics as well as distribution of phatic communion, social and strategic functions of phatic communion in the work place. Holmes' (2000) descriptive study provided L2 learners with valuable knowledge about the appropriate use of phatic communion. Similarly, Tharp-Wiesauer's (2002) thesis study was implemented in an Austrian company in Los Angeles where he analyzed the language needs of a group of Austrian technicians. Based on the findings of the needs analysis, Tharp-Wiesauer (2002) developed a curriculum focusing on social

communication, phatic communion in particular, for English-for-Specific-Purpose (ESP) learners. Tharp-Wiesauer (2002) argued that for language learners, lessons in the target language's phatic discourse could be immediately rewarding. Unlike Holmes (2000) and Tharp-Wiesauer (2002) who focused on phatic communion at work places, Nemoto (2007) investigated a study-abroad program in Japan and the setting of the study was Japanese host families. In the study, Nemoto (2007) reported that Japanese-as-a-foreign-language (JFL) learners perceived phatic communion to be more important than transactional communication, such as ordering in a restaurant and shopping at stores. Nemoto (2007) found that the ability to participate in phatic communion had a real-life consequence in how JFL learners maintained a good relationship with their host families.

Different from the aforementioned researchers who were interested in phatic communion in work places and in social settings, Luke (2004) and Iwai (2010) conducted their research in traditional settings—second or foreign language classrooms. In an exploratory case study, Luke (2004) investigated the value of small talk, a type of phatic communion, between a native English-speaking teacher and her Cantonese-speaking students in an ESL classroom and demonstrated how conventionally marginalized classroom small talk could be conducive to the ability of communicative competence of L2 learners. In the study, Luke (2004) advocated that language teachers should not exclude non-task-related talk simply for following the syllabus and completing the textbook content. She contended that meaningful communication with the target language was the most important no matter whether the talk was phatic or non-phatic, small or large. In addition, Iwai (2010) investigated the effects of explicit instruction of pragmatics on JFL learners' ability to engage in social interaction. In this dissertation

study, the researcher compared two groups of students. One group was provided with meta-pragmatic instruction about the definition of small talk and the organizational features of small talk including relevant resources, appropriate topics, and how interlocutors jointly conducted small talk. The other group mainly received grammar-focused instruction. Findings revealed that the activity-based, pragmatics-focused instruction facilitated student participation in small talk and social interaction; students were inclined to use small talk to effectively co-construct sociability, rapport, and identity in the interaction with native speakers.

In summary, as a component of social communication, phatic communion is an indispensable part of our everyday life. A goal of second language learners is to be able to actually use the target language to conduct such social communication as phatic communion with the target language speakers. In this study, Facebook, a type of “phatic technology” (Vetere, Howard, & Gibbs, 2005), was used for students to conduct phatic communication in Chinese as a supplement to classroom learning. According to Vetere, Howard and Gibbs (2005), phatic technologies refer to those technologies that are particularly designed to maintain social interactions although they can also be used for conveying information, and phatic technologies are mainly concerned with the users’ feelings of ongoing connectedness with people in their social circles. Therefore, I considered Facebook a type of phatic technology to current college students. By phatic communication, it means the purpose of communication was to maintain social contact and to strengthen social bonds; phatic communication occurred when comments were made about the weather, inquiries about health or affirmation of some obvious state of

the world (Vetere, Howard, & Gibbs, 2005). This definition was in alignment with what many college students were actually doing on Facebook.

### **Discourse Functions of Learners' Language in the CMC Context**

Researchers have long attended to language learners' production from the perspective of discourse functions. Previous research has demonstrated that CMC could provide learners with the opportunity to produce different kinds of discourse, which in turn facilitates their ability to apply a great variety of functions in different contexts as well as to play an active role in managing the discourse (Chun, 1994; Darhower, 2002; Kern, 1995; Sotillo, 2000). For example, in an exploratory case study, Chun (1994) investigated the first-year German learners' class discussions when using a real-time networking program on a LAN. Chun (1994) found that the first-year learners of German performed a wide range of discourse functions in synchronous CMC. She reported that the learners asked more questions of fellow students than the instructor; they gave feedback to others and requested clarification when they did not understand each other; and they ended conversations with appropriate leave-taking utterances. She argued that the learners generally took the initiative more than they did in the normal classroom. Therefore, Chun (1994) concluded that computer-assisted classroom discussion could provide students with the opportunity to acquire and practice more varied communicative proficiency than the face-to-face discussion.

In a descriptive study, Kern (1995) compared the quantity and characteristics of the discourse produced by two groups of second-semester French learners during a synchronous CMC session and during an oral class discussion on the same topic. Kern

(1995) reported that students in the CMC group had over twice as many turns, produced two to four times more sentences, and used a much greater variety of discourse functions when working in a real-time networking program than students in face-to-face oral discussion group. In addition, the language produced by the CMC group had a greater level of morphosyntactic complexity than the language generated by students in face-to-face discussion. Kern (1995) inferred that although computer-mediated discussion could not be a substitute for normal classroom discussion, it did offer a powerful means of restructuring classroom dynamics and a useful environment for social use of language.

Similar to Kern (1995), Sotillo (2000) also conducted a study investigating the discourse functions and syntactic complexity of college-level English learners' language produced in the CMC context. Different from Kern's (1995) study which compared French learners' language production in synchronous CMC and face-to-face oral discussion, Sotillo (2000) compared two groups of ESL learners' language produced respectively in an asynchronous and synchronous CMC context in discussions of reading assignments. Results revealed that when students engaged in synchronous interaction, the quantity and types of discourse functions were similar to the types of interactional modifications found in face-to-face conversations, such as requesting personal information, flirting, making assertions, challenging classmates, and joking among themselves. But discourse functions in asynchronous discussion were more constrained than those found in synchronous discussions. In addition, students often deviated from the assigned topics and discussed issues concerning students themselves when they were engaged in synchronous communication. Regarding syntactic complexity, the delayed

nature of asynchronous discussions allowed learners to produce more syntactically complex language.

Different from the above reviewed studies which investigated language learners' discourse functions from a sociolinguistic perspective, Darhower (2002) looked at the interactional features of synchronous CMC in a Spanish language class from a sociocultural perspective. In this case study, Darhower (2002) divided the intermediate-level Spanish learners into four groups who conducted discussions about the assigned topics in four chat rooms afforded by Web CT. One of the major themes of interactional features that emerged from the learners' discussions was social cohesiveness including greetings and leave takings, use of humor, and sarcasm/insults. Darhower (2002) reported that these discourse functions, which Chun (1994) referred to as demonstration of "minimal sociolinguistic competence" (p. 22) enabling learners to handle everyday social encounters, were an important part of the chat discussions, and they allowed learners to share their feelings with each other and to demonstrate a sense of sociability. Similar to Sotillo's (2000) study, off-topic utterances occurred in every episode and almost in all chat room discussions in this study. After analyzing off-task discussions, Darhower (2002) reported that the chosen topics in off-task discussion were what learners found interesting and of immediate relevance to their lives.

In summary, existing research on discourse functions mainly focused on a comparison between learner output in computer-mediated synchronous discussions and learner output in face-to-face discussions or between learner output in synchronous and asynchronous communication modes. Research findings have demonstrated that CMC

could provide learners with the opportunity to produce different kinds of discourse. However, no studies have yet examined Chinese-as-a-foreign-language learners' discourse functions in a CMC or an online context. Furthermore, although there is limited evidence which suggests a possible relationship between the communicative proficiency demonstrated by the ability of functional uses of the target language and morphosyntactic complexity of written discourse, more research is needed to investigate whether students' functional uses of the target language impact their writing ability as a whole in the target language. In addition, an interesting finding revealed in these reviewed studies was that students would prefer to use the target language to discuss topics that were interesting and relevant to them. In alignment with this finding as well as fundamental social function that Facebook serves, students in this study were encouraged to communicate personally relevant topics with the target language.

### **Application of Facebook in Language Learning Contexts**

With social media and social networking environments being praised for their educational value and potential (Mills, 2011; Thorne, 2011), language researchers and educators have also been considering how these new environments and tools potentially support meaningful language use (Chapelle, 2007; Mills, 2011; Thorne, 2011). Though a number of studies have been conducted on college students' general use of Facebook and the application of Facebook for educational purposes in general educational contexts (e.g., Madge et al., 2009; Pempek et al., 2009), few studies have as yet been undertaken to investigate the adoption of Facebook to aid second language learning. A few examples include studies conducted by Aubry (2009), Blattner and Fiori (2009), Terantino (2013),

Kabilan et al. (2010), Medley (2010), Mills (2011), and Reinhardt and Zander (2011). These examples mainly fall into four categories: conceptual discussions, survey studies, empirical studies, and theses or dissertation studies. Conceptually, Blattner and Fiori (2009) discussed the promises of using Facebook in the language classroom. According to their observations, Blattner and Fiori (2009) suggested that Facebook group function could be used to build a new learning community or to let students join an existing one. They claim that language learners could hold meaningful interaction synchronously or asynchronously with native speakers on Facebook, which may help to facilitate the ability of socio-pragmatic awareness and cross-cultural understanding.

In terms of survey studies, Kabilan et al. (2010) found that Malaysian college students believed that Facebook could be utilized as an online environment to facilitate the learning of English. Most recently, Terantino (2013) compared foreign language faculty's and students' perceptions over using Facebook in foreign language courses. Findings revealed that foreign language students were more open to use Facebook for foreign language learning, but foreign language faculty were not convinced to implement such use because they had yet a more solid pedagogical foundation.

Regarding empirical studies, Mills (2011) conducted a qualitative study which explored how a Facebook project allowed intermediate-level students of French to gain information about French cultural products, how the students developed identities through the enhancement of the interpersonal, presentational, and interpretive modes of communication, and how the students developed relationships and established roles via their participation in the online francophone community. Findings showed that the



Facebook-supported global simulation community engaged the students in a French virtual context and afforded a variety of opportunities for interpretive, creative, and interpersonal engagement within a context that emphasized self-direction, ownership, and autonomy. In a mixed methods study, Shih (2011) investigated the effect of integrating Facebook and peer assessment into college English writing class instruction through a blended teaching approach, which was comprised of one-third of a semester of classroom instruction and two-thirds of the semester time in combining Facebook, peer assessment, and classroom instruction. The findings suggested that incorporating peer assessment using Facebook in learning English writing was interesting and effective for college-level English writing classes, and that students improved their English writing skills and knowledge not only from the in-class instruction but also from cooperative learning on Facebook. Since peer assessment was part of the investigation, it was hard to conclude to what extent Facebook contributed to the results. Therefore, Shih (2011) claimed that the Facebook integrated instruction significantly enhanced students' interest and motivation.

In the next category, Aubry (2009) conducted a quantitative dissertation study which investigated the effect of the instructor's self-disclosure on Facebook on students' motivation types, attitudes, and performance in an on-line French course. Results revealed that the instructor's social presence on Facebook significantly increased students' motivation, but there was no difference in overall attitudes toward the course and no difference in the learning performance. In a qualitative thesis study, Medley (2010) compared written communication discourse on Facebook among American students and international students from Asia. The author found that Asian students, different from their behaviors in a classroom, were more open and willing to discuss with

native peers in order to develop their language competence, and membership in a Facebook discourse community helped them to bridge cultural and linguistic differences. This finding indicates that students, who are not active or do not have opportunity to make contributions in the language classroom, may be willing to actively participate on Facebook when almost every member has an equal say if they would like to let their voices heard.

In summary, in the studies reviewed, students have used Facebook mainly for social interactions rather than for academic purposes. The instructor's self-disclosure on Facebook generally has positive impact on the student-teacher relationship and on student motivation. In the language learning context, results of survey studies revealed that students perceived Facebook as a positive online environment that could be utilized to facilitate language learning, but faculty in that study reported they were not pedagogically convinced. Empirical studies showed that a Facebook-supported community could afford a variety of opportunities for interpretive and creative language use, cultural exploration, and rapport building. Though results have been consistently reported that Facebook could help to increase students' motivation and interest in language learning, only one study reported perceptual improvement in student writing skills and writing knowledge after the use of Facebook. Different from the reviewed literature, this study looked at discourse functions of Chinese learners' language production on Facebook and investigated whether the learners' functional use of language on Facebook could transfer to improved writing ability through an experimental comparison study.

## **Language Features in CMC and Transferability of CMC to Language Proficiency**

Previous research has demonstrated that asynchronous CMC allows ample time for students to process input and output, to encode and decode messages, and to reflect upon and develop ideas; thus, CMC may help to improve learner interlanguage (Abrams, 2003; An & Frick, 2006; Kitade, 2008). Some researchers have reported that students produced more language in a given amount of time in the CMC context than in face-to-face communications (e.g., Beauvois, 1998; Kern, 1995). The language that students used in CMC exhibited lexically and syntactically more formal and complex than the language they produced in face-to-face discussions (Abrams, 2003; Payne & Whitney, 2002; Warschauer, 1996). In CMC, students used a larger variety of discourse functions to express more diverse communicative intents than in teacher-directed discourse (Abrams, 2001; Beauvois, 1998; Chun, 1994; Kern 1995). In addition, the language used in the CMC contexts displays some of the linguistic features associated with both written and spoken language, and it has been identified as a particular register of language (Beauvois, 1998; Davis & Brewer, 1997; Smith, 2003; Warschauer, 1999). Davis and Brewer (1997) described CMC discourse as “writing that reads like conversation”, and Beauvois (1998) called it “conversation in slow motion”. Crystal (2001) labeled this communication mode Netspeak – neither writing nor speech, but a functionally separate mode.

Though CMC language has demonstrated unique characteristics, some researchers have investigated the potential of a cross-modality transfer in L2 proficiency. One line of this research concerns the transferability of synchronous CMC to L2 speaking skills

(Abrams, 2003; Payne & Whitney, 2002; Payne & Ross, 2005; Satar & Özdener, 2008).

The other line of this research addresses the transferability of asynchronous CMC to L2 writing skills, which are not closely related to the present study (Armstrong & Retterer, 2008; Arnold, Ducate, & Kost, 2009; Ducate & Lomicka, 2008; Chen, 2006; Kessler, 2009; Lee, 2010; Mark & Coniam, 2008; Raith, 2009; Shang, 2007). In this line of research, researchers have investigated the effect of using a certain type of asynchronous CMC on local aspects of written texts that L2 learners produced, such as grammatical accuracy, syntactic complexity, pragmatic competence, and overall writing performance. However, little research in this regard has been undertaken in the context of Chinese as a foreign language. One related study is Liao's (2010) dissertation study, part of which investigated the impact of online text chat on third-year Chinese L2 learners' composition skills. In the study, Chinese L2 learners conducted five online-chat tasks. Upon completing each task, the learners immediately wrote a composition independently on the same topic that was discussed in each task. The results indicated that, compared with face-to-face conversation, the online text chat served as an effective medium to prepare L2 learners to use lexical items, syntactic structures, and ideas that they were able to incorporate into their subsequent compositions. Moreover, their compositions displayed high accuracy in character, lexical, and syntactic items, and tended to be longer than the compositions completed by the same students after the paired face-to-face conversations. This finding may suggest that the skills displayed in the written communication could be more easily transferred to the subsequent composition activity than those displayed in the oral communication. To further this line of research, the present study examined whether

the practice of asynchronous written communication on Facebook could translate into better improvement in writing ability in separate writing activities.

### **Computer-assisted L2 Writing and Writing Performance**

In the area of computer-assisted L2 writing, previous research mainly focused on the change in quantity or quality of the final product resulting from writing with computers compared with using pens and papers, or focused on the impact of peer feedback and peer collaboration in the writing process mediated by computers on the quantity or quality of the final product (Ferris & Hedgcock, 2005). Given the fact that on-line chatting, emailing, blogging, tweeting, and Facebook posting are enriching the formats and modes of communication in the current networked society, second language writing is no longer limited to essay writing (Warschauer, 2002). With the help of such technologies, students can instantly share their own thoughts and experiences through writing, and other students and the teacher can reflect and comment on the shared thoughts and experiences. Currently, college students are spending a good portion of time communicating with each other in electronic writing outside of the classroom (Keller, 2009). Yancey (2009), therefore, suggested that educators might better reach the needs of 21st century learners by introducing online writing into the classroom. In view that using social networking tools has become an important part of college students' lives and social networking sites provide new opportunities and incentives for personal writing, which requires use and development of language skills, the language educators should find means to link informal and recreational writing with formal and academic writing (Godwin-Jones, 2008). Some L2 researchers have argued that writing is essentially a

social act and that it is fundamental to make L2 writing an interactive social activity (e.g., Ferris & Hedgcock, 2005; Weissberg, 2006). In this social construction of language activity, language learners are also developing their writing skills through this personal and practical writing (Pennington, 2003; Warschauer, 2002).

In terms of how computer-assisted L2 writing has been researched, one category focuses on analysis of texts produced by L2 writers (Reichelt, 1999). A main purpose of this research was to investigate the effect of pedagogical treatment or task type on various aspects of written texts that L2 learners produced, such as grammatical accuracy, syntactic complexity, quantity of text, overall quality of text, and cohesion (Reichelt, 1999). The computer technologies used to support different writing tasks include email (e.g., Biesenbach-Lucas, Melonie, & Weasenforth, 2000; Chen, 2006; Shang, 2007), blogs (e.g., Armstrong & Retterer, 2008; Ducate & Lomicka, 2008; Raith, 2009), and wikis (e.g., Arnold, Ducate, & Kost, 2009; Kessler, 2009; Lee, 2010; Mark & Coniam, 2008). Among these studies, one of the most relevant to the current study is Armstrong and Retterer's (2008) study which examined the use of a blog in an intermediate level Spanish class and its effect upon students. The questions investigated were whether students wrote more using a blog than in a traditional course and whether the frequency of writing could improve overall language performance. Results revealed that students did write a significant amount and students made considerable improvement in their accuracy in the use of verbs. In addition, students who wrote blogs in the target language frequently felt more confident in their ability to write in the target language. However, the researchers acknowledged that because of the lack of a control group, it was unjustifiable to conclude a causal effect relationship. Another relevant study is conducted

by Mark and Coniam (2008) who investigated authentic and collaborative writing through the use of wikis by secondary ESL learners. One purpose of the study was to examine the effect of wiki-based collaborative writing on the finished product. The reported results were that students produced substantially more text in the final stage than at the beginning stage, and there was a considerable amount of expansion, reorganization and correction of ideas in the final product compared with earlier versions. The same limitation as Armstrong and Retterer's (2008) study is that there was no control group to make a comparison. Additionally, Ducate and Lomicka (2005) described a travel blog project in fourth semester French and second semester German university-level classes. The researchers suggested that when writing blogs, students may give their attention to both the contents and language forms, which might help upgrade their writing skills.

In terms of L2 Chinese writing, there are two major issues facing language learners: one is Chinese character writing, which has received the most attention (Zhang, 2009). But it was not the focus of this study. The other is composing in Chinese, which is what writing normally refers to in the field of second language acquisition and in this study as well. In order to develop Chinese language learners' composing skills, Kubler (2002) advocated a computer-assisted approach to Chinese composing. Kubler (2002) noted that computer-assisted approaches could accelerate the composing process "by allowing learners to focus on composition per se rather than on the production of individual characters" (Kubler, 2002, p.114). That is to say, when students put more attention to accurately writing the structure of each Chinese character, the flow of expressing their ideas might be hindered. Although what students composed on Facebook

mainly consisted of short pieces<sup>3</sup>, students composed their ideas and constructed meaning on a weekly basis to express themselves, and to communicate and interact with their peers. During the study, students used Chinese in a context where the focus was mainly on communication (Matsuda, 2003). Weissberg (2006) contends that L2 writing skills could “best be acquired by L2 learners when the writing is embedded in the dialogue of social interaction” (p. 2). Therefore, it is assumed that such short-piece writing as Facebook posts might help to improve L2 learners’ writing ability. Empirical research is needed to demonstrate such evidence (Armstrong, 2010). To date, no research has examined the impact of conducting social communication in Chinese on Facebook on intermediate-level Chinese language learners’ writing ability.

### **CALL Research on Learning Chinese as a Foreign Language**

In general, Chinese as a foreign language (CFL) has been under-represented in language learning and technology research (Felix, 2005; Wang & Vasquez, 2012; Zhao, 2003). Among a few published studies in this regard, we still can see a variety of perspectives of how different types of technologies have contributed to and facilitated different aspects of Chinese language learning<sup>4</sup>. For example, in a recent study, Cai and Zhu (2012) investigated the impact of integrating a short-term online learning community project into Chinese language learning on students’ motivation. Though the project provided the students with opportunities to interact with other CFL learners and it was reported that it promoted the students’ motivation, the study did not examine the effectiveness on student learning outcomes. Another related study was conducted by Xie (2002) who discussed using online chat to facilitate Chinese language teaching and



learning. Xie (2002) reported that the online chat promoted students' communication in Chinese and enhanced students' writing skills, but the report was based on the students' perceptions rather than on the result of experimental comparison. Other related studies investigated the impact of integrating CMC technologies into Chinese language learning on students' interactional skills and cultural knowledge (Chang, 2007; Jin & Erben, 2007; Wang, 2006). The majority of these studies have taken a qualitative approach. In spite of the growing interest in CALL and CFL in recent years, to the best of my knowledge, no research has been undertaken to explore the discourse functions of learners' Chinese language use on social media or to examine how social media such as Facebook could be used to assist CFL learners to develop their Chinese writing ability. Particularly, no experimental design has been adopted in the previous research.

### **Summary of the Literature Review**

Social communication is an indispensable part of our daily life. Research findings have demonstrated the importance of social communication to language learners because an essential goal of learning a second language for learners is to be able to actually use the language to conduct social communication. Secondly, findings of research on discourse functions have demonstrated that CMC could provide learners with the opportunity to produce different kinds of discourse. However, it is unclear whether functional use of the target language for authentic written communication could transfer to students' writing ability in the target language. So far, few studies, if any, have examined Chinese-as-a-foreign-language learners' discourse functions in a CMC or an online context. Thirdly, the findings of research about college students' general use of

Facebook showed that college students used Facebook mainly for social interactions rather than for academic purposes. In language learning contexts, empirical studies have demonstrated that a Facebook-supported learning community could afford various opportunities for authentic language use, cultural exploration, and rapport building; though results have been consistently reported that Facebook could help to increase students' motivation and interest in language learning, only one study reported perceptual improvement in student writing skills and writing knowledge after the use of Facebook. Therefore, we have limited knowledge to answer some fundamental questions, such as what kind of discourse language learners use on Facebook, whether writing updates and communicating with their peers in the target language on Facebook could enhance their writing ability. So far, the reported findings about language use in the CMC context appear to be promising in general, such as greater grammatical accuracy, increased syntactic complexity, increased writing fluency, and better overall writing performance. In addition, in the field of CALL, research on learning Chinese as a foreign language (CFL) is under represented. This study is intended to make such a contribution. The purpose of this study is to explore what kind of discourse intermediate-level Chinese language learners use when they conduct social communication in Chinese on Facebook and to examine whether conducting weekly social communication in Chinese on Facebook could impact their writing ability.

### **A Pilot Study**

**Background.** A pilot study was conducted in a Level II (Chinese III) class in the World Languages Department at a southeastern university in the US in the Fall semester

of 2010. The purpose of the pilot study was to investigate students' perceptions of integrating Facebook into Chinese language learning and their perceptions of conducting social communication on Facebook on their Chinese language learning. Twenty one students who were aged from 19 to 25 participated in the pilot study. In the study, all students were asked to post at least two entries and make at least four comments on their peers' post each week on a class Facebook group page. Like the students' regular Facebook routines, these students were not provided specific topics or guidelines about their Facebook posting. The students were told to post anything they would like to share with their classmates. One principal rule was that everything should be posted in Chinese. As a part of instructional activities in the course syllabus, all students were asked to participate. This activity covered 5% of the total grade. It was graded according to whether students had met the minimum number of entries and comments each week. The quality of the students' posts was not considered in the grading.

**Data collection and data analysis.** At the end of the semester, a survey was administered via emails. The survey was made up of two sections. One section was about students' demographic and background information and the other about their class Facebook experience which consisted of 10 questions (see Appendix I). All questions were written in English and students answered the questions in English as well. In addition, six students volunteered to be interviewed individually and all interviews were audio recorded. The interview questions were similar to the survey questions. The intent of the interview was to obtain more information about their experience of communication on Facebook. The answers to the survey questions and the transcribed interview were coded and all codes were organized into different themes.

**Major findings.** Students reported that they basically perceived Facebook to be an alternative tool to practice using Chinese. Ten out of fourteen students felt that Facebook provided them with a comfortable learning environment where there was no pressure in the use of Chinese, a learning environment where they were more willing to take risks in using Chinese and where they were not afraid of committing errors. Eleven out of fourteen students liked free posting and free writing. They indicated that it allowed them to communicate with each other about non-classroom topics in Chinese, which was normally limited in the regular classes. Thirteen of them also reported that they had the chance to communicate about topics that were interesting to them. In addition, all of the 14 respondents reported that they benefited from that activity one way or the other. The self-reported benefits included: the activity helped them to recognize more Chinese characters and build up their vocabulary; it increased their awareness of grammar and sentence structure; it facilitated their improvement in reading comprehension and writing ability; it increased their writing confidence; and it gave them a sense of accomplishment when they realized that sometimes they could express some complicated ideas in Chinese.

**Purpose of the present study.** Though the pilot study yielded positive findings in students' perceptions of integrating Facebook into Chinese language learning, this study was intended to move beyond merely surveying students' perceptions to examining the actual language output as well as the impact of conducting weekly social communication in Chinese on Facebook on the participants' writing ability. In addition, to echo Chapelle's (1997, 2000) call to study the kind of language that learners engage in during CALL activities, the present study aimed to explore language functions intermediate-

level Chinese language learners performed when they conducted social communication in Chinese on Facebook. According to Felix (2005, 2008), many studies claiming to have investigated the effectiveness of using a type of technology based their findings on surveys of student perceptions. Felix (2005, 2008) postulated that students' positive statements could not be meaningful without any forms of controlled comparison. Therefore, a quasi-experimental design was included in this study. The quantitative section was intended to examine whether conducting weekly social communication in Chinese on Facebook could impact the participants' writing ability. The following chapter introduces methodology of the present study.

### **Chapter III Methodology**

This chapter describes the design of the present study, setting, participants, qualitative data collection procedures, qualitative data analysis methods, quantitative data collection procedures, and quantitative data analysis methods. The purpose of this study was, on one hand, to explore what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook and how the learners interacted with each other through asking questions; on the other hand, it was aimed to examine whether conducting weekly social communication in Chinese on Facebook impacted students' writing ability. The following research questions were addressed within the context of the present study:

1. What kind of discourse do intermediate-level Chinese language learners use when they conduct social communication in Chinese on Facebook?
  - 1.1. What kind of discourse functions do intermediate-level Chinese language learners perform when they conduct social communication in Chinese on Facebook? What is the distribution of those discourse functions?
  - 1.2. What type of questions do intermediate-level Chinese language learners use during their social communication? What kind of functions do different types of questions perform? How are different types of questions and their functions distributed? To what extent are those questions answered by other students?

- 1.3. What are the characteristics of those questions that the learners posed most?
2. Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability?
  - 2.1. Is there any difference in quantity of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?
  - 2.2. Is there any difference in quality of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?

### **Research Design**

A concurrent mixed model design (Tashakkori & Teddlie, 2003)—a type of mixed methods—was adopted for the present study. According to Tashakkori and Teddlie (2003), a concurrent mixed model design is a multi-phase mixed design in which there are two relatively independent phases: one with qualitative questions, data collection and data analysis techniques, the other with quantitative questions, data collection and data analysis techniques. The two phases occur in the same time frame. In view that the two overarching research questions in the present study perceptually interconnected (functional use of the target language and the impact of such use on target language writing ability) and they require different data collection methods and different data analysis techniques, the concurrent mixed model design (Tashakkori & Teddlie, 2003) meets the need to address the two overarching research questions differently in the same study. In the present study, a qualitative approach was used to address the first

overarching research question: *What kind of discourse do intermediate-level Chinese language learners produce when they conduct social communication in Chinese on Facebook?* When addressing the second overarching research question: *Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability?* I employed a quasi-experimental design to examine whether there was any difference in the quantity and quality of the written texts produced by an experimental group who conducted weekly social communication in Chinese on Facebook and a control group who did not post on Facebook. A quasi-experimental design is one that is similar to an experimental design but lacks the key ingredient – random assignment or random selection of participants (Trochim, 2006). That is to say, the participants in the two groups in this study were not randomly assigned but rather, determined on a voluntary basis. The qualitative data and the quantitative data were collected in the same time period. The analysis of these two types of data was conducted independently.

## **Setting**

This study was conducted in the World Languages Department at a southeastern university in the US in the Spring semester of 2012. In the department, the Chinese language program offers four levels of language courses plus an undergraduate minor program in Chinese<sup>5</sup>. Each level of the course covers two semesters and is offered on a yearly basis. Courses at Level 1 consist of Modern Chinese I, which is offered every fall semester, and Modern Chinese II offered every Spring semester. Similarly, courses at Level 2 consist of Modern Chinese III, which is offered every fall semester, and Modern Chinese IV offered every Spring semester. Advanced Chinese Conversation I and II are



courses at Level 3, which are offered in the Fall and Spring respectively. Courses at Level 4 are respectively titled Networking, and Understanding and Misunderstanding in Chinese. Most students take Chinese not only for meeting a foreign language requirement, which can be fulfilled by taking two courses at Level 1, but also because they aspire to a future career related to China. Thus, most of the students typically have a high motivation for learning Chinese (likely attributed to the increasing influence of China in the world economy as well as other world affairs, e.g., Tsung, 2010).

The present study was carried out in Modern Chinese IV classes, which were at the upper Level 2. A total of 24 students were enrolled in two sections of classes (comprised of students who had studied Chinese for three consecutive semesters at the university and were in the fourth semester at the time of the study). Section 1 was made up of 16 students who attended a seven-weeks study abroad program in China in the summer of 2011, and Section 2 was made up of eight students who did not participate in that summer program. According to ACTFL Chinese Proficiency Guidelines (1987), all of these students were considered to be at the intermediate level, but Section 1 was at an intermediate high level and Section 2 at an intermediate low level. Two instructors co-taught the two classes in a collaborative way. They met the students in both classes on alternate days. One instructor was mainly in charge of listening and speaking and the other was primarily responsible for reading and writing. All class activities and course assignments were the same with the two classes. Like other foreign language courses at the university, Chinese classes met four times a week and each time for 50 minutes.

The Chinese language program at the university adopts a performance-based pedagogy. The fundamental ideas of this pedagogy are twofold: learning in cultural context and learning through performance (Walker, 2010; Shepherd, 2012). Learning in cultural context suggests that all of the classroom activities are embedded in contexts commonly encountered in China; learning through performance means that students learn Chinese by doing things with Chinese (Shepherd, 2012). The goal of this pedagogy is to train students to function autonomously in Chinese cultural contexts. The two Modern Chinese IV classes, where the present study was carried out, use an interactive DVD-based learning material—*Chinese: Communicating in the Culture, Performance Text Four*, which focuses on listening and speaking skills, two textbooks—*The Lady in the Painting* and *Traditional Chinese Tales*, which focus on Chinese reading, writing, and Chinese culture, and a Chinese movie—*Strange Friends* and the movie script, which focus on Chinese speaking and Chinese culture. The classes were generally taught with two types of methods: ACT and FACT (Shepherd, 2012). ACT classes were designed to elicit students' performance. These classes were conducted completely in Chinese and revolve around commonly encountered contexts in Chinese culture. When students encountered problems or questions, they tried first to negotiate the situation in Chinese. If students still did not understand, they were then able to raise their questions during FACT classes or after class. FACT classes were designed to fill in gaps and to help raise the level of the students' performance in subsequent ACT classes. Only in FACT classes could English be used and using Chinese is still prioritized in FACT classes. Students had opportunities to ask questions on usage, structure, or any other problems in the FACT classes. For example, a typical ACT performance class normally started with a core

dialogue serving as the fundamental unit around which class activities were designed. Students were responsible for preparing the dialog and associated drills before the class. In the class, students were first required to perform the dialogue conforming to the Chinese cultural norms in their behaviors, and then, students needed to apply the learned vocabulary, structures, patterns and appropriate cultural norms in a newly designed context which was similar to a real world situation. In a typical ACT reading class, students were normally required to narrate a story or part of the story one by one in their own words, to ask and answer questions in Chinese based on the content of the story, or to read the story aloud as a class. Sometimes, students were asked to perform segments of the story and to collectively narrate the story. Students were required to make full preparations before every class. The preparation included reading and knowing the content in each story and audio recording of their reading. A typical ACT movie class focused on learning to narrate in Chinese according to Chinese discourse norms. Students worked with the movie and its script scene by scene learning how to narrate the events in each scene first from a third person perspective and then from the perspectives of the participants in the scenes. Before class, students were asked to watch the assigned scene and to ensure that they understand all of the language involved and know how to use all of the vocabulary and structures used in the scene. A typical ACT writing class included writing paragraph-length summaries of story content. In summary, the performance-based pedagogy emphasizes the importance of culture in language learning and it puts language learning into cultural contexts. Likewise, students' target language use on Facebook is situational and the construction of meaning is often contextualized. This

online written language communication in situations is both an extension and a supplement to the oral language practice in simulated contexts in the classroom.

### **Participants**

Participants in the study were solicited from two sections of the Chinese IV classes with a total of 24 students. All 24 students volunteered to participate in the study and all of them signed the consent forms. Section 1 was made up of 16 students who attended the 2011 Summer Program in China. Among these 16 students, 11 were female and 5 were male. Section 2 consisted of eight students who did not attend that summer program. In this section, five of them were female and three were male. All participants were aged from 19 to 22. Around half of the participants were majoring in Business. The rest of participants were majoring in Biology, Anthropology, Public Relations, and International Studies respectively. Table 3.1 is the gender and section information of the participants in the study.

Table 3.1

*Gender and Section Information of the Participants in the Study*

Section	Female	Male	Total
Section 1	11	5	16
Section 2	5	3	8
Total	16	8	24

Among the total 24 participants, 12 students chose to participate in a Facebook-posting activity. More detailed information about this activity is introduced in the *Task* section. 10 of the 12 students were from Section 1 and two were from Section 2. Among these 12 students, 10 were female and 2 were male. Table 3.2 displays profiles of the 12 students who participated in the Facebook-posting activity. All the names in this table are pseudonyms. These 12 students contributed to the qualitative part of the study. In the remaining text, these 12 students are occasionally labeled the Facebook participants.

Table 3.2

*Profiles of the Participants in the Qualitative Section*

No.	Name	Gender	Academic Year	Class Section	Major
1	Andrew	M	Senior	001	Business
2	Pearl	F	Senior	001	Business
3	Crystal	F	Sophomore	001	Business
4	Diana	F	Senior	001	Biology
5	Zack	M	Junior	001	Anthropology
6	Maggie	F	Sophomore	001	Business
7	Britney	F	Junior	001	Business
8	Celina	F	Junior	001	Public Relations
9	Jane	F	Senior	001	Business
10	Malinda	F	Senior	001	International Studies
11	Becky	F	Sophomore	002	Anthropology
12	Kathy	F	Senior	002	Business

In the quasi-experimental design of the study, which was to investigate whether weekly social communication in Chinese on Facebook impacted the students' writing ability, two groups were used to examine the impact. The above-mentioned 12 students who chose to participate in the Facebook posting activity (explained in the *Task/Treatment* section) comprise the experimental group. The remaining 12 students who did not participate in the activity make up the control group. Each group included students from both sections of Chinese IV classes. Ultimately, three students were excluded from each group respectively, which means that the final number of participants in each group was nine students. Table 3.3 is the gender and class section composition of the participants in the experimental group and the control group.

Table 3.3

*Composition of the Participants in the E Group and the C Group*

Group	Gender		Class Section	
	Female	Male	Section 1	Section 2
The E Group (N=9)	8	1	7	2
The C Group (N=9)	4	5	6	3

*Note.* E = Experimental; C = Control

The reasons that three students from the 12 Facebook participants were excluded were that one student, Andrew, stopped writing posts after the first week and did not continue later on. Another student, Malinda, only occasionally participated in the Facebook-posting activity with considerably limited contributions to the Facebook group. The third student Diana was not included because she was an exceptional student<sup>6</sup>. On

one hand, Diana's Chinese proficiency was above all the other students in the two sections according to her performance in the final exam in the previous semester, in the midterm and final exams in the semester of the present study, in the regular class assignments, and in the classroom participation. On the other hand, Diana had spent extra time studying Chinese to prepare for the Chinese Bridge Competition held in Houston, Texas, which involved participants from colleges in the southern United States. The inclusion of Diana would make the experimental group at an advantage at the outset of the study. Therefore, Diana was not included in the experimental group during the quantitative analysis although she regularly contributed to the Facebook-posting activity.

Among the 12 students in the control group, three students were also not included in the quantitative portion of the study. One student dropped the class towards the end of the semester. Two students did not write posts on the class Facebook page, but they reported that they did use Chinese to communicate with their friends on other social media (Twitter and Google+) around one to two times every week in that semester. Because Twitter and Google+ are similar enough to Facebook, including these students may have confounded the results. Therefore, an equal number of students (9) made up the experimental group and the control group respectively.

### **Role of the Researcher**

Though I had previously worked as a teaching assistant in the Chinese language program at the university for a few semesters, I did not teach these Modern Chinese IV students during the study or at any time before the study. The class instructors introduced me to the students as a researcher at the beginning of the Spring semester of 2012 and I

observed each instructor's session twice in that semester. There were two purposes of the class observations. One was to experience how the two instructors normally taught the classes, how the students performed in the class, and how the students interacted with the instructors and with their peers. The other was to acquaint myself with the students and to attempt to build a good relationship with all of them.

During the Facebook posting activity, I primarily acted as a participant observer (Trochim, 2006). According to Trochim (2006), participant observation requires that the researcher become a participant in the context being observed. That is to say, I was both participating in the posting activity and observing the students' communication and interaction on Facebook during the study. As a participant, I periodically posted entries and commented on the participants' posts on the Facebook group like the Facebook participants. As an observer, I paid attention to the content of the students' communication and to the interaction between the participants. I also observed their language use. A major rationale was that the core value of Facebook was its social function. Members' participation and interaction were vital in a social group. In view that the total number of participants was small (24 students in total) and there were only 12 participants for the Facebook-posting activity, my participation would have served to trigger or motivate these students' participation and interaction. In addition to motivating them to participate in the activity, my participation could provide the students with standard language samples. However, this advantage mainly favored the participants in the experimental group, if they read my posts, while it put the participants in the control group at a disadvantage. Therefore, my participation may confound the results of the quasi-experimental design. In addition to acting as a participant observer, I occasionally



provided feedback to the linguistic mistakes of some posts in the first few weeks. The total feedback entries I made were 43, which means 43 student entries were provided feedback. This only covered six percent of the total 625 posts contributed by the participants. The reason for providing feedback was that those linguistic mistakes were typical and recurring. I was concerned that those students would habitually commit the same mistakes if they were not corrected. In view that the feedback was mainly given in the first few weeks and it covered only six percent of the total posts, I assumed this measure would not significantly affect the quantitative results.

My participation falls into three categories: posting updates like Example 3.1, responding to individual participants' entries like Example 3.2, and joining the participants' conversation like Example 3.3. Below are these three examples.

#### Example 3.1 Posting an update



**Shenggao Wang**

有兴趣的同学可以看一看北京国际电影节上的中国演员们。  
<http://www.wenxuecity.com/news/2012/04/23/1740130.html>



群星争艳北京电影节红毯 莫小棋  
[www.wenxuecity.com](http://www.wenxuecity.com)

2012年4月23日第二届北京国际电影节在北京开幕。众多明星亮相电影节红毯。图为杨颖、赵又廷。钟欣桐获朱时茂、余少群左右护花。吴奇隆牵手张静初。刘亦菲与邓超。莫小棋一袭蓝裙，胸前深V爆乳性感抢镜。莫小棋莫小棋莫小棋莫小棋莫小棋范冰冰与冯小刚范冰冰章子怡章子怡卡梅隆与妻子霍思燕与谢贤黄奕邓文迪翁虹钟丽缇周冬雨

Translation:

*Here is a link to Chinese actors and actresses on Beijing International Film Festival. If you are interested in it, you may have a look.*

### Example 3.2 Responding to a participant's entry



Translation:

Entry by a participant: *I am hoping for the semester to be over very soon.  
How about you?*

Me: *I think everyone has the same idea. Do you have any other exams after the Chinese final?*

### Example 3.3 Joining the conversation



Translation:

Entry by a participant: *I can't wait to return to Orland to see my family. I have been too busy this semester. I had no time driving there. After the semester, I will go home and stay there three days.*

Responded by another participant: *I have not seen much my family this semester.*

Me: *There are only two weeks left this semester. Two weeks later, you all can go home and fully enjoy the stay with your family. Keep up your work!*

When providing feedback to the students' linguistic mistakes, I mainly used three ways. One way was only providing explicit correction in a single follow-up comment like Example 3.4. The second way was first interacting with the student on the content in a follow-up comment and then restating the sentence with a starter *Here is the correct way*

in a separate follow-up comment like Example 3.5. Similar to the second way, another way was first interacting with the student on the content and then restating the sentence with a starter *Here is the correct way* in the same follow-up comment like Example 3.6. These three ways were randomly used and no preferences were given to a particular type of feedback. Altogether, 43 posts were provided feedback, which covered six percent of the total 625 posts that the participants made. Below are the examples of feedback.

#### Example 3.4 Explicit correction



你们的城市报道准备怎么样呢？我在更正我的第二的稿纸。  
Unlike · Comment · Unfollow Post · April 14 at 9:03pm

You like this.

**Shenggao Wang** “我正在修改我的第二稿”对了，“我在更正我的第二的稿纸”不对。  
April 14 at 11:35pm · Like

我还没准备我的城市（太原）报告演讲。很紧张  
April 15 at 10:56pm · Like

Translation:

Entry by a participant: *How did you prepare your city report? I am revising my second paper.*

Me: *“I am revising my second draft” is correct. “I am revising my second paper” is not correct.*

Responded by another participant: *I have yet to prepare my city (Taiyuan) report speech. I am nervous.*

#### Example 3.5 Interaction and restatement in separate follow-up comments



今一个人谁是喜剧演员给我一张纸。她明天从12:45到1:30有一个表演在学生中心（MSC Ballroom）。我跟她说话只一分钟，她好像很好笑。我想去看她的表演但是我最近很忙。。。.  
Like · Comment · Unfollow Post · April 17 at 8:48pm

（。。。我还要去。）  
April 17 at 8:48pm · Like

**Shenggao Wang** 看来你对喜剧很感兴趣，还是准备去看，是吗？  
April 17 at 10:28pm · Like

**Shenggao Wang** 应该这样说：今天，一个喜剧演员递给我一张宣传单。她明天从12:45到1:30在学生活动中心有一个表演。  
April 17 at 10:30pm · Like · 1

谢谢老师。哈哈。。对，我喜欢喜剧。)  
April 18 at 12:40pm · Like

Translation:

Entry by a participant: *Today, a person who is a comedian gave me a piece of paper. From 12:45 to 1:30 tomorrow, she will have a performance in the MSC Ballroom. I talked with her only for one minute. She was funny. I want to watch her performance, but I am too busy ... ..*

Entry by the same participant: *(... I still want to go ...)*

Me: *It seems that you are very interested in comedy. You still will go to watch it, will you?*

Me: *Here is the correct way: Today, a comedian gave me a flyer. She, **from 12:45 to 1:30 tomorrow in the MSC Ballroom**, will have a performance* (In Chinese, both time and place phrases appear earlier than the verbal phrase).

Comment by the same participant: *Thank you. Aha ... yes, I like comedy :)*

Example 3.6 Interaction and restatement in the same follow-up comment



Translation:

Entry by a participant: *I want to learn how to Fengshui my home. I want the home become both quiet and prosperous.*

Me: *People in Taiwan and Hong Kong believe in Fengshui. Most people in the mainland China do not believe in it. I have never believed in this.*

*Here is the correct way: I want to learn knowledge about Fengshui, and want to let the home become both quiet and prosperous.*

As a result, my contribution to that activity was 328 entries in total including entries of writing updates and comments for providing feedback. A total of 1,004 entries were contributed by all members of the Facebook group including all the participants, the advanced learners and the researcher. All the entries I contributed covered 32.7% of the total 1,004 entries. Therefore, I have to admit that my participation may have certain

counter-impact on the quantitative examination because I provided the Facebook participants with extra target language exposure. This extra target language exposure put the non-Facebook participants at a disadvantage (According to the post-activity survey, among the nine non-Facebook participants, four of them had never visited the class group page and five of them only occasionally visited the page). Thus, this exposure could be an intervening variable that might affect the quantitative results.

### **Task/Treatment**

The task for qualitative investigation in the present study was the Facebook posting activity. From the second week of the Spring semester of 2012, the Facebook participants were asked to post at least two entries and make at least four comments per week on the class Facebook group page created for this study. No specific topics were provided or suggested. Like their normal Facebook routines, the participants were told to post anything they liked on the designated group page, but the posts were to be in Chinese. The rationale is twofold. One is that Facebook itself is an open social space. Users have great freedom to share almost anything they would like. Another is that the researcher wanted to investigate whether weekly free social communication in Chinese on Facebook could transfer to the improvement of the students' Chinese writing ability. Previous research has demonstrated that asynchronous CMC in the target language could help students to produce grammatically accurate and syntactically complex sentences (e.g., Armstrong & Retterer, 2008; Arnold, Ducate, & Kost, 2009; Kessler, 2009; Lee, 2010; Mark & Coniam, 2008). But this research was conducted in the traditional CMC contexts and the investigated languages were commonly taught languages. In addition,

the recommended minimum numbers of entries and comments were based on the past experience in a pilot study, which found that too many required posts increased the participants' workload unduly and had a negative impact on participation. The purpose of asking the Facebook participants to post more comments than entries was to encourage students to interact with each other. In the field of second language acquisition, it is generally believed that learners can benefit from taking part in interaction because interaction can expose them to different kinds of developmentally beneficial opportunities, conditions, and processes, which include input, negotiation, output, feedback, and attention (Mackey & Goo, 2012).

Chapelle (2001) has developed a model for CALL evaluation based on criteria used in SLA research. Chapelle (2001) refers to six criteria for appropriateness of adopting technology to support language learning. These six criteria are: the language learning potential embedded in the task, the fitness of the task for a given group of learners, the opportunity for a focus on meaning, authenticity, a positive impact on the participants, and practicality. In this study, the Facebook posting activity met these criteria. For example, the language learning potential was that the students had to use their existing linguistic knowledge as well as all possible resources when they constructed their meaning; when they made comments, the students normally first read their peers' input, interpreted intended meaning of the input and then generated their output. Such situational use of the target language in an online social environment created countless opportunities for practices. During the situational practices of using the target language, language learning may occur, not to mention that the practice itself was a reinforcement of their learning. Secondly, this task fits Modern Chinese IV students who

were at an intermediate level and were expected to be able to communicate simple facts and ideas about “personal preferences, daily routines, everyday events, and other topics grounded in personal experiences” (ACTFL, 1987, p. 484) in a collection of sentences. Furthermore, Facebook was already a part of these participants’ daily lives. Thus, the activity was practical and feasible. Additionally, when teachers consider integrating technology into language learning, Thorne (2003) suggests that the most important thing for language educators is to examine its fitness into the learning process and to choose the right technological tool for the right job. In this study, the default social function of Facebook was maintained, the only difference being that the participants conducted social communication and social interaction in Chinese rather than in English.



Figure 3.1. The class Facebook group page.

The Facebook posting activity—the task for qualitative investigation—functioned as a treatment in the quasi-experimental design. The participants who experienced this treatment constitute the experimental group. The treatment was not implemented in the control group. Other than this Facebook posting activity, the control group and the experimental group received the same instruction from the two instructors and worked on the same course assignments throughout the semester. Figure 1 is a screen shot of the Facebook group page where the participants in the experimental group completed the activity.

### **Qualitative Methods**

In this concurrent mixed model research design, there are two relatively independent phases for the qualitative data collection and analysis as well as for the quantitative data collection and analysis. By “independent phases”, it means that the data collection for qualitative analysis and the data collection for quantitative analysis were implemented concurrently, but they did not influence each other. This section introduces how the first overarching research question—*What kind of discourse do intermediate-level Chinese language learners produce when they conduct social communication in Chinese on Facebook?*—has been addressed primarily in a qualitative approach. The information includes the type of data collected, data collection procedures, and data analysis.

**Procedures for qualitative data collection.** With the help of the two instructors, I introduced the Facebook activity and the research purpose to the Chinese IV (the 4<sup>th</sup> semester) students on the first day of the Spring semester in 2012. The students were told



that this activity was not a graded assignment and the participation was voluntary. I also told them that choosing not to participate did not affect their course grade. Paper-based consent forms were distributed to all students in the two classes. I asked the students to submit the signed consent forms to the teacher on the second or third day if they decided to participate. All 24 students submitted the signed consent forms. 12 of them agreed to participate in the activity. I invited these 12 volunteers to start posting updates from the second week on the class Facebook group I created.

In the first week when I administered the first writing task designed for the quantitative methods (to be introduced in the subsequent section), all students including the non-Facebook participants were briefly trained on how to use certain Chinese language input software, how to type Chinese characters, Chinese phrases and expressions more efficiently, and how to switch from simplified Chinese to traditional style of Chinese. These techniques could benefit all the students whenever they type Chinese with a computer or on a mobile device. Below are two screenshots showing how I instructed the students to generate characters through Chinese input software. Figure 3.2 shows how to type Chinese characters in a Word document through the installed Chinese

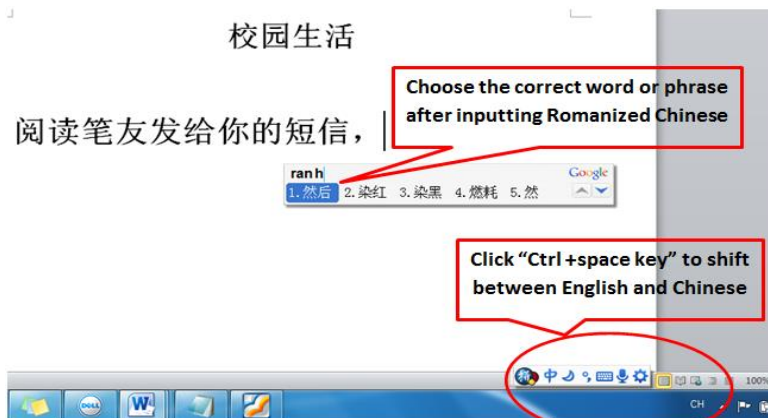


Figure 3.2. Generating Chinese characters through the installed Chinese input software.

input software in their own computers, and Figure 3.3 displays how to type Chinese characters through a multi-functional web site. The students can copy the generated Chinese characters from the website and pasted them onto a Word document.



Figure 3.3. Generating Chinese characters through a multi-functional web site.

From Week 2 to Week 16, the Facebook participants regularly posted updates and interacted with their peers through comments in Chinese on the class Facebook group page. As I mentioned in the Task section, no specific topics were provided or suggested. The participants posted anything that they felt interested in. Table 3.4 is the timeline for both qualitative and quantitative data collection.

In order to have more students join this designated group, I sent about 10 invitations to more advanced learners who were either still in the Chinese language program at the time of the study or had already graduated at that time. Six of them joined the group and participated in the activity as well. But their participation was mainly in the

first few weeks. The total contributions of these six advanced learners were 51 entries, covering 5% of the total (1,004 entries), and 1,427 characters, covering 10.5% of the total (13,563 characters). My intention for inviting those advanced learners was to increase the Facebook participants' motivation in the posting activity and to create

Table 3.4

*The Timeline for Qualitative and Quantitative Data Collection*

Week	Data collection for qualitative analysis	Data collection for quantitative analysis
Week 1		<ul style="list-style-type: none"> <li>• Introducing the research</li> <li>• Obtaining the informed consent forms</li> <li>• Training computing in Chinese</li> </ul>
	--Recruiting Facebook participants	--Administering the 1 <sup>st</sup> writing task --Conducting the pre-treatment survey
Week 2~9	--Facebook participants posting entries and comments	
Week 9		--Administering the 2 <sup>nd</sup> writing task
Week 10	SPRING BREAK	
Week 11~15	--Facebook participants posting entries and comments	
Week 16	--Retrieving all posts --Identifying posts containing questions	--Administering the 3 <sup>rd</sup> writing task --Conducting the post-treatment survey

opportunities for them to interact with the more advanced learners. According to my observation, the more advanced learners mainly interacted with themselves and interacted less with the Facebook participants during their limited time of participation. The

possible reason could be either that they all knew each other or their proficiency level was similar, or both.

In addition, I noted down every participant's contribution to this Facebook posting activity week by week. The records include how many entries each participant posted each week, how many Chinese characters each participant produced each week, and the average number of entries and Chinese characters contributed by all the participants each week. For example, Table 3.5 shows one participant's (i.e. Pearl)

Table 3.5

*A Record of Pearl's Contribution in the Activity in the Whole Semester*

Week	# of Entries	# of Comments	# of Characters
2	2	4	96
3	1	3	88
4	2	2	118
5	2	2	207
6	2	2	173
7	2	2	144
8	2	4	120
9	2	2	110
10		Spring break	
11	2	4	99
12	2	2	105
13	2	3	92
14	2	2	56
15	2	2	94
16	2	0	38
Total	27	34	1540

contribution in the Facebook posting activity throughout the whole semester. Pearl's contribution was above the average and she was a typical participant in the number of entries posted and in the number of Chinese characters produced. Table 3.6 is a record of the average number of weekly posts and characters per participant, not including the researcher's contribution. In order to avoid possible data loss and ensure the safety of all

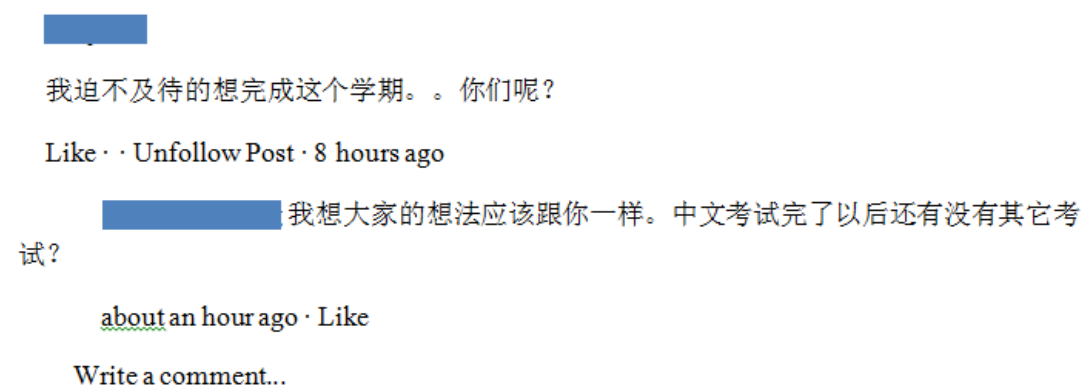
Table 3.6

*The Average Number of Weekly Posts and Characters per Participant*

Week	Average number of		
	Entries	Comments	Characters
2	2.8	3.3	111.8
3	2	3.2	88.7
4	1.6	3.1	91.3
5	2.2	3.6	121.5
6	1.8	3.9	145.8
7	1.6	2.3	84.6
8	2.2	2.7	100.4
9	1.2	1.3	66.6
10	Spring Break		
11	1.9	1.9	83.2
12	1.6	2	97.8
13	2.2	3.2	129.8
14	1.5	1.4	88.8
15	2	2.1	97.9

data, I saved all posts on the Facebook group page week by week and with different formats, such as Word files and Text files. At the end of that semester, I again saved all entries and comments posted on the Facebook group page in the whole semester in a Web page format, a Word format, and a Text format as well.

In summary, the primary data for answering the first overarching research question about what kind of discourse the participants used on Facebook were all entries and comments the participants posted on the class Facebook group page in that semester. Figure 3.4 below is an example of pre-sorted data saved in the Word document. Figure 3.5 is an example of sorted data saved in the Word document. In the sorted data, only names and posts were kept. All non-useful information below each entry was deleted. No entries posted by the invited advanced learners were included in the sorted data. My entries were not deleted in the sorted data, but they were excluded for analysis. These sorted data were then imported into ATLAS.ti. (6.2) software. How the sorted data were coded and analyzed to answer each sub-question is explained in the following section.



*Figure 3.4.* An example of pre-sorted data saved in the Word.

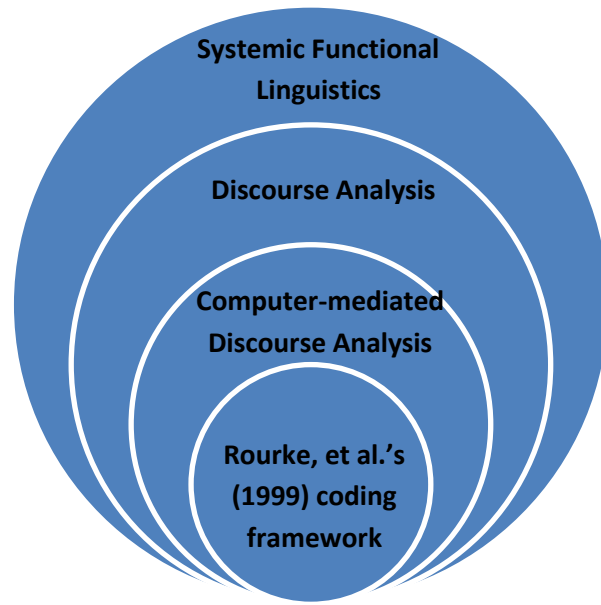
「  
[redacted] 我迫不及待的想完成这个学期。。你们呢？  
[redacted] 我想大家的想法应该跟你一样。中文考试完了以后还有没有其它考试？

Figure 3.5. An example of sorted data saved in the Word.

**Data analysis for answering the first sub-question.** Data used to answer the first sub-question— *What kind of discourse functions do intermediate-level Chinese language learners perform when they conduct social communication in Chinese on Facebook? What is the distribution of those discourse functions?*—were all entries and comments the Facebook participants generated. The computer-mediated discourse analysis (CMDA) approach was used to analyze these data. According to Herring (2004), CMDA is an approach to researching online behavior that is grounded in empirical and textual observations. The underlying principle of CMDA is linguistic discourse analysis, which is the analysis of language-in-use whether spoken or written (Gee, 2010). Language-focused content analysis is the basic methodological orientation of CMDA. The discourse analysis approach, or the CMDA approach in the present study, aligns with the broader theoretical concept—Halliday’s (1978) systemic functional linguistics (SFL) that grounds the present study. Seeing language as a resource of meaning, SFL is concerned with texts rather than sentences as the basic unit (Halliday & Martin, 1993). It focuses on relations between texts and social contexts rather than on texts as decontextualized structural entities in their own right (Halliday & Martin, 1993). Similarly, discourse analysis studies how sentences in spoken or written language form larger meaningful units such as paragraphs, conversations, etc. (Richards, Platt, & Platt, 1992). It pays attention to themes in messages and language function in communication (Gee, 2010). In addition, discourse analysis also addresses language use governed by

social and pragmatic patterns which frame the production and understanding of messages (Kern, 1995). Therefore, the discourse analysis approach and the specific CMDA approach in the present study are in alignment with Halliday's (1978) functional perspective of language. The Facebook posting activity in the present study was a meaning-focused activity. The target language use in an online social context was emphasized and the participants' discourse of language in social communication was analyzed. Based on these conceptions and the data from the pilot study, an operational coding scheme (see Table 3.2) was developed to code discourse functions in the entries and comments of the Facebook participants' social communication. In the operational coding scheme, some functions were adopted from Rourke, Anderson, Garrison, and Archer's (1999) coding framework, which was developed to assess social presence in asynchronous text-based computer conferencing in college online courses. Rourke, et al.'s (1999) coding framework was adopted because the research context of their study was similar to this study and many categories in Rourke, et al.'s (1999) coding framework corresponded with students' communication in the pilot study. In addition, Rourke, et al.'s (1999) coding framework was developed to assess social presence in the asynchronous text-based computer conferencing context where students projected themselves socially and emotionally through the use of language. The assessment of social presence involves both texts and the computer conferencing context, just as SFL is concerned with relations between texts and social contexts. Therefore, the relationship among SFL, discourse analysis, CDMA, and Rourke, et al.'s (1999) coding framework in the present study can be demonstrated with the following graph (see Figure 3.6).





*Figure 3.6.* The relationship among Systemic Functional Linguistics, Discourse Analysis, Computer-mediated Discourse Analysis (CMDA), and the adopted coding framework.

The adopted functions from Rourke, et al.'s (1999) coding framework include: expressing emotions, telling jokes or using humor, asking questions, complimenting or appreciating. In addition to these functions, additional functions—describing events related to campus, describing events unrelated to campus, sharing similar experiences or perspectives—were identified in the pilot study and were then added to the coding taxonomy. Furthermore, other functions that were frequently researched in pragmatics and discourse analytic research (e.g., Chun, 1994; Habil, 2010; Kern, 1995; Kırkgöz, 2010; Sotillo, 2000) were added to the coding scheme, such as giving advice, offering help, making requests, expressing thanks, delivering greetings, expressing wishes, expressing apology. All illustrative examples for each function shown in Table 3.7 were taken from the actual data in the present study. This coding scheme was used as an

analytical framework to code and analyze all entries and comments posted by the participants on the class Facebook group page.

Table 3.7

*A Coding Scheme for Discourse Functions in Social Communication on Facebook*

Functions	Examples
Expressing emotions	我爸爸今天来参观。我太高兴了！ My father comes to see me today. I am very happy.
Telling jokes or using humor	下个星我也有三个考试！现在我的家是图书馆！ I also have three exams next week. Right now, my home is a library.
Describing events related to campus (e.g., campus activities, academic work)	今天下午我跟米雪娟在图书馆，我们做国际市场营销的功课。Michelle and I are in the library this afternoon. We are working on our International Marketing homework.
Describing events unrelated to campus (e.g., personal activities occurring outside campus)	下个星期是我爸爸的生日，所以这个周末我和家里人都要去射箭。My father's birthday is in the next week, so I will go to shoot arrows with my family this weekend.
Expressing likes and dislikes	我真的喜欢听中国传统的音乐。我最喜欢听二胡的音乐。I really like listening to Chinese traditional music. I like listening to erhu music most.
Making explanations	我还没毕业呢。还有，我现在不在中国。I have yet to graduate. In addition, I am not in China right now. (replying to a question)
Sharing similar experiences or perspectives (including expressing agreement)	我也呆了好几年了，可是还没习惯。I have also stayed here for a couple of years, but I am still not used to it.
Asking questions	谁今天要去学生中心看那个新年晚会？Who is going to the student center to watch the New Year's celebration today?
Expressing compliments	你的头发总是很漂亮。Your hair always looks pretty. 恭喜！你的中文说得真不错，当然你赢了！Congratulations! You speak Chinese really well. Of course you won!
Expressing opinions	昨天的晚会很好玩！每个节目都很有意思。Yesterday's performance was a great fun. Every program was interesting.

Table 3.7 (continued)

Functions	Examples
Giving advice	你可以和我们一起去中国。You can go to China with us. 别忘了你的雨伞。Do not forget to bring an umbrella.
Making requests	同学们，请投票！Classmates, please vote. 请喜欢这幅画!!!! 所以我们可以赢得比赛。:))) Please like this picture so that we could win a competition.
Expressing apology	现在才有时间上脸书。对不起，我晚了。I got time to check my Facebook right now. Sorry, I am late. 哦，不好意思我刚才看到这个帖子。Sorry. I have just seen your post.
Expressing wishes	希望你早点好起来:) Wishing you getting better very soon! 祝你的爸爸生日快乐~ Happy birthday to your dad!
Delivering greetings	大家好！（谁今天要去学生中心看那个新年晚会？） Hello, all! (Who is going to watch the New Year's celebration in the student center today?) 好久不见:) Long time no see!
Offering help	我只是最近学会的。如果你们愿意，我也可以教你们！I have only learned it recently. If you would like to learn, I can teach you.
Expressing thanks	感谢你纠正我。Thank you for correcting my mistake. 好的，谢谢。OK, thank you.
Expressing understanding or non-understanding	我以前猜了。现在知道了。I guessed in the past. I know it now. 还不懂T恤的意思:( I still do not know what T-shirt means.
Expressing modesty	他们告诉我我的中文很好，但是我觉得他们太客气了。They told me my Chinese was very good, but I think they were too polite.
Making predictions	好像快下雨！It looks it is going to rain. 我看出来中国人都喜欢买鱼吧。It seems to me that Chinese people like buying fish.
Expressing encouragement	你可以做到这一点:) You. 你会成功，加油！You will succeed. Please keep going.

Idea unit (Henri, 1992) in a post was used as the unit of analysis during the coding process. Garrison, Anderson, and Archer (2000) note that the major challenges associated with concretizing an analytical framework are the perplexing problems of determining an appropriate unit of analysis. In general, there are three types of unit analysis: syntactic unit analysis (i.e. using each individual sentence as a unit), idea unit analysis (i.e. using a

thematic idea in a message as a unit), and message unit analysis (i.e. using each complete message a unit) (De Wever, Schellens, Valcke, & Van Keer, 2006). Idea unit was adopted for discourse analysis in this study. It was operationalized as the unit of a sentence or sentences that have the same theme in an entry on the Facebook group. Adopting idea unit as the unit of analysis in this study lies with the perspective of systemic functional linguistics, which is concerned with discourse, rather than sentences, as the basic unit through which meaning is negotiated (Halliday & Martin, 1993). The reason for not taking each complete post as the unit of analysis is that a post may consist of more than one idea unit, and each idea unit may serve different discourse functions (Hughes, Ventura, & Dando, 2007). Below are two examples (two Facebook entries from the pilot study) showing how discourse functions were identified and coded with the idea unit.

#### Example 3.7 Several sentences coded as one idea unit

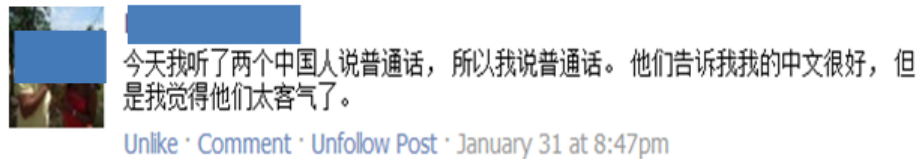


Translation: *I feel pretty good though I have been extremely busy this week. I won a scholarship. I found a new and kind roommate. And I also heard some excellent news in my work.*

The entry in Example 3.7 is made up of several sentences. But the core meaning or the theme is that the student was expressing her emotional status on that day or in that week, namely, the first sentence stating that she felt happy. The subsequent sentences are listing some facts to explain why she felt pretty good. The reason that the subsequent sentences were not coded as *describing events related to campus* was that the student

used verb phrases instead of sentences in Chinese to list a series of events. In addition, the fundamental principle of discourse analysis is to understand texts in a broad context. That is to say, the whole entry and the Facebook culture should be taken into consideration. Reading the student's whole Chinese entry, the other coder and I both agreed that listing events was functioning to express emotions. If the student was describing those events, she would have posted them as separate entries. Therefore, the whole entry was identified as one function and it was coded as *expressing emotions*.

Example 3.8 Two sentences coded as two idea units

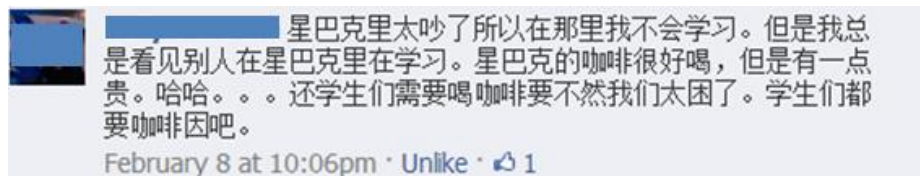


Translation: *Today I heard two Chinese people speaking Mandarin, so I spoke Mandarin. They told me my Chinese was very good, but I think they were too polite.*

In Example 3.8, there are two sentences, and two different functions were identified. In the first sentence, the student described an event unrelated to school work or campus activity; in the second sentence, she expressed modesty about the comment offered by the two Chinese people. The whole entry contains two idea units. Therefore, two functions were identified in this entry and they were coded as *describing events unrelated to campus* and *expressing modesty* respectively. Consequently, 910 idea units were identified. One of the instructors (the instructor is introduced in the following paragraph) and I achieved high percentage of agreement, namely 91.2%, in identifying idea units. Such a high percentage of agreement in idea unit identification was mainly because most of the participants' posts were made up of short and simple sentences.

When the Facebook participants' entries and comments were coded, ATLAS.ti (6.2) software program was used to facilitate coding. All entries and comments in text format were uploaded onto the software program. I invited one class instructor, a Chinese native speaker working at the Confucius Institute of the university, to help code the data in the group work area in the library where all computers have ATLAS.ti (6.2) software program. The Chinese instructor has a master's degree in teaching Chinese as a foreign language. Before coding, the instructor and I first discussed how to determine idea units. I used some examples to illustrate the meaning of idea units. One of the examples is the above mentioned Example 3.8. Below is another example demonstrating how idea units were determined.

#### Example 3.9 Multiple sentences coded as different idea units



Translation: *It is too noisy in Starbucks, so I cannot study there, but I always see people studying in Starbucks. Starbucks coffee is very good, but it is a little bit expensive. Haha ... In addition, students need to drink coffee. Otherwise, we are sleepy. All students probably need coffee, right?*

In this example (Example 3.9), there are five sentences (four sentences in Chinese), but the student talked about three ideas: Starbucks as a place for study, the coffee in Starbucks, and the need for students to drink coffee. Therefore, three idea units were determined and three functions were labeled although all of the functions are expressing opinions. During the discussion, I emphasized the difference between syntactic units (units determined by sentences), idea units (units determined by ideas or

themes), and message units (units determined by each complete message). Then, we discussed how to identify discourse functions with the coding scheme. We examined each discourse function and its corresponding example in the coding scheme one by one (see Table 3.7) to ensure we understood these categories in the same way. In the first draft of the coding scheme, there was an *answering questions* function. The instructor thought this function was too broad and it could contain several other functions. I agreed with her and this function was removed from the coding scheme. Next, we discussed using different labels to represent each discourse function. The labels were functioning as the codes when we were coding the data in the software program. We chose the key word in each discourse function as its label. For example, we used the label “emotions” to represent the *expressing emotions* function. Table 3.8 shows the labels used to represent each discourse function.

Last but not least, I trained the instructor how to use the ATLAS.ti. (6.2) software program and how to code the data in the software program because the program was new to her. After the discussion of discourse function identification and the training of using the software program, we used the participants’ Facebook posts in the first week as a sample and completed a pilot coding together. We first used an *open coding* (a function in the ATLAS.ti.) method in the software program to input the first-time showing codes into the program, and then we used a *coding by list* (a function in the ATLAS.ti.) method, if a previous code recurred, and a *quick coding* (a function in the ATLAS.ti.) method if the same code repeated subsequently. After the pilot coding, we coded the remaining data

Table 3.8

*Labels Used to Code Each Discourse Function*

Function	Label
Expressing emotions	Emotions
Telling jokes or using humor	Jokes
Describing events related to campus (e.g., campus activities, academic work)	School events
Describing events unrelated to campus (e.g., personal activities occurring outside campus)	Non-school events
Expressing likes and dislikes	Likes and dislikes
Making explanations	Explanations
Sharing similar experiences or perspectives (including expressing agreement)	Similar experiences
Asking questions	Questions
Expressing compliments	Compliments
Expressing opinions	Opinions
Giving advice	Advice
Making requests	Request
Expressing apology	Sorry
Expressing wishes	Wishes
Delivering greetings	Greetings
Offering help	Help
Expressing thanks	Thanks
Expressing understanding or non-understanding	(non)understanding
Expressing modesty	Modesty
Making predictions	Predictions
Expressing encouragement	Encouragement



separately with the same methods. Below is a screen shot of coding the data with the ATLAS.ti. (6.2) software program (see Figure 3.7).

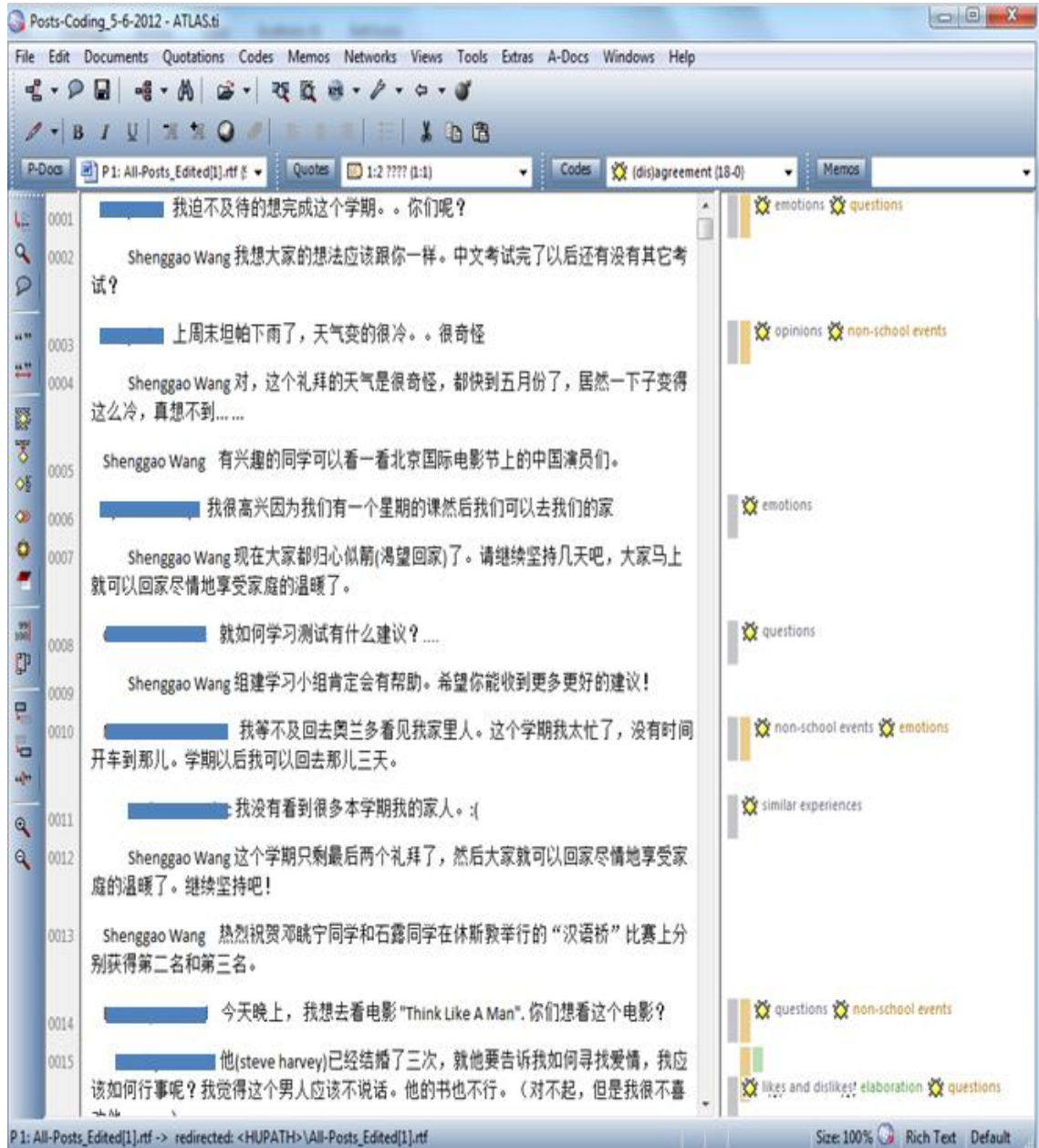


Figure 3.7. A screen shot of the coding interface in the ATLAS.ti. (6.2) program.

Table 3.9 shows the inter-coder reliability of each function after separate coding. The inter-coder reliability for each function was calculated with Holsti's (1969) formula

Table 3.9

*Inter-coder Reliability of Coding Discourse Functions in the First Time*

Functions	Inter-coder reliability
Asking questions	93.8%
Expressing opinions	59.2%
Describing events unrelated to campus	80.9%
Expressing emotions	74.5%
Describing events related to campus	72.6%
Sharing similar experiences or perspectives	88%
Expressing likes and dislikes	69%
Expressing wishes	75.8%
Making explanations	19.3%
Expressing thanks	100%
Giving advice	71.7%
Expressing compliments	61.5%
Expressing encouragement	63.2%
Making requests	26%
Expressing understanding or non-understanding	70%
Expressing modesty	70.6%
Making predictions	18%
Expressing apology	100%
Delivering greetings	57.1%
Telling jokes or using humor	54.5%
Offering help	100%
Total number of codes or idea units	91.2%

$\frac{2m}{n1 + n2}$  in which  $m$  is the number of agreed codes and  $n1$  and  $n2$  are the number of coding decisions made by each coder. The scales for evaluating the inter-coder reliability are excellent ( $>.80$ ), good ( $>.60$ ), moderate ( $.40\sim.60$ ), and low ( $< .40$ ) in general. According to these scales, the instructor and I achieved “*excellent*” inter-coder reliability during the independent coding in six discourse functions: *asking questions, describing events unrelated to campus, sharing similar experiences or perspectives, expressing thanks, expressing apology and offering help*. We achieved “*good*” inter-coder reliability in these nine discourse functions: *expressing emotions, describing events related to campus, expressing likes and dislikes, expressing wishes, giving advice, expressing compliments, expressing encouragement, expressing understanding or non-understanding, expressing modesty*. The agreement of coding in three discourse functions (*expressing opinions, delivering greetings, telling jokes or using humor*) was “*moderate*”. We achieved low inter-coder agreement in these four discourse functions—*making explanations, making requests, and making predictions*. The main reason for low inter-coder reliabilities in these four discourse functions is that the discourse functions of related entries were much less clear-cut with these categories and those entries could be interpreted differently by different coders. For example, about the function *making explanations*, the different decisions centered on posts that could also be coded as *expressing opinions* if understood from different perspectives. For example, one student posted that “既然在写简体字比繁体字容易练习我比较喜欢用简体字。除非，我去香港或台湾做工作我不需要知道怎么用繁体字。” “*I prefer to use simplified Chinese characters since writing with simplified Chinese characters is easier than writing with traditional Chinese characters. Unless I go to work in Hong Kong or Taiwan, I do not*

*need to learn how to write with traditional Chinese.*” For the first sentence, we both coded *expressing likes and dislikes*. For the second sentence, the instructor coded it as *expressing opinions* and I coded it as *making explanations*. It seems that the student was expressing her opinion that it was unnecessary to learn how to write with traditional Chinese characters if a student would not go to Hong Kong or Taiwan. But considering the previous sentence, I think the student was explaining why she preferred not to use traditional Chinese characters. After discussion, we agreed to code it as *making explanations* rather than *expressing opinions*.

To resolve all the disagreements, the instructor and I worked together to revisit all idea units that we coded differently and re-read the original entries in their discourse contexts on the Facebook group page. During this calibration process, we discussed each discrepancy in our coding, negotiated until we reached agreements and resolved all remaining differences.

**Data analysis for answering the second sub-question.** The second sub-question is: *What type of questions do intermediate-level Chinese language learners use during their social communication? What kind of functions do different types of questions perform? How are different types of questions and their functions distributed?* The reason for focusing on questions is two-fold. First, interaction is the core ingredient in the design of social networking tools (Downes, 2007). Based on the researcher’s observation in the pilot study, asking questions was a frequently performed language function during the students’ interaction on Facebook. Second, interactionist approaches to SLA research have demonstrated that the most effective way of developing successful L2 competence

is to ensure that learners have sufficient opportunities to participate in conversations and to interact with each other, which could create opportunities for L2 learning (Mackey, 2007). Therefore, it could be inferred that more questions being asked means a higher probability of interactions, and more interactions could possibly yield more learning opportunities.

When addressing these sub-questions, I first singled out all entries and comments that contain questions. The extracted entries and comments consist of three scenarios: questions in entries with no follow-up comments, questions in entries with follow-up comments but no questions in the follow-up comments, questions in both entries and their follow-up comments. Next, all question types were coded with a coding scheme (see Table 3.10) used by Hayashi (2010), Stivers and Enfield (2010), and Yoon (2010). The

Table 3.10

*A Coding Scheme for Question Types (adapted from Hayashi, 2010; Stivers & Enfield, 2010; Yoon, 2010).*

Question type	Examples
Polar	这个日子也可以说祝快乐吗? Can we also say “wish you happy” on this day? 你最喜欢国际营销课? Do you like the international marketing course most? 明天的考试是听写的考试, 对吗? Tomorrow’s test is a dictation test. Is it correct?
Q-word	谁今天要去学生中心看那个新年晚会? Who is going to the student center to watch the New Year’s Celebration? 你朋友的中餐馆在哪里? Where is your friend’s Chinese restaurant?
Alternative	你喜欢喝冰水还是开水? Do you like drinking ice water or hot water? 你在哪里学习, 是图书馆呢还是家里? Where are you studying, in the library or at home?

coding scheme was part of a large cross-linguistic project initiated by a multidisciplinary team at the Max Planck Institute. It has been used by researchers investigating question–response systems involving 10 typologically distinct languages, including Asian languages such as Japanese, Korean, and Laotian. Although Chinese was not one of the investigated languages, it can be assumed that the coding scheme generated from these studies may also be applicable to similar research topics involving the Chinese language. In this coding scheme, there are three types of questions: polar questions, Q-word questions, and alternative questions. According to Stivers and Enfield (2010), polar questions refer to any questions that are raised to affirm, confirm, or disconfirm something. Such questions may consist of question particles, inversions, or tags. In contrast, ‘Q-word’ questions or ‘WH’ questions are questions in which there are presupposed propositions, and the answers to such questions are expected to provide the identity of the proposition elements. Finally, alternative questions refer to questions that include the proposal of a restricted set of alternative answers in their formulation. Specific examples are provided for each type of question in Table 3.10.

In order to make the coding process more efficient, question functions were simultaneously coded with a coding scheme displayed in Table 3.11 when question types were coded. In the coding scheme, question functions include *requesting information*, *requesting clarification or confirmation*, *requesting explanation*, *requesting suggestions*, *requesting opinions*, *offering suggestions*, *offering opinions*, *rhetorical questions*, and *other*. The coding scheme was adapted from the two studies (Hayashi, 2010; Yoon, 2010) in a special issue of *Journal of Pragmatics* focusing on question–response sequences in conversations across ten languages. These two studies analyzed question-response

sequences in oral conversations in Japanese and Korean. The reason I adapted the coding scheme from these two studies is that Japanese and Korean belong to East Asian languages and they share more common linguistic features with Chinese than western languages. The function *other initiation of repair* in the original scheme was not included because it applies to oral conversations instead of written communication. Another excluded function in the original scheme is *offering suggestions or opinions* because no instances were found in the data of the present study. Table 3.11 illustrates how question functions were coded. All examples were taken from the actual data in this study.

Table 3.11

*A Coding Scheme for Question Functions in Social Communication on Facebook*

Question Functions	Examples
Requesting information	有人赢得一些奖学金的钱吗? Has anybody received the scholarship?
Requesting clarification or confirmation	你想汉语课吗? Are you thinking about Chinese classes?
Requesting explanation	这些字是什么意思? What do these words mean?
Requesting suggestions	谁能推荐一个好看的中国电视秀? Who is able to recommend a good Chinese TV show?
Requesting opinions	你们觉得今天的考试怎么样? What do you think of today's exam?
Rhetorical questions	这个我怎么会研究呢? How would I research this?

When coding question types and question functions, I invited another colleague, who is a native speaker of Chinese and is a student in the same doctoral program as me, to help co-code all the questions. We also used the ATLAS.ti. (6.2) software program

during the coding process. Before coding, I also conducted a coder training, which included the identification and categorization of question types and question functions. After coding the first 20 questions together, we coded the remaining 124 questions separately. The inter-coder reliability was calculated also with Holsti's (1969) formula  $\frac{2m}{n1 + n2}$  in which  $m$  is the number of agreed codes and  $n1$  and  $n2$  are the number of coding decisions made by each coder. The inter-coder reliability of question types and question functions during separate coding is listed in Table 3.12 and 3.13. Using the same scales for evaluating the inter-coder reliability (*excellent*,  $>.80$ ; *good*,  $>.60$ ; *moderate*,  $.40 \sim .60$ ; and *low*,  $<.40$ ) as I reported in discourse functions, the colleague and I have achieved *excellent* inter-coder reliability in Q-word questions and all three types of polar questions. We achieved *good* inter-coder reliability in coding alternative questions. In view that questions types were structurally determined and it involved less subjective judgment, inter-coder reliability for coding question types was all higher than that for coding questions functions. As for question functions, we have reached *excellent*

Table 3.12

*Inter-coder Reliability of Question Type Coding*

Question type	Inter-coder reliability
Polar-Interrogative	100%
Polar-Tag	85%
Polar-Declarative	90.9%
Q-word	94.2%
Alternative	66.7%
Total	93.9%



Table 3.13

*Inter-coder Reliability of Question Function Coding*

Question functions	Inter-coder reliability
Requesting information	71.9%
Requesting clarification/confirmation	52.8%
Requesting explanation	54.7%
Requesting opinions	48.5%
Requesting suggestions	88.9%
Rhetorical questions	100%
Total	69.5%

*Note.* Only four out of 144 questions were rhetorical questions. There were no discrepancies in making these decisions. Therefore, the reliability is 100%.

or *good* inter-coder reliability in these three question functions: requesting information, requesting suggestions, and rhetorical questions. The inter-coder reliability in these three question functions—requesting clarification/confirmation, requesting explanation and requesting opinions—is *moderate*. Similarly, all disagreements of codes in question functions were resolved through negotiation and discussion when we revisited those original questions and their surrounding discourse contexts.

When addressing the question *To what extent are those questions answered by other students*, all questions were coded into two categories: *questions responded to* and *questions unresponded to*. All questions labeled *questions responded to* include questions that were directly or indirectly answered and those simply responded to. All questions that were not responded to were labeled *questions unresponded to*. When labeling all the questions with these two categories, I did not invite another person to help

label them because this labeling process was dichotomous and comparatively more objective.

**Data analysis for answering the third sub-question.** When addressing the third sub-question—*What are the characteristics of those questions that the learners posed most?* I sorted out all the questions that every Facebook participants posed. When sorting out all the questions, I kept the whole entries that contained each question and kept the comments following those entries as well in order to have a better understanding of the questions to be analyzed. Table 3.14 shows the Facebook participants' contributions in the number of total questions, total entries, and total Chinese characters. From the table, it can be seen that the number of questions each participant posed ranged from seven to 23, the number of entries each posted ranged from 28 to 78, and the number of Chinese characters each participant produced ranged from 615 to 2092. Becky and Crystal raised the most questions among the nine participants. In addition, the number of entries they posted and the number of characters they produced were also among the top. In view that the second sub-question mainly focuses on question types and question functions where questions are investigated from a broad perspective, this sub-question delves into the specific contents of each question. Considering feasibility, I selected two participants who posed the most questions as two cases for in-depth analysis. Table 3.14 also shows that Becky and Crystal were the most engaged participants in that activity. Therefore, this sub-question may help to understand how the two participants engaged themselves throughout the activity. Another purpose of this question was to investigate whether there were any characteristics and particularly uniqueness among those questions that Becky and Crystal posed to communicate and interact with other participants.

Table 3.14

*The Facebook Participants' Contributions in the Number of Questions, Entries, and Chinese Characters*

NO.	Name	# of total questions	# of total entries	# of total characters
1	Becky	23	78	2092
2	Crystal	18	67	1399
3	Jane	17	73	2316
4	Pearl	16	61	1540
5	Maggie	14	50	729
6	Celina	12	74	1313
7	Kathy	10	57	873
8	Britney	8	50	899
9	Zack	7	28	615
Average		13.9	59.8	1308.4

**Trustworthiness.** Establishing trustworthiness is a means to convince consumers that the study deserves to be undertaken and the findings are trustworthy (Lincoln & Guba, 1985). The qualitative section of this study achieves trustworthiness through these measures. First, the data collection lasted 14 weeks. During the 14 weeks, I also visited the two classes and observed the instructor's teaching. In addition, I visited the Chinese corner and had some free talk with a few of the participants. Therefore, I had a relatively long engagement throughout the data collection process. Second, as a participant observer, I not only participated in the Facebook posting activity, but also kept a detailed record of the whole inquiry process. As I explained in the section of Researcher's Role, the role of participant observer provided me an emic view of the students' Chinese

language use. The record of the inquiry process includes keeping a record of each participant's weekly posts (see Table 3.5—*A record of Pearl's contribution in the activity in the whole semester*), taking notes on training the students how to use Chinese input software (see Figure 3.2—*Generating Chinese characters through the installed Chinese input software* and Figure 3.3—*Generating Chinese characters through a multi-functional web site* in the section of *Procedures for qualitative data collection*), recording the discussion with two co-coders and the coding experiences, and saving several copies of the participants' Facebook posts. In addition, when coding discourse functions, question types and question functions, I invited two co-coders to help code those two types of data and the inter-coder reliability for coding different types of data is reported.

## **Quantitative Methods**

Before introducing the quantitative methods, I want to review the two overarching research questions that guide the present study: 1. What kind of discourse do intermediate-level Chinese language learners use when they conduct social communication in Chinese on Facebook? 2. Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability? A mixed methods design is necessitated because these two overarching research questions require different approaches to address, which has been explained in the research design section. The relationship between these two overarching research questions is that the researcher was attempting to investigate whether the ability of functional and situational use of the target language on Facebook could transfer to the improvement of the target language writing ability. Though the functional and situational use of the target language on Facebook mainly belongs to the domain of communication,

findings of previous research have demonstrated the transferability of asynchronous CMC to L2 writing skills (e.g., Armstrong & Retterer, 2008; Arnold, Ducate, & Kost, 2009; Mark & Coniam, 2008; Raith, 2009). But more research is needed to support the transferability. In the previous sections, I have addressed qualitative methods to answer the first overarching research question. In the following sections, I introduce how the second overarching research question is answered in a quantitative approach. The information includes how the quantitative data were collected, what are the related variables and instruments, and how these data were analyzed in quantitative ways.

**Quantitative research questions and hypotheses.** The overarching quantitative research question is *Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability?* Below are two sub-questions and hypotheses under this overarching question.

*2.1. Is there any difference in quantity of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?*

The null hypothesis of this research question is that there is no significant difference in the quantity in writing products between the experimental group and the control group. However, previous researchers (e.g., Armstrong & Retterer, 2008) reported that students who frequently wrote blogs in the target language not only felt more confident in their ability to write in the target language but also wrote more in quantity than those who did not write blogs. Though writing blogs is different from writing posts on Facebook, the findings of that research might be transferrable to the

context in this study in view that blogging and Facebook posting both involve the use of computer-mediated text creation for communication. Therefore, it is assumed that the Facebook participants may similarly achieve certain fluency in expressing their ideas in Chinese after one-semester practice in regular personal and recreational posting—a type of writing—on Facebook. Hence, an alternative hypothesis of this research question is that there is a significant difference in the quantity of writing products between the experimental group and the control group, and that the experimental group produces significantly more Chinese characters in their writing products than the control group in the same time frame.

*2.2. Is there any difference in quality of writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?*

The null hypothesis of this research question is that there is no significant difference in the quality in writing products between the experimental group and the control group. Ducate and Lomicka (2005) contended that when students engaged in meaningful communication where they were writing for the sake of expressing their opinions and sharing information, they would become more proficient at writing in the target language in terms of both content and structure. Research in comparing discourse in asynchronous CMC discussion with that in face-to-face discussion on the same topics found that students in the asynchronous CMC context performed better in the overall quality of texts than students in face-to-face discussions (e.g., Abrams, 2003; Beauvois, 1998; Kern, 1995; Sotillo, 2000). It is, therefore, assumed that the Facebook participants

as a whole will achieve a better performance in the overall quality in the three separate writing tasks after one-semester practice in regular personal and recreational posting on Facebook. Thus, an alternative hypothesis of this research question is that there is a significant difference in quality in writing products between the experimental group and the control group, and the quality of written texts produced by the experimental group is significantly better than the control group.

**Procedures for quantitative data collection.** As I mentioned in the qualitative section, all students in the two classes were introduced to the Facebook activity and the research purpose on the first day of the Spring semester in 2012. A short training session was held in a language lab on the last class in the first week. The training introduced all Chinese IV students to installing and using Chinese language input software, as well as to the efficient typing of Chinese characters. The techniques introduced during the training could help students to generate Chinese efficiently on computers or on mobile devices. After around 15 minutes of training, the class instructor and I asked all students in the two classes to perform the first writing task, which was a part of the course assignments. A writing prompt (see Appendix V) was provided to the students via university official email. The students were told to complete the writing task independently in the language lab in the remaining 35 minutes. Because the quantity of their writing texts was one of the variables under investigation, no word limit was suggested or required in the writing prompt. The students were asked to write in as complete, correct, and as culturally appropriate a manner as possible. During their writing, students were not allowed to use any aids or any online resources. After completing the writing, the students were told to first email me and then print it out to submit to the instructor. In Week 9 and Week 16, all

students performed the second and the third writing tasks (see Appendix V), following the same procedures. All three writing tasks were part of the course graded assignments. The purpose of making these writing tasks as graded assignments was to let the students take them seriously and complete them with the highest capability. This would be beneficial to examine the impact of the Facebook-posting activity on the students' writing ability.

As I introduced in the *Participants* section, there were an equal number of participants—nine students—in the experimental group and the control group. Altogether, 18 participants from both groups produced a total of 54 texts across the three writing tasks. These 54 writing texts were labeled with a combination of numbers and letters according to their groups and the writing tasks. For example, I used W1-ES1 to represent the first writing text Student 1 in the experimental group produced and W1-CS1 to represent the first writing text Student 1 in the control group produced. I kept these labels and their corresponding identities in a separate file. This was a step to reduce my own bias towards the participants' writing when I was scoring their texts.

In addition to performing the three writing tasks, all the participants also completed a pre-treatment and a post-treatment survey (see Appendix II and III), administered at the beginning and the end of that semester respectively. The pre-treatment survey was for collecting all participants' demographic information and the information about their self-reported use of Facebook and other social media as well. The post-treatment survey was to seek information about whether the participants in the control group also posted entries in Chinese or communicated with other people in



Chinese on their own Facebook home page or on other social media, and whether the participants in both groups had any other writing activities other than writing assignments for the course work. This information helped to reduce possible confounding variables. For example, data from two of the students in the initial control group were excluded because they reported that they used Chinese to communicate with their friends on other social media (Twitter and Google+) around one to two times every week in that semester. At the end of the study, I also interviewed the nine Facebook participants. Six of them were interviewed in three pairs at different times and three were interviewed individually. The interview questions (see Appendix IV) were mainly about their reflections on the activity. The purpose of the interview was to provide possible explanation of the quantitative results.

**Quantitative data analysis.** After collecting all 54 written texts from the participants in both groups, I invited another Chinese instructor (i.e., not an instructor of the Chinese IV students) to help score all of the student texts. Before scoring, the instructor and I first reviewed and discussed the scoring rubrics, which are introduced below in the Instruments section. Next, a pilot scoring session was held in order to ensure that we applied the scoring rubrics in the same way. Ten samples of the participants' writing texts were randomly selected for the pilot scoring. We discussed our scoring results and resolved any discrepancies in scores. After that, all 54 texts were rated separately. Each participant's final score in each writing task was obtained by averaging the scores assigned by the two raters. Table 3.15 shows the Pearson Product-Moment Correlation Coefficients ( $r$ ) of the scores given by the two raters. Four  $r$  values are provided in the table, including the correlation coefficients between the scores of texts in

writing Task1, Task 2, Task 3. All the  $r$  values are between .50 and .75, which means the different sets of scores have a strong relationship [ $r$  value between .25 and .50 shows a moderate relationship;  $r$  value between .50 and .75 shows a strong relationship;  $r$  value larger than .75 shows a very strong relationship (Trochim, 2006)]. That is to say, while not strong, the overall degree of agreement in the scoring between the two raters was at least acceptable.

Table 3.15

*Pearson Correlation Between the Two Raters*

	Scores of all texts	Scores of texts in T1	Scores of texts in T2	Scores of texts in T3
Pearson Correlation	.661	.593	.751	.622
N	54	18	18	18

T1=writing task 1, T2=writing task 2, T3=writing task 3

To determine the number of Chinese characters that each participant produced in each writing task, I used the word count function in Microsoft Word to obtain these calculations. Since this procedure did not involve subjective judgment, I completed it independently.

**Variables.** In the quantitative part of the present study, the independent variable is writing Facebook posts, and the dependent variables are the number of Chinese characters each participant produced in three writing tasks and the score of each writing text. However, knowing my population, I was aware of additional factors that might impact the results. These factors include whether or not participants had: family members speaking Chinese, Chinese learning experience prior to their university studies, or prior

participation in a study-in-China program in the previous semester. Other factors include the participants' involvement in a similar Facebook posting activity in the semester prior to the study (Fall of 2011) and the participants' performances in three high-stakes exams<sup>8</sup>, such as the final exam in the semester prior to the study and the midterm and final exams in the semester during the study. Table 3.16 shows a comparison of these factors that might affect the results of the two groups' performances in the present study.

Table 3.16

*Factors That Might Affect the Results of the Two Groups' Performances*

Factors	The E Group	The C Group
Number of students who have family members speaking Chinese	1	1
Number of students who have Chinese learning experience prior to the university	0	1
Number of students who attended the study-in-China summer program	7	6
The mean number of Chinese Facebook posts in the semester prior to the study (Fall of 2011)	34.1	27.8
The mean number of Chinese characters posted on Facebook in the semester prior to the study (Fall of 2011)	608.6	405.9
The mean score in the final exam (written part) in the semester prior to the study (Fall of 2011)	69	76.2
The mean score in the midterm exam (written part) in the semester during the study (Spring of 2012)	55.3	64.8
The mean score in the final exam (written part) in the semester during the study (Spring of 2012)	49.8	57.1

From the table, it can be seen that although the participants in the experimental group were more active in a previous Facebook posting activity than those in the control group, the participants in the control group performed better in the three high-stakes

exams (reading and writing portions) than the experimental group (checking the numbers in the last three rows). That is to say, compared with the experimental group, the control group had a certain advantage in the writing performance. Therefore, the two groups were comparable at the outset of the study and it could be assumed that any variation due to these factors was likely balanced out in the two groups.

**Instruments.** The instruments of the quantitative section of this study include three writing assessments, which were administered in the beginning, the middle, and the end of the semester and a scoring rubric used to score the writing texts. The three writing assessments were used to examine the effectiveness of conducting social communication on Facebook on the participants' writing ability. Writing ability generally refers to the skills that help writers put their ideas, thoughts, and feelings into words in a meaningful form and to mentally interact with the message (Troyka, 1987). Systemic functional linguistics considers how people use language to make meaning in social contexts. Therefore, it is plausible to investigate whether functional and situational use of the target language to conduct meaningful communication on Facebook could help L2 learners to improve their writing ability. In the L2 context, writing ability is often measured with the quantity and quality of a text in a specific writing task (e.g., Abrams, 2003; Beauvois, 1998; Ducate & Lomicka, 2005; Sotillo, 2000). Quantity refers to the writing length of each written text. The writing length reflects writing fluency, which is one component of writing ability (Chenoweth & Hayes, 2001; Way, Joiner, & Seaman, 2000; Wolfe-Quintero, Inagaki, & Kim, 1998). In this study, the writing quantity is measured with the number of Chinese characters produced in each writing task in a fixed time frame because a character is considered the basic writing unit in the Chinese language (Liao,

2010). It should be noted that the concept of character in Chinese is different from the concept of word in English because most of Chinese characters are monosyllabic phonemes and lexical morphemes at the same time and the counterpart of a word in English is commonly equal to a combination of two or more Chinese characters in order to match its meaning (DeFrancis, 1984; E. Shepherd, personal communication, December 16, 2012). For example, “China” is a word in English. The same concept in Chinese is made up of two characters “中国”, which means China and the two characters can have different meanings when separately located in different linguistic contexts. In addition, measuring the number of Chinese characters is a tradition in calculating the length of a piece of writing in Chinese (Shang, 2007).

Writing quality is typically measured as a score of each writing text, as determined through the use of some type of writing rubric (e.g., Chen, 2006; Lee, 2010; Raith, 2009; Shang, 2007). In this study, the first writing task asked students to introduce themselves to an imagined Chinese net pal based on the information on the prompt (see Appendix V). The second and third writing tasks asked students to describe campus life and to share their summer plans with the same imagined Chinese net pal. The first task was designed by the researcher. The reason of designing this task is that self-introduction is one of the fundamental language functions used in both spoken and written communication contexts including in the online environment. According to the functional perspective of language, people use language as a resource for making meaning in social contexts (Eggins, 2004). On Facebook, L2 learners often need to introduce themselves to the members of a new group or to the new members of an existing group and the introduction often includes their interests and hobbies, likes and dislikes, etc. The content

of such writing and its function could transfer between different contexts. Additionally, the Chinese language program at the university emphasizes functional uses of Chinese and always creates opportunities for the students to perform such functions as self-introductions. In the online context, when the students encounter the native speakers or acquaint themselves with other Chinese language learners, they also should be able to apply what they have learned in the classroom to the specific situations, such as introducing themselves. The second and third writing tasks were adapted from 2010 and 2011 Chinese Language and Culture Exam administered by College Board Advanced Placement (AP®) Program<sup>7</sup> (n.d.). The rationale of adapting the AP® Chinese Language and Culture Exam is that it assesses student learning at the level equal to that of a fourth-semester college course in Mandarin Chinese. In addition, the given topics are closely related to all participants' daily lives. All writing prompts and instructions were written in English in order to preclude the possibility that participants might use the words and sentence patterns from the provided prompts if they were written in Chinese.

In terms of measuring a text's overall quality, many different types of instruments have been used by different researchers. These instruments generally fall into two categories: holistic and analytical (Helms-Park & Stapleton, 2003; Kroll, 1998). In holistic assessment, raters base their judgments on their impression of the whole composition. These raters tend to use a single global numerical rating to rate a composition. A typical example of holistic rating scales is the scoring rubrics for Test of Written English (TWE) attached to TOEFL (Test of English as a Foreign Language). In analytical assessment, however, raters often "use several subscales, which may or may not be summed or averaged together to form a composite total, to rate characteristics of a

composition separately” (Carr, 2000, p. 209). A typical example of analytical rating scales is Jacobs, Zinkgraf, Wormuth, Hartfiel, and Hughey’s (1981) ESL Composition Profile, which is made up of five components: content, organization, vocabulary, language use, and mechanics. A holistic assessment method was employed in this study and a scoring rubric (see Appendix VI) was adapted from 2011 scoring guidelines for AP® Chinese Language and Culture Exam in which students’ interpersonal writing skills were tested. The reason of adapting this scoring rubric is that the designing of three writing tasks was based on AP® Chinese Language and Culture Exam, as I introduced early in this section. In the original rubric, there are seven rating levels: *excellent*, *very good*, *good*, *adequate*, *weak*, *very weak*, and *unacceptable*. In the adapted rubric, the *unacceptable* level was removed because it was not applicable to the participants in this study. The difference in description between the levels of *excellent* (demonstrates excellence in interpersonal writing) and *very good* (suggests excellence in interpersonal writing) is too hard to be identified although the descriptions of other levels are also subjective. Therefore, these two levels were merged into one level *excellent*. And the level *adequate* was renamed as *acceptable*. Consequently, the five rating levels that were used are: *excellent*, *good*, *acceptable*, *weak*, and *very weak* (see Appendix VI). In the original rubric, each rating level consists of three categories—*task completion*, *delivery*, and *language use*—to describe the characteristics of a writing text. In this study, the researcher used three different categories: experiential meaning, interpersonal meaning and textual meaning as components of holistic assessment to rate the participants’ writing skills. The adoption of these three categories was based on Halliday’s systemic functional linguistics—the theoretical framework that guided this study. Specifically, the

experiential meaning refers to the content the participants composed on Facebook, namely, the information and experience the participants shared. The interpersonal meaning emphasizes the interactivity of their communication, such as the use of inclusive pronouns to interact with their peers, the use of questions to engage their peers, or the use of interaction-oriented sentences to communicate with their peers. The textual meaning considers issues such as vocabulary use and grammar.

**Reliability and validity of the instruments.** Table 3.17 shows that the three writing tasks ( $p$  values for Task 1 and 2, Task 1 and 3, Task 2 and 3 are all less than .01) are all significantly correlated, which indicates the three writing tasks were internally consistent in their assessment of participants' writing ability in Chinese.

Table 3.17

*Pearson Correlation Between the Three Writing Tasks*

	T1~T2	T1~T3	T2~T3
Pearson Correlation	.604*	.552*	.753*
Sig. (2-tailed)	.000	.000	.000
N	54	54	54

\*. Correlation is significant at the 0.01 level (2-tailed).

T1=writing task 1, T2=writing task 2, T3=writing task 3.

In terms of validity, the three writing tasks—self-introduction, introducing campus life, and introducing summer plan—have high face and content validity. First, these tasks involve basic and practical language skills that L2 learners at the intermediate level and above are expected to master. Second, they are relevant to L2 students' daily lives. The writing tasks are also in alignment with the research treatment— i.e., the Facebook posting activity in which self-introduction, sharing campus life and future plan



were part of communication topics. Moreover, the writing skills demonstrated in the writing tasks have been listed in one of the ACTFL standards (Chinese) which states that “(t)he intermediate level is characterized by an ability to meet practical writing needs by communicating simple facts and ideas in a loose collection of sentences” (p. 484). In addition, the original AP® Chinese Language and Culture Exam was designed to be equivalent to 4th-semester college Mandarin Chinese course (Baum, 2007). Three to four college professors and three to four AP teachers were involved in the design of the exam. College comparability studies are often conducted in order to ensure that the AP® standards are comparable to or higher than the grading standards that are applied by college professors when evaluating the performance of their own students in corresponding college courses (Baum, 2007). Therefore, the validity of the items in the exam has been fully established.

## Chapter IV Results

The purpose of this study was to explore what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook and to examine whether conducting weekly social communication in Chinese on Facebook impacted students' writing ability. In this chapter, I first present the findings of qualitative research questions and then present the results of quantitative research questions. A summary of the overall results is presented at the end of the chapter.

### Findings for Qualitative Research Questions

For the qualitative part, this study has an overarching research question—*What kind of discourse do intermediate-level Chinese language learners use when they conduct social communication in Chinese on Facebook?* Under this overarching research question, there are three sub-research questions. The findings of each sub-research question are presented below.

**Research question 1.1.** *What kind of discourse functions do intermediate-level Chinese language learners perform when they conduct social communication in Chinese on Facebook? What is the distribution of those discourse functions?*

In the data of the participants' posts (625 posts in total excluding the researcher's and more advanced-level learners' posts) on Facebook, a total of 910 instances of discourse functions were coded with the ATLAS.ti (6.2) software program. Among these instances, 22 types of discourse functions were identified and the frequencies of these discourse functions were calculated (see Table 4.1). The highest percentage of discourse function was *asking questions*, which covers 15.8% of the total instances of discourse functions. This means the participants frequently used questions to interact with each other during their social communication on Facebook and the questioning function was fully exploited to elicit and maintain communication in that asynchronous environment. A noteworthy example (Example 4.1) is that one participant Diana asked a series of questions in an entry about the most important thing in one's life. The question she posed was what the most important thing was in this world. Following the question, she first provided her own thoughts about this question. She wrote that the most important thing to her was to study hard, graduate and then find a job that she liked. And then she was eliciting her peers' viewpoints with these two more questions: "*How about you? What is the most important thing to you?*" Diana's open-ended and thought-provoking questions triggered two more advanced-level learners and another participant, Pearl, to join the dialogue. Pearl's response was that the most important thing to her was that she was happy, and no matter whether she had a good job or made a handsome boyfriend, nothing would be meaningful if she was not happy (对于我来说自己幸福最重要。不管找到好的工作, 还是很帅的男朋友。如果自己不幸福任何事都没有意义。) Based on Pearl's comment and other advanced learners' responses to the question, it can be seen that every participant in the dialogue thought over the philosophic question and they all expressed

Table 4.1

*Distribution of Discourse Functions in Social Communication on Facebook*

Functions	Number of instances	Percentage
Asking questions	144	15.8%
Expressing opinions	120	13.2%
Describing events unrelated to campus (e.g., personal activities occurring outside campus)	119	13.1%
Expressing emotions	90	9.9%
Describing events related to campus (e.g., campus activities, academic work)	87	9.6%
Sharing similar experiences or perspectives (including expressing agreement)	74	8.1%
Expressing likes and dislikes	53	5.8%
Expressing wishes	46	5.1%
Making explanations	34	3.7%
Expressing thanks	29	3.2%
Giving advice	26	2.9%
Expressing compliments	12	1.3%
Expressing encouragement	12	1.3%
Making requests	11	1.2%
Expressing understanding or non-understanding	10	1.1%
Expressing modesty	9	0.9%
Making predictions	8	0.8%
Expressing apology	6	0.6%
Delivering greetings	6	0.6%
Telling jokes or using humor	6	0.6%
Offering help	3	0.3%
Other	3	0.3%
Total (22)	910	100%

their opinions in Chinese with sophisticated ideas as well as articulate meanings. This example demonstrated that the participants had the potential to respond to communicative situations in rhetorically complex ways (DePew, 2011). In this example, both Diana and Pearl appropriately and correctly used some expressions and patterns to fulfill the discourse functions and their communicative purposes as well, such as “对我来说, ……” (To me, ……), “对你们来说, ……” (To you, ……), “不管… 还是…” (No matter what … …) and “如果…都…” (If…, …). If L2 learners could use the target language to conduct such meaningful and thoughtful communications, this would be the ultimate goal of the target language learning, namely, using language as a resource for making meaning in social contexts (Halliday & Martin, 1993). According to my observations, that dialogue was the most in-depth and thought provoking communication that was conducted in Chinese. It was that question and the question content that fully engaged the participants in the dialogue.

#### Example 4.1 Interactions triggered by a series of questions in one entry



Entry by Diana: *In this world, what is the most important thing? To me, it is to study hard, graduate and then find a job that I like. How about you? What is the most important thing to you?*

Comment by a more advanced-level student Erin: *I have also thought about this question and have finally discovered that mutual love is the most important. To love each other involves relying on each other, helping each other, and forgiving each other. I believe success, job, money, etc., all these things will eventually disappear someday. Only love can last forever.*

Comment by another more advanced-level student Linda: *In this world, happiness is the most important. No matter whether you have found a good job or true love, the most important thing is whatever you think.*

Responded by Diana: *I also think happiness and love are very important, but I have yet been in love and I have no idea what love is like. So I cannot love is the most important to me. In the future, when I am in love, I may change my ideas.*

Responded by Diana: *"So I cannot say love is the most important to me."* (Self-correction of a missing word)

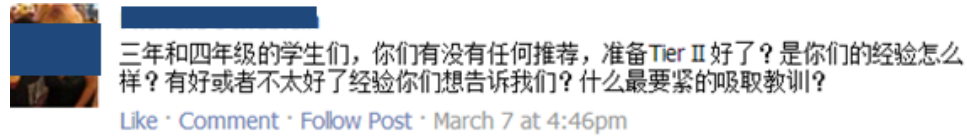
Responded by the more advanced student Erin: *What I said about love is not the love in "falling in love", but the love between children and parents and the love between friends. The love even exists between strangers. Nevertheless, I can understand your point.*

Comment by Pearl: *To me, the most important thing is that I am happy. No matter whether I have got a good job or a handsome boyfriend, nothing would be meaningful if I am not happy.*

In another example (Example 4.2), the participant Jane posted a series of questions directed to the more advanced-level learners. Jane was hoping to elicit some information from past students about the Summer Study in China—Tier II program. Unfortunately, no advanced-level learners who attended that program replied to her entry. If those advanced-level learners answered Jane's questions, Jane not only practiced using the target language with questions, but also obtained the information she was seeking. This example suggests that though asking questions as a language function is a good strategy to engage the others and to trigger online interactions, how to make the

participants answer each other's questions and join the dialogue deserves language educators to ponder over it in such an online context.

Example 4.2 A series of questions in one entry with no interactions



Entry by Jane: *Third and fourth year students, do you have any suggestions for how to prepare for Summer Study in China—Tier II? What is your experience? Do you have any good or not good experiences to share with us? What was the most important lesson you have learned?*

In Example 4.3, Britney posted a question asking the other participants' plans on a weekend. Becky shared her weekend plan and asked back to Britney with a tag question "How about you?" The dialogue ended with Britney's turn in which she also shared her plan on that weekend. This example illustrates a typical interaction triggered by questions through which the participants communicated about their daily routines, such as weekend events and activities, friends' birthday parties, preparation for school work, etc. This example also shows an ideal pattern for interactions mediated with questions. That is, student A started with a question; student B answered the question and then posed the same question in return; student A also answered the same question thereafter. It further demonstrated that functional use of questions played an important role in student interaction in the online context. More interactions meant more output of the target language. This meaning construction during the output process may help to improve the students' writing ability, which is defined as the skills that help writers put their ideas, thoughts, and feelings into words in a meaningful form and to mentally interact with the message (Troyka, 1987). It should be noted that although the participants as a whole used

the question function the most frequently when compared with other functions, question entries covered less than one third of each participant's total entries. In addition, more than 50 percent of questions were not answered, which is introduced in the second sub-research question.

#### Example 4.3 A typical interaction triggered by questions



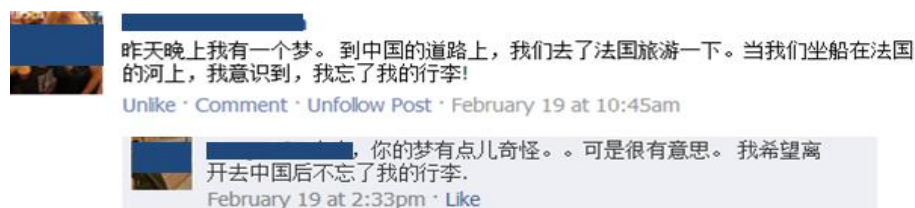
Entry by Britney: *What are you going to do this weekend?*

Comment by Becky: *I need to prepare for the coming week because I have lot of work to do. How about you?*

Responded by Britney: *My friend's birthday is this weekend, so we will eat together. I also need to work.*

The second highest percentage of discourse functions was *expressing opinions*, covering 13.2%, and *describing events or activities unrelated to campus* (e.g., personal events or activities occurring outside campus), covering 13.1%. The number of instances of these two functions is very close with *expressing opinions* 120 instances and the other 119 instances. Below are three examples of dialogues containing *expressing opinions* function.

#### Example 4.4 Pearl expressing her opinion in the follow-up entry





Entry by Jane: *I had a dream last night. In the dream, I toured France on the way to China. When we took a cruise in a river in France, I realized I forgot my luggage.*

Comment by Pearl: *Your dream is a little bit strange, but it is interesting. I hope I will not forget my luggage when I leave for China.*

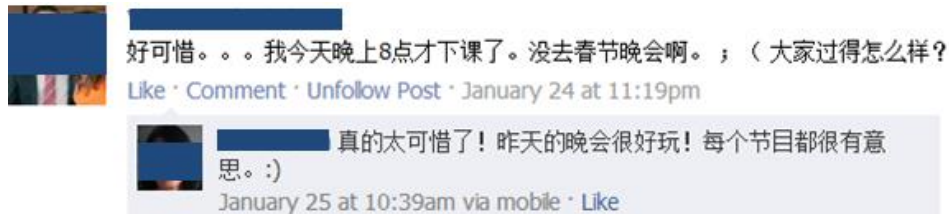
#### Example 4.5 Crystal expressing her opinion in the follow-up entry



Entry by Diana: *Is the weather a little bit weird these days? Last week, it was hot every day. How about this week? It is a little bit cold in the morning and evening, but it is very hot at noon and in the afternoon. I really do not like it. In addition, many people seem getting cold lately. Please take care of yourself, everyone!*

Comment by Crystal: *I also think so. The weather is a little bit weird, but the weather in the north is not as good as here. Here, it did not snow. Is it right?*

#### Example 4.6 Diana expressing her opinion in the follow-up entry



Entry by a more advanced-level student Andy: *What a pity! ... My class did not end until 8:00pm tonight. I missed the Spring Festival performance. How was it, guys?*

Responded by Diana: *It is indeed a pity. The performance last night was a fun. Every program was interesting.*

In Example 4.4, Pearl expressed her opinion on Jane's dream, which she thought a little bit strange, but interesting. In Example 4.5, when sharing the same perspective as Diana about the weather at that time, Crystal further claimed that the weather in that city was better than the weather in the north, which was highly opinionated. Example 4.6

displays that Diana expressed her opinion about the show in the Spring Festival performance when responding to a more advanced-level student Andy's inquiry. From these few examples and the high percentage of this function among the total discourse functions, it can be seen that the participants frequently expressed their opinions during their communication on Facebook, just like our daily conversations where we commonly make comments and express opinions. For language teachers, it may be expected that such frequent use of *expressing opinions* in an online social context could be transferrable to its classroom use or to the face-to-face communication contexts. From systemic functional linguistics perspective, the participants were using Chinese as an alternative resource for expressing opinions about the topics discussed and for maintaining interpersonal relationship in an after-class social context. When the students were practicing using the target language to express their opinions, they were also practicing writing down their thoughts, ideas and feelings in a meaning form, which could benefit the improvement of the target language writing ability.

As it is mentioned above, the percentage of the function *describing events or activities unrelated to campus* is approximate to that of the function *expressing opinions* with only a difference of one instance. Therefore, both functions can be considered the second highest percentage of discourse functions. Below are four examples of posts describing events or activities that either did not happen on campus or were unrelated to school work or were unrelated to the campus activity.

Example 4.7 Britney sharing her plan to watch a movie



今天晚上，我想去看电影 "Think Like A Man". 你们想看这个电影？

Like · Comment · Follow Post · Sunday at 5:58pm

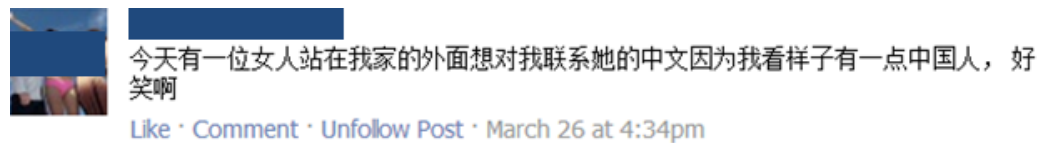
Entry by Britney: *I want to watch the movie Think Like A Man tonight. Do you want to watch this movie?*

Example 4.8 Crystal sharing her family plan over a weekend



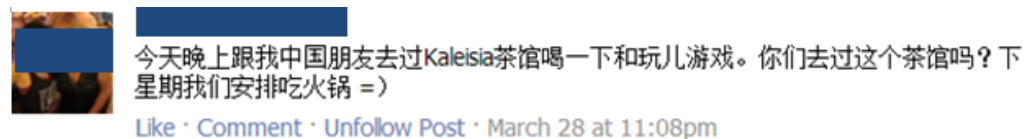
Entry by Crystal: *My father's birthday is next week, so my family and I will go to shoot arrows this weekend. It should be a fun recreation.*

Example 4.9 Maggie describing an anecdote happening in front of her apartment



Entry by Maggie: *Today, a lady stood outside of my apartment and wanted to practice her Chinese with me because I look like a Chinese. It is funny.*

Example 4.10 Jane sharing an eating-out activity



Entry by Jane: *Tonight, I went to a tea house called Kaleisia with my Chinese friend and we played games there. Have you been to this tea house? We will eat hot pot next week.*

These four examples show us that the participants shared their after-school life as well as some of their personal life, such as movie watching in Example 4.7, homesickness in Example 4.8, a social anecdote in Example 4.9, and eating out with friends in Example 4.10. Communicating about social life is typical of what appears on Facebook. Thus, it is not surprising that the function *describing events or activities unrelated to campus* ranks among the top three of all 22 types of discourse functions, which corroborates a finding in previous research that students use Facebook mainly for social interactions rather than for academic purposes (Madge, et al., 2009; Pempek et al.,

2009). The students in this study were performing the same or similar social functions, but they nevertheless accomplished them in Chinese. Practicing such functional use of Chinese also matches the ACTFL Performance Guidelines (ACTFL, 1987) in Chinese writing ability which states that the intermediate-level learners should be able to meet a number of practical writing needs. The content of such practical writing involves personal preferences, daily routines, everyday events and other topics grounded in personal experiences.

The next frequently used discourse functions were *expressing emotions* and *describing events or activities related to campus* (e.g., campus activities, academic work) which rank the fourth and fifth respectively. Here are six examples with three for each of these two functions: *expressing emotions* and *describing events or activities related to campus*.

#### Example 4.11 Celina expressing her sadness



Entry by Celina: *I did not visit my parent's home on the past weekend, so I feel very sad.*

#### Example 4.12 Becky expressing her delight



Entry by the researcher: *Many Chinese calligraphists prefer to write in traditional Chinese characters. Although traditional characters have more strokes than simplified ones, they look more delicate in structure. But ordinary people think traditional characters are hard to write because of too many strokes. Here is a related joke:*

*A: What are traditional characters?*

*B: The characters which have more strokes.*

*A: Why are those which have more strokes called traditional characters?*

*B: The more strokes, the more **troublesome** to write. So, they are called **traditional** characters. (The humorous point here is that the Chinese counterparts for “troublesome” and “**traditional**” are two homophones.)*

Entry by Becky: *Aha~~Very clever! I am glad that I understood a Chinese joke.*

#### Example 4.13 Zack expressing his happiness



Entry by Zack: *I am happy that I completed reading the book The Lady in the Painting. I think Meizhen is like a Supreme Being who can rescue people from predicaments and difficulties. I do not like it.*

#### Example 4.14 A dialogue about DVD for the textbook



Entry by Kathy: *Hello, classmates! Who has the DVD for Traditional Chinese Tales?*

Responded by Crystal: *I have a book, but no DVD.*

Responded by Zack: *Maybe you can download ...*

#### Example 4.15 A dialogue about a course assignment



Entry by Jane: *How did you prepare your city report? I am revising my second draft.*  
Responded by Pearl: *I have yet to prepare my city (Taiyuan) report. Feel nervous.*

#### Example 4.16 Describing a status of studying in the library



Entry by Pearl: *Jane and I were in the library this afternoon. We were working on our assignment for International Marketing.*

As we know, non-verbal behaviors play an important role in expressing emotions in face-to-face communication. Similarly, in the CMC context, people often incorporate emoticons as visual cues to augment the meaning of textual electronic messages and to serve as nonverbal surrogates which are suggestive of emotional expressions (Rezabek & Cochenour, 1998; Derks, Bos, & von Grumbkow, 2007). However, emoticons are not actual non-verbal behaviors; the use of emoticons to some people could be habitual and less conscious, or deliberate and voluntary, online behaviors (Derks, et al., 2007). It is often hard to interpret the emoticons as simply habitual behaviors, or as wording having deliberately encoded elements of intentional communication (Walther & D'Addario, 2001). Such a claim also applies to this study. Therefore, all emoticons and such emotional words as “*haha*” in the present study were not considered in the whole coding process. Examples 4.11 to 4.13 demonstrate that the participants expressed their emotions through verbal language in each specific context. For example, Celina expressed sadness for not being able to go home in that weekend; Becky expressed delightedness for understanding a Chinese joke; and Zack conveyed a sense of accomplishment for completing reading all chapters of the book. In Examples 4.14 to 4.16, the participants shared their activities or events happening on the campus. Such topics as borrowing

books, working on homework, and studying in the library are typical in their communication. Similarly, when communicating these daily routines in the school on Facebook, the participants were also practicing their writing involving their daily routines and everyday events, which are stated in the ACTFL Performance Guidelines (ACTFL, 1987) for intermediate-level learners in Chinese writing ability.

Other discourse functions ranking among the top 10 in the number of instances were *sharing similar experiences or perspectives* (including expressing agreement), *expressing likes and dislikes*, *expressing wishes*, *making explanations* and *expressing thanks*. The least used functions were *expressing modesty*, *making predictions*, *expressing apology*, *delivering greetings*, *telling jokes or using humor*, and *offering help*. Each of these discourse functions covers less than 1% of the total number of instances.

From this finding, it can be seen that the Facebook environment provided learners with the opportunity to produce different kinds of discourse and to perform a variety of functions in an online social context. Facebook offered learners a platform for practicing functional use of the target language in discussing about both academic work and social talk (e.g., movie watching, homesickness, eating out with friends, weather, friends' birthday parties) (Chun, 1994; Darhower, 2002; Kern, 1995; Sotillo, 2000). Such functional use of the target language aligns with the fundamental tenet of systemic functional linguistics theory (Eggins, 2004; Halliday, 1978) which claims that first, language use is functional. For example, Jane posted an entry to ask the third and fourth year students whether they had any suggestions on preparing for the Summer Study Program in China and whether they had any experiences to share with her (Example 4.2).

In this entry, the purpose of Jane's questions was to seek information from the advanced learners rather than to pose questions for practicing structuring question forms. One of the ultimate goals of learning Chinese is to use Chinese and to function with Chinese in real life situations. This was what the participants were doing on Facebook.

Secondly, SFL claims that the function of language is to make meanings and these meanings are influenced by the social and cultural context in which they are exchanged. For example, Maggie shared her experience on a day with the members in the group. She wrote that a lady stood outside of her apartment and wanted to practice Chinese with her because she looked like a Chinese (Example 4.9). The meaning making process was also the experience sharing process. On Facebook, it was the right place for Maggie to share this kind of social encountering with her peers. Therefore, the institutional context, the Facebook culture, and the individual participants' living experience together framed their communication and the uniqueness of their language use in that activity.

In addition, from the SFL perspective, the process of using language is a process of making meaning by choosing. This choosing involves both grammatical and functional respects. Grammatically, the participants were choosing the correct vocabulary, expressions, sentence patterns, and sometimes, even the native language when they were making meanings. For example, Britney posted an entry that she wanted to watch the movie *Think Like A Man* at that night (Example 4.7). Probably she did not know how to translate the name of the movie into Chinese. Or she may think keeping the English name of the movie would be a better choice in that situation. Functionally, the participants were using Chinese to exchange information, to share experiences, to express opinions, to express emotions, etc. Therefore, the participants' functional use of Chinese



on Facebook was in alignment with the fundamental tenet of systemic functional linguistics theory (Eggins, 2004; Halliday, 1978).

However, whether the social use of the target language on Facebook could benefit the students' language proficiency, or even whether Facebook should be taken seriously as a learning environment, some researchers and practitioners hold different views in this regard (Kabilan et al., 2010). Generally speaking, Facebook is often used by students "as a place to chat about who's "hot", what's "cool" and where the "hip" action is" (Reid, 2011, p. 77). Such "hot", "cool", and "the hip action" use of language have also been demonstrated in the present study. For example, Pearl posted an entry about the basketball player Jeremy Lin, a Chinese American who did an excellent performance in a season of NBA games (see Example 4.17). At that time, Jeremy Lin was the hot topic both on TV and in the social media. Similarly, Celina told her classmates in a post that she wanted to tattoo Chinese characters. She listed three Chinese words and phrases and tried to receive feedback from their peers (see Example 4.18). Tattooing Chinese characters has long been a "cool" fashion among the young people. These examples show that the participants talked about some hot and cool stuff in Chinese on Facebook, which the participants were interested in. They expressed such interest in the post-experiment interview when asked about their opinions on the Facebook-posting activity.

#### Example 4.17 Describing a hot topic about an NBA game



Entry by Pearl: *Did you watch the basketball game last night? LIN Shuhao, "Jeremy lin" aka "Jackie Chan of Basketball" ... "LINSanity", are all very interesting nicknames. Haha! He is cute, right?*

#### Example 4.18 Describing a cool idea – tattooing Chinese characters



我想一个纹身! 我想这个:

改变  
爱 ♥  
勇气

你们觉得好不好?

Like · Comment · Unfollow Post · February 21 at 10:41pm near Tampa

Entry by Celina: *I want to tattoo! I want to choose these character words: change, love, courage. What do you think of them?*

Additionally, the functional use of the target language in such a social context as Facebook could be understood as a literacy practice in view that this literacy practice was linguistically and symbolically mediated in a target language (Reinhardt & Zander, 2011). To be more specific, the literacy practice in this study does not only refer to traditional reading practice (i.e. the participants read the posted entries first before they made comments) and writing practice (i.e. the participants first constructed meaning in their mind and then put their ideas, thoughts, and feelings into written forms); it also refers to the 21<sup>st</sup> century digital literacy, namely, the ability to use L2 to conduct social networking, online chatting, instant messaging, blogging, twittering, etc. (Mompean, 2010; Yancey, 2009). Such literacy practices on Facebook could create an alternative pedagogical space for L2 situational use. This space could bring the students' after-class literacy practices from a digital and personal domain into a school domain which normally promotes formal, academic literacy practices (Reid, 2011).

**Research question 1.2.** *What type of questions do intermediate-level Chinese language learners use during their social communication? What kind of functions do different types of questions perform? How are different types of questions and their functions distributed? To what extent are those questions answered by other students?*

The findings of the first research question indicated that asking questions was the most frequently performed discourse function by the participants in the Facebook activity. Altogether, 144 questions were identified from the total of 910 instances of discourse functions. When these questions were further categorized, it was found that the participants mainly used Q-word questions (or *Wh*-questions), which covered 49.3%, and polar questions (or yes/no questions), which covered 47.9% of the total questions, during their communication and interaction. Less than 3% of the total questions were the alternative questions (see Table 4.2). As introduced in the qualitative methods section,

Table 4.2

*Distribution of Different Types of Questions*

Question type	Percentage
Polar	47.9% (n = 69)
Q-Word	49.3% (n = 71)
Alternative	2.8% (n =4)
Total	100% (N = 144)

Q-word questions are questions in which there are presupposed propositions, and the answers to such questions are expected to provide the identity of the proposition elements (Stivers & Enfield, 2010). Q-word questions are also known as content questions or

information questions, most of which begin with *wh*. For example, *Happy Easter! What did you do today?* (Example 4.19). *Who knows when we should finish paying our tuition fee for the summer?* (Example 4.21) Polar questions refer to any questions that are raised to affirm, confirm, or disconfirm something; such questions may consist of question particles, inversions, or tags (Stivers & Enfield, 2010). For example, *can we also say Happy President Day on this date?* (Example 4.23) *Tomorrow's exam is the listening exam, right?* (Example 4.24)

#### Example 4.19 A *what*-question



Entry by Celina: *Happy Easter! What did you do today?*

#### Example 4.20 A *wh*-question and a polar question



Entry by Maggie: *What do you think of today's exam? Not that difficult, right?*

#### Example 4.21 A *who*-question



Entry by Crystal: *Who knows when we should finish paying our tuition fee for the summer? I am a little bit concerned.*

#### Example 4.22 An interrogative polar question



Entry by Kathy: *Do you have any suggestions regarding study to prepare for the test?*

Example 4.23 Another interrogative polar question



Entry by Crystal: *Happy President's Day!*

Comment by Diana: *Can we also say Happy ... Day on this date? Haha.*

Example 4.24 A tag polar question



Entry by Zack: *Tomorrow's exam is the listening exam, right?*

Example 4.25 A declarative polar question



Entry by Pearl: *Today's International Marketing class was very interesting. Now we are learning Euro.*

Comment by Britney: *You like International Marketing most?*

An alternative question is a question that presents two or more possible answers and presupposes that only one is true (Summer Institute of Linguistics, n.d.). Unlike polar questions that elicit a 'yes' or 'no' answer, alternative questions invite as an answer one of the two or more alternatives presented in the question (Koshik, 2005). Among all 144 questions, there are only four instances of alternative questions. Below are all these alternative questions that the participants used.

Example 4.26 An alternative question



Entry by Pearl: *Because I have a cold, I need to drink a lot of water.*

Comment by Celina: *Do you like ice water or hot water?*

Example 4.27 A second alternative question



Entry by Britney: *Where should I go to spend my vacation? Dominican Republic, Puerto Rico, or The Bahamas? I do not know.*

Example 4.28 A third alternative question



Entry by Pearl: *Who is going to China this summer? I bought my plane ticket. It is almost 1,600 dollars. Do you think it is a little expensive, or I need to wait to see?*

Example 4.29 A fourth alternative question



Entry by Crystal: *There are a lot of policemen on the way. Please drive carefully!*

Comment by Kathy: *Is it on campus or outside?*

In Example 4.26, Pearl said she needed to drink a lot of water because she had a cold. Celina then asked Pearl whether she liked ice water or hot water. In the American

culture, people do not often drink hot water. The reason why Celina offered an alternative option in her question was most probably that she knew people chose to drink hot water when getting cold in the Chinese culture. In Example 4.27, Britney was planning to spend her vacation. Therefore, she posed an alternative question to seek her peers' suggestions on choosing a country from three options to travel. Similarly, in Example 4.28, Pearl was requesting suggestions on a ticket to China through asking whether it was expensive or whether it was better to buy one later. In Example 4.29, Kathy was seeking a confirmation from Crystal where those policemen were.

Regarding the polar questions, it has been introduced that there are three types of polar questions: interrogative, tag, and declarative questions. Interrogative questions are questions raised to affirm, confirm, or disconfirm something. In Chinese, these types of questions normally contain the question particle “吗”. In the above-mentioned Example 4.23, Diana responded to Crystal's entry “总统日快乐!” (*Happy President's Day!*) with an interrogative question: “这个日子也可以说祝快乐吗?” (*Can we also say Happy ... Day on this date?*). A tag question is a constituent that is added after a statement in order to request confirmation or disconfirmation of the statement from the addressee (Summer Institute of Linguistics, n.d.). In Chinese, a tag question often ends with these lexical phrases “对吧?” (*Right?*), “是吗?” (*Is it true?*), “行吗?” (*Is it OK?*), “好吗?” (*Is it OK?*), or these syntactic phrases “好不好?” (*Is it OK, or not?*), “对不对?” (*Is it correct, or not?*), “行不行?” (*Is it OK, or not?*). In Example 4.24, Zack posted a tag question: “明天的考试(时)是听写的考试, 对吗?” (*Tomorrow's exam is the listening exam, right?*). A declarative question in spoken language often contains a statement followed by a

question intonation. In the present study, a declarative question was judged by a statement plus a question mark. In the above-mentioned Example 4.25, Pearl posted an entry: “今天的国际营销课很有意思，现在我们学习欧元。” (*Today’s International Marketing class was very interesting. Now we are learning Euro.*) Britney responded to Pearl’s entry with a declarative question to check information: “你最喜欢国际营销课?” (*You like International Marketing most?*) Among the polar questions, the participants predominantly used the interrogative questions which covered more than 65% (see Table 4.3). The tag questions that were used covered around 26%. The participants seldom used the declarative questions which covered only around 9%. It is understandable that the small percentage in the use of the declarative questions was mainly because the participants’ social communication on Facebook was written oriented and the communication lacked prosodic features, such as intonation. In face-to-face conversations, however, declarative questions are frequently used to check information, to repeat something someone has said in order to question or confirm it, or to express surprise or amazement (Hayashi, 2010; Yoon, 2010). These questions have no question words or question particles, but have only intonation and/or pitch and stress added.

Table 4.3

*Distribution of Different Sub-Types of Polar Questions*

Polar question type	Percentage
Interrogative	65.2% (n=45)
Tag	26.1% (n=18)
Declarative	8.7% (n=6)
Total	100% (N = 69)



In the above paragraphs, I have introduced what type of questions the participants used during their social communication on Facebook and the distribution of those question types. Hence I introduce the functions of those questions performed. Findings reveal that more than 50% of the questions were asked to request information (see Table 4.4). The next major question function is requesting clarification or confirmation which covered around 20%. Questions functioning to request explanation, to request suggestions and to request opinions each covered less than 10%. Only four out of 144 questions were rhetorical questions. Following Table 4.4 are examples of questions illustrating how different functions were performed through different types of questions.

Table 4.4

*Distribution of Question Functions*

Question Functions	Percentage
Requesting information	54.3% (n=78)
Requesting clarification or confirmation	20.8% (n=30)
Requesting explanation	6.9% (n=10)
Requesting opinions	8.3% (n=12)
Requesting suggestions	6.9% (n=10)
Rhetorical questions	2.8% (n=4)
Total	100% (N=144)

First, I display examples of questions that served to request information and to request clarification or confirmation. In Example 4.21, Crystal posted a question “谁知道我们什么时候得付完我们的夏天学费?” (*Who knows when we should finish paying our tuition fee for the summer?*) Most probably, Crystal indeed did not know the answer

to this question. She was requesting this information from her peers and she was hoping anyone in the Facebook group could share the information. In Example 4.24, Zack asked his classmates whether the exam the next day was a listening exam and he was requesting confirmation from his peers. He posed a tag question: “明天的考试（时）是听写的考试，对吗？” (*Tomorrow’s exam is the listening exam, right?*). Through posing these questions, it seemed that these participants did use that activity as a platform to seek and exchange information that was useful to them.

Next are examples of questions that served to request opinions and suggestions. In Example 4.18, Celina was requesting her peer students’ opinions about some Chinese words for tattoo. Her entry was “我想一个纹身！我想这个：改变，爱♥，勇气。你们觉得好不好？” (*I want to tattoo! I want to choose these character words: change, love ♥, courage. What do you think of them?*). Facebook was the right place for Celina to discuss about tattoo of Chinese characters, which was a “cool” thing to her, since the purpose of the group was learning Chinese. Example 4.27 is an alternative question in which Britney was seeking the other participants’ suggestion on the destination country for summer vacation. Britney posted: “我应该去哪里度假？多米尼加共和国，波多黎各，巴哈馬？” (*Where do I need to spend my holiday? Dominican, Puerto Rico, or Bahamas?*). If any of the participants had visited one of these countries and were willing to share their experiences, then this question served as an elicitation for interaction.

Another example of a question that was used to request explanation is Kathy’s entry: “道法自然”. This is a Chinese philosophical expression which has highly complicated meanings. Kathy only posted this expression without any other linguistic

context. So Becky responded to Kathy with this entry: “我不懂。这些字是什么意思?” (*I do not understand it. What do these characters mean?*) Even I did not understand what Kathy meant and why she posted it. But Kathy did not reply to Becky. Most probably Kathy did not understand the real meaning of this expression. Maybe she came across the expression and thought it was cool to post it on the group page.

Regarding rhetorical questions, there are only four instances in the current data. A rhetorical question is defined as one that requires no answer because the answer is obvious and does not need to be stated. One example is Crystal's entry: “这个学期。。虽然我的课比上个学期（小）少，我现在比上个学期忙得多。这怎么可能呢?” (*This semester, I am taking fewer courses than last semester, but I am now much busier than last semester. How could this be possible?*). Based on the content of the whole entry, it could be inferred that, after posing the question *How could this be possible?* Crystal might not seek answers from her peers but question herself. Therefore, it is considered a rhetorical question. In view that the participants had yet to learn about rhetorical questions and that the appropriate and correct use of rhetorical questions itself was challenging to the intermediate level-learners, it was not surprising that there were only four instances of such questions used by two participants.

In summary, the above findings and the examples demonstrated that the participants frequently used questions to interact with each other during their social communication on Facebook and the questioning function was exploited to elicit communication in that asynchronous environment. Although questioning has been well researched in the line of input-interaction-output research in the L2 context, such as

communication strategies (e.g., Ellis, 2008; Gass, 1997; Gass & Varonis, 1994; Long, 1996; Swain, 1995), little research has been conducted in the social media environment. Previous researchers reported that native speakers often made use of questions to establish and control topics when communicating with non-native speakers (Ellis, 2008). Teachers typically tended to use a lot of questions to interact with students, which gave the teacher control over the discourse or the content in particular (Ellis, 2008). Nevertheless, in the social media such as Facebook, every member in the group had equal control of topics and enjoyed full freedom in asking questions and in performing other language functions.

Regarding the research question—to what extent all the questions were answered by the peer students, findings show that more than half (54.9%) of the total questions were not responded to (see Table 4.5). When this sub-research question was further

Table 4.5

*Distribution of Questions Responded to or Unresponded to*

Questions Responded to or Unresponded to	Polar	Q-word	Alternative	Percentage
Responded	43.5% (n=30)	49.3% (n=35)	0% (n=0)	45.1% (n=65)
Unresponded	56.5% (n=39)	50.7% (n=36)	100% (n=4)	54.9% (n=79)
Total	100% (N=69)	100% (N=71)	100% (N=4)	100% (N=144)

examined, no identifiable patterns were found in terms of what type of questions were more inclined to be responded to, except for alternative questions which had only four in total and all of which were not responded to. With regard to the high unresponse rate, it is likely related to the nature of asynchronous online communication and the unique

features of Facebook. A prominent characteristic of asynchronous computer-mediated communication is that a significant delay can exist between the time a message is sent and when the message is read (although the communication also can be instant on Facebook if the message sender and receiver are both online). This delay could easily make the message out of date or easily overlooked when there were already several new entries posted and new dialogues occurred on the Facebook group page. If a message was not up to date, the students may not be interested in responding to it. On Facebook, the group home page was constantly being updated if a group was active. The newest entry was always on the top. Therefore, some students may only read the most recent updates on the screen rather than scroll down the page and check the rest entries displayed.

Additionally, for many Facebook users including the Facebook participants in the present study, they might be members of several, or even dozens of, social groups on Facebook. Therefore, some of the participants may receive many updates notifications and may encounter overwhelming updates and messages when they log on to Facebook. Updates notifications from this particular group could be inundated with all other updates and messages from varied sources on the participants' Facebook homepage.

According to the interview conducted after the study, other reasons for the high unresponse rate include that 1) answers to some questions were too obvious; therefore they did not want to respond to. Because it is a norm on Facebook that users enjoy the full freedom in expression and in interaction, the participants were not forced to answer each other's questions although the activity was designed for pedagogical and research purposes; 2) some questions were not thought provoking or not open-ended and the participants expressed that there was nothing to comment on those questions or they were

not interested in commenting on those questions; This situation deserves both researchers and educators to contemplate. On one hand, communication and networking on Facebook is part of users' entertainment, it could hardly be thoughtful to most entries and dialogues. On the other hand, if a researcher or an educator designs tasks to make the students have thoughtful dialogues on Facebook, Facebook might not be the right tool to conduct thoughtful and deep dialogues, as Thorne (2003) suggested that the right tool should be used for the right job regarding the use of technology; 3) it was easy to merely read what other students posted; if this was the case, namely, those entries that were not responded to were read, then the high unresponse rate could be interpreted differently. At least, it meant the Facebook participants exposed them to the Chinese language after class; 4) some of them often checked Facebook updates on their cell phones, but made responses in Chinese on computers. By the time of computing, they had already forgotten about those messages they read on cellphones. It shows that the digital literacy practices with the target language could be simultaneously implemented in a variety technological environments to the current college students; and 5) many times, they were "simply lazy" because this was not a graded assignment. Therefore, no matter how "free" the activity was in terms of what the students wanted to post and how "authentic" the activity was in view that it was part of the students' daily lives, some participants may still consider it a task, or even an academic burden.

In summary, the findings of the second sub-research question revealed that among 144 questions identified from the total of 910 instances of discourse functions, the participants mainly used *wh*-questions and *yes/no* questions during their communication and interaction, which covered 49.3% and 47.9% of the total questions respectively.

There were only four instances of alternative questions. More than 50% of those questions were asked to request information. Questions asked to request clarification or confirmation covered around 20%. Less than 10% of questions were asked to request explanation. Similarly, less than 10% of questions were asked to request suggestions and to request opinions. Only four out of 144 questions were rhetorical questions. In addition, more than half (54.9%) of the total questions were not responded to. Although it is hard, if necessary, to know whether the number of different types of questions raised and the functions of those questions performed met certain standards, the participants' use of questions and their functions was based on the real-life contexts and was performed for communicative purposes. From the systemic functional perspective of language, this is the real goal of second language learning because language use is functional and functional use of language is influenced by the social and cultural contexts (Eggins, 2004). Learning a second language, a learner should be able to functionally use the target language in specific social and cultural contexts. As for the finding that only four alternative questions were used, it might be hasty to conclude that the participants were not good at using this question type. Most probably, only in those contexts were the alternative questions needed. Regarding the finding that few rhetorical questions were used, the reason might be that the students were at a developmental stage where they had yet to master the ability to apply the rhetorical questions in the real-life context.

**Research question 1.3.** *What are the characteristics of those questions that the learners posed most?*

As I explained in the *Methods* section, two participants'—Crystal's and Becky's—questions were selected for deeper analysis because these two participants

raised more questions than others and that the number of entries they posted and the number of characters they produced were also among the top (see Table 3.13 for review). The purpose of this question is to investigate whether there are any characteristics and particularly uniqueness among those questions that Becky and Crystal used to communicate with other participants. After perusing every question Becky and Crystal raised and the context in which each question was hosted, I noticed that their questions both shared common characteristics that most of all 144 questions had and displayed their own uniqueness. For the common characteristics, many of Becky's and Crystal's questions, like other participants' questions, were about social and recreational matters (e.g., 你最喜欢的中国菜是什么? Becky's entry: *What is your favorite Chinese food?* 这个情人节你们干什么? Crystal's entry in Example 4.34: *What will you do on the Valentine's Day?*) and about their studies, assignments, as well as campus activities (e.g., 谁要做 HSK 考试? 我不知道如果我准备了对 HSK4 还是 HSK3。你呢? Becky's entry: *Who will take HSK test? I do not know whether I need to prepare for HSK4 or HSK3. How about you?* 今晚谁要去中国文化开会? Crystal's entry in Example 4.33: *Who is going to attend the Chinese Language and Culture Club's meeting tonight?*). Some of Becky's and Crystal's questions also displayed uniqueness. For example, Becky was the only participant who raised several questions to check the accuracy of her word choice and grammar in her entries. Crystal posed more questions (10 out of 18) as initiating entries than questions as responses to or comments on others' entries. In addition, Crystal raised three rhetorical questions out of the four among all 144 questions. As introduced in the methods section, a rhetorical question is a question used as a rhetorical device to make a statement rather than to seek an answer because the answer is



obvious and does not need to be stated. Below are some examples of Becky's questions about checking the word choice and grammar of her sentences.

Example 4.30 A question checking the grammaticality



Becky's entry: *I bought a pair of new shoes yesterday. They are soft and comfortable. I hope they could propel me to run faster... But I know I need to run more frequently. (Is grammar all correct? ;^;)*

Example 4.31 A question checking the improvement

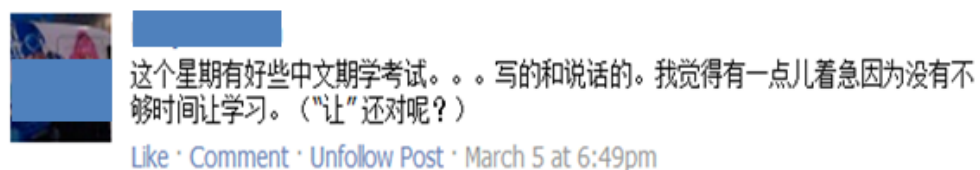


Becky's entry: ... ..

My comment: Your sentences are hard to understand. I do not think your ideas were conveyed clearly. Could you try to rewrite it?

Becky's response: *In the language class, I saw other students who are also learning Chinese. It is good to attend the class with friends. (Is it better? Please help; ...;)*

Example 4.32 A question checking the usage of a verb



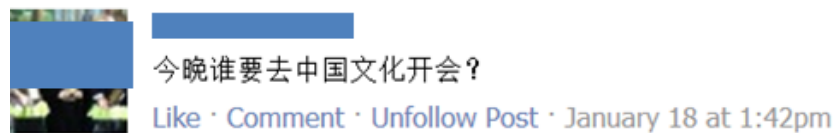
Becky's entry: *There are a few Chinese exams this week...including writing and speaking. I feel a little bit worried because I do not have sufficient time to study. (Is the usage of 'Ràng' correct?)*

In Example 4.30, the last sentence does not conform to the Chinese syntax. The adverbial phrase *more frequently* should and can only precede the verb *run* while it is flexible in English. Most probably Becky was uncertain about this sentence when she posed that question since the other two sentences are acceptable. In Example 4.31, Becky was rewording her entry after I expressed non-understanding. Her first entry was totally incomprehensible. But her rephrasing was correct. Except that she literally translated an attributive clause *who are also learning Chinese* into Chinese, which is not correct, the other parts were correct. Therefore, she raised a question to check whether her rewording was better. The question in Example 4.32 was checking whether she used 'Ràng' pattern correctly. All these questions indicate that Becky did care about the accuracy of her language use in this after-class social domain of discourse. During the interview, Becky reported that when she was posting entries, she would make an effort to compose sentences correctly. That is to say, when Becky practiced functional use of the target language for social communication, she also focused on the forms of her language in that meaning-focused Facebook posting activity. This finding is in consistent with Mills' (2011) study which reported that intermediate-level students of French also focused on grammatical accuracy to make their message clear in a Facebook project of creating a global simulation community. However, it should be noted that none of these forms-focused questions received responses from other students. Except for my feedback, Becky did not receive responses to these forms-focused questions from other members of the Facebook community. This shows that no negotiation of meaning occurred between

the students in these examples. Most probably, the participants deemed it was the researcher's job to provide linguistic feedback to Becky; or the participants were not confident enough to give any linguistic feedback. Therefore, it would be better to design a feedback mechanism in order to meet different students' needs if a similar activity is to be implemented for pedagogical purposes.

Following the analysis of Becky's questions are examples of Crystal's initiating questions:

Example 4.33 An entry starting with a question (1)



Crystal's entry: *Who is going to attend the Chinese Language and Culture Club's meeting tonight?*

Example 4.34 An entry starting with a question (2)



Crystal's entry: *What will you do on the Valentine's Day?*

Example 4.35 An entry starting with a question (3)



Crystal's entry: *Who knows when we should finish paying our tuition fee for the summer? I am a little bit concerned.*

Example 4.36 An entry starting with a question (4)



Crystal's entry: *When should we receive our visa and passport?*

In the above examples, Crystal's questions were about attending a student society's meeting, planning for the Valentine's Day, the time for paying summer tuition, and the progress of their applications for Chinese visas. In general, the linguistic contexts where questions were located were that 1) an entry started with a question (e.g., 今晚谁要去中国文化开会? *Who is going to attend the Chinese Language and Culture Club's meeting tonight?*); 2) an entry started with a description or a statement followed by a question (e.g., 这个周末我回家。你们呢? *I will go home this weekend. How about your guys?*); 3) a question was raised in the follow-up comment (e.g., **Celina:** 我很难过因为今天没去中文课。 *I felt bad because I did not go to the Chinese class.* **Maggie:** 为甚麽你没去? *Why did you not go?*). Around half of Crystal's questions (11 out of 23) fell into the first case and most of her initiating questions (9 out of 11) were responded to or commented on by other participants. It suggests that a Facebook post starting with a question would be more likely to trigger interactions among the students. When a student started up an entry with a question, it was as if the student initiated a topic to all the audience in a face-to-face conversation and this question would be more likely to be responded to. If an interaction or a prolonged dialogue occurred between or among the students on Facebook, it increased the opportunity for the students to produce more target language, and more target language use might yield higher probability for language learning to occur (Mackey, 2007).

Following are examples of Crystal's rhetorical questions.

Example 4.37 A dialogue containing Crystal's rhetorical question

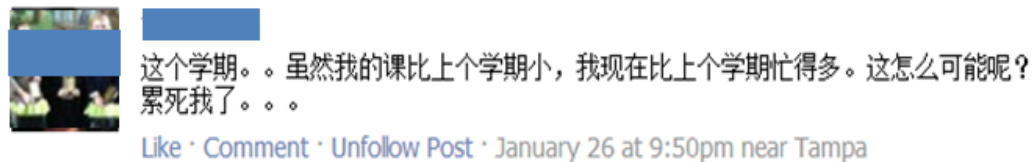


Zack's entry: *The bathroom in the subway stations in Tokyo are now equipped with electronic games. Men can play games while they are in the bathroom. It is pretty interesting.*

Crystal's response: *Men are really weird. In the bathroom, who wants to play games?*

Zack's response: *Of course, I want to. Why don't you want to?*

Example 4.38 An entry ending with a rhetorical question



Crystal's entry: *This semester, I am taking fewer courses than last semester, but I am now much busier than last semester. How could this be possible?*

Example 4.39 Another rhetorical question Crystal posed



Crystal's entry: *Oh, Gosh, Why is it so difficult to write this assignment?*

In Example 4.37, Crystal used a rhetorical question to provide a self-contained answer, which could be interpreted as *of course, nobody would play games in the bathroom*. When Crystal said *How could this be possible?* in Example 4.38, she was not intended to seek an answer. The same is to the question in Example 4.39: *Why is it so*

*difficult to write this assignment?* According to the systemic functional linguistics theory, language is a semiotic tool used to construe human experiences and the humans make linguistic choices to contribute to the realization of social contexts (Halliday, 1978). Crystal chose to use rhetorical questions to construct her experience and to express her disagreement (Example 4.38) as well as her frustration in the school work (Example 4.39) in those two situations. Although the participants had yet to formally learn about the construction and the use of rhetorical questions during the time of the study, Crystal had demonstrated the ability in the use of rhetorical questions in Chinese.

**Summary of qualitative findings.** In the qualitative part, the present study concerns discourse types and functions of intermediate-level Chinese learners' language use on Facebook when they conduct social communication in Chinese and special attention was given to question types and functions of those learners' language use. Findings reveal that the Facebook participants mainly used 22 types of discourse functions during one-semester of social communication in Chinese on Facebook. The highest percentage of discourse function was *asking questions*. The second highest percentage of discourse functions were *expressing opinions* and *describing events or activities unrelated to campus*. The next frequently used discourse functions were *expressing emotions* and *describing events or activities related to campus*, which ranked the fourth and fifth respectively. Other discourse functions listed among the top 10 were *sharing similar experiences or perspectives*, *expressing likes and dislikes*, *expressing wishes*, *making explanations* and *expressing thanks*. The least used functions were *expressing modesty*, *making predictions*, *expressing apology*, *delivering greetings*, *telling jokes or using humor*, and *offering help*.

With regard to question types and functions, findings reveal that the participants mainly used *wh*-questions and *yes/no* questions during their communication and interaction. Alternative questions were seldom used. Among those questions, more than half of them were asked to request information. Questions functioning to request clarification or confirmation covered around 20%. Less than 10% of questions were requesting explanation, requesting suggestions and requesting opinions. Rhetorical questions were the least and rarely used. In addition, more than half (54.9%) of the total 144 questions were not responded to.

Many of the traditional types of language practice were largely mechanical and mechanical drills were of little value for L2 acquisition because they did not train the learner to use the target language in contexts (DeKeyser, 2007). In the present study, the participants were given full freedom and were provided open space for practicing functionally using Chinese as a foreign language on Facebook. They made different linguistic choices to meet different needs in each specific context, where a variety of language functions were performed. Such language use aligns with systemic functional linguistics perspective which claims that language use is functional, semantic and contextual and humans use language for accomplishing everyday social life. So is true to the ultimate goal of foreign language learning. In addition, Lightbown and Spada (2006) suggested that in the L2 context, when practices were designed as opportunities for meaningful language use, then the role of practices was beneficial and even essential, although meaningful practices do not necessarily ensure high levels of fluency and accuracy.

## Results for Quantitative Research Questions

For the quantitative part, this study also has an overarching research question—*Does conducting weekly social communication in Chinese on Facebook impact intermediate-level learners' writing ability?* Under this overarching research question, there are two sub-research questions. The results of each sub-research question are presented below.

**Research question 2.1.** *Is there any difference in quantity in writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?*

When answering this sub-question, I used a non-parametric statistic test—Sign Test to analyze the collected data. Three reasons necessitate the option for the Sign Test. First, if the sample size is less than 30, it is not statistically reasonable to use any kind of parametric modeling, which assumes normality (Conover, 2006). In the present study, the sample size is 18, less than 30, with each group nine participants. Second, in order to verify whether the collected data (the number of characters in three writing tasks) are normally distributed or not, I used the Shapiro-Wilk test, which is an appropriate normality test for a small sample size, to assess the data. Table 4.6 shows the results of the Shapiro-Wilk tests. The null hypotheses for normality tests are that the collected data are normally distributed. If the  $p$  value is greater than .05, then we fail to reject the null hypothesis, which means the data are normally distributed. If the  $p$  value is less than .05, then we can reject the null hypothesis, which means the data significantly deviate from a



normal distribution. In Table 4.6, the  $p$  values for Task 1 and 3 are greater than .05 while the  $p$  value for Task 2 is less than .05. Thus, the data in Task 1 and 3 could be normally

Table 4.6

*Tests of Normality in the Number of Characters in Three Writing Tasks*

Task	Shapiro-Wilk		
	Statistic	df	Sig.
Task1	.925	18	.157
Task2	.893	18	.043
Task3	.917	18	.116

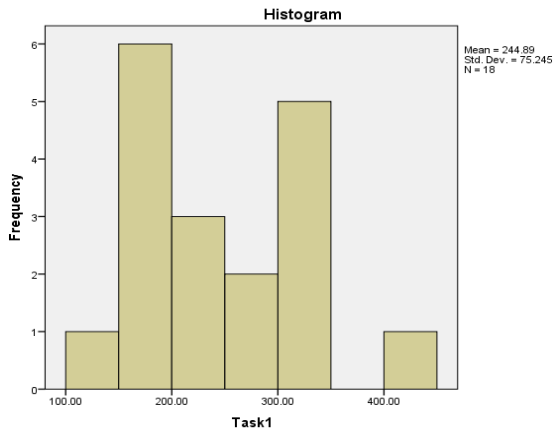


Figure 4.1. Histogram of characters produced by the two groups in Task 1.

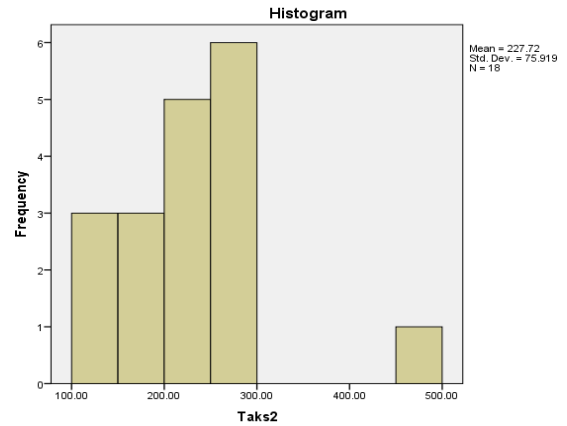


Figure 4.2. Histogram of characters produced by the two groups in Task 2.

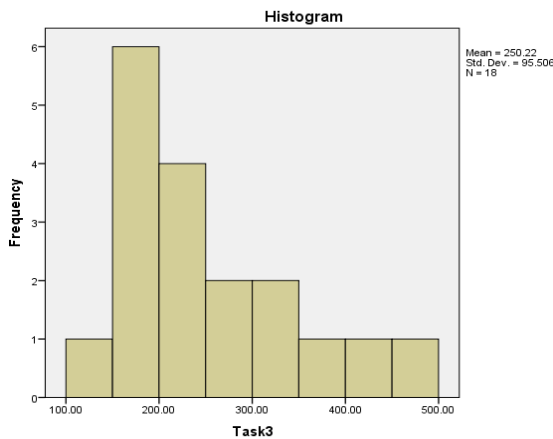


Figure 4.3. Histogram of characters produced by the two groups in Task 3.

distributed (see Figure 4.1 and 4.3) and the data in Task 2 are not normally distributed (see Figure 4.2). However, the  $p$  values for Task 1 (.157) and 3 (.116) are merely moderately greater than .05. Therefore, it is still safer to use a non-parametric statistic test than to use a parametric one. Third, the Sign Test is a test for analyzing the differences between two variables and for comparing the probability of a positive difference with the probability of a negative difference (Conover, 2006). Although we can certainly find the difference between the number of characters produced by one participant in different tasks or by two participants from different groups in the same task, we cannot add to the degree of certainty by simply subtracting two numbers. The use of Sign Test can help add to the degree of assurance in the result. For example, if we say there is a difference between the number of characters before and after the treatment, this does not indicate that the difference is significant. The Sign Test was, therefore, chosen to analyze the

Table 4.7

*The Number of Chinese Characters Produced by Both Groups in Three Writing Tasks*

Participant	# of characters in T1	# of characters in T2	# of characters in T3
ES1	301	270	214
ES2	309	255	263
ES3	319	258	234
ES4	405	451	474
ES5	157	200	123
ES6	142	233	406
ES7	326	271	235
ES8	288	273	349
ES9	168	156	180
Average	268.3	263	275.3
Total	2415	2367	2478

Table 4.7 (continued)

Participant	# of characters in T1	# of characters in T2	# of characters in T3
CS1	193	146	183
CS2	338	295	358
CS3	267	216	222
CS4	178	178	197
CS5	206	175	163
CS6	194	205	321
CS7	205	149	168
CS8	197	122	157
CS9	215	246	257
Average	221.4	192.4	225.1
Total	1993	1732	2026

*Note.* ES1=Experimental Group Student 1, CS1=Control Group Student 1.  
T1=writing task 1, T2=writing task 2, T3=writing task 3.

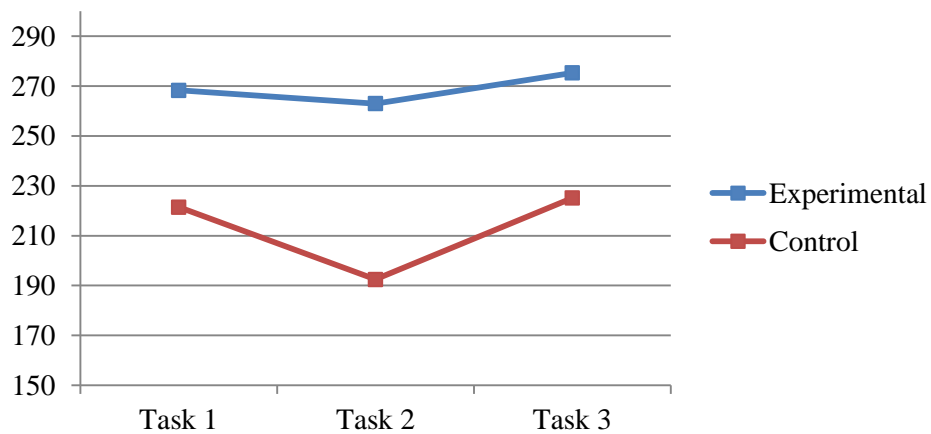
differences (at the .05 level of significance) in the number of characters produced by the two groups in three writing tasks in order to answer the first quantitative sub-research question. Table 4.7 above shows the raw data of the number of Chinese characters the participants in both groups produced in the three writing tasks. These numbers were input into SPSS software and the results are obtained through running the Sign Test.

Table 4.8 and Figure 4.4 display the descriptive statistics of the results of the first quantitative research question. From the table and the figure, it can be seen that the experimental group as a whole produced more characters in all three writing tasks than the control group. On average, both groups produced the fewest characters in the second writing task, which was introducing their campus life to a simulated Chinese net pal, and both groups produced the most characters in the third writing task, which was sharing their summer plan to the simulated Chinese net pal.

Table 4.8

*The Average Number of Characters in Three Writing Tasks Between the Two Groups*

Group	Task 1	Task 2	Task 3
Experimental	268.33	263	275.33
Control	221.44	192.44	225.11



*Figure 4.4.* The average number of characters in three writing tasks between the two groups.

The Sign Test statistics results (see Table 4.9) show that there was no significant difference in writing Task 1 in terms of the number of Chinese characters produced by the two groups ( $p = .508, >.05$ ). Task 1 was conducted before the treatment and served as a baseline. Therefore, although Table 4.8 shows that the experimental group produced more Chinese characters in Task 1 than the control group, the Sign Test results nevertheless indicate that the two groups were comparable at the outset of the study. Table 4.9 also indicates a significant difference for both Tasks 2 and 3 between the two groups (i.e., both  $p$  values are less than .05), with the experimental group producing more characters than the control group (as seen in Figure 4.4).

Table 4.9

*Sign Test Results*

Sign Test	Task 1	Task 2	Task 3
	Control - Experimental	Control - Experimental	Control - Experimental
Exact Sig. (2-tailed)	.508	.004	.039

These results revealed that the participants in the experimental group performed better than the control group in writing Task 2 and Task 3 in the number of Chinese characters produced in the same time frame. The results indicate that one-semester, or 14-weeks, posting in Chinese on Facebook did impact the participants' writing ability in the aspect of quantity. On a group basis, the students who regularly participated in posting entries in Chinese on Facebook generated more Chinese characters in delayed writing tasks in a fixed time frame than the students who did not participate in the semester of the present study.

**Research question 2.2.** *Is there any difference in quality in writing products between intermediate-level learners who conduct weekly social communication in Chinese on Facebook and those who do not?*

When answering this sub-question, I used another non-parametric statistic test—the Mann-Whitney test to analyze the collected data. The reasons for applying another non-parametric statistic test are similar to the reasons described in the first quantitative sub-question. First, the sample size is small and it is not statistically reasonable to use a parametric modeling that assumes normality. Second, in order to verify whether the collected data—the final score each participant obtained in each writing task (see Table

4.11)—are normally distributed or not, I also used the Shapiro-Wilk test, which is an appropriate normality test for a small sample size, to assess the data. Table 4.10 shows the results of the Shapiro-Wilk tests. From the table, it can be seen that the  $p$  values for the scores in all three writing tasks are greater than .05. Particularly, the  $p$  value for Task 3 is a high percentage number. Therefore, all these data could be normally distributed (see Figure 4.5 and 4.6) and the data in Task 3 (see Figure 4.7) in particular. For safety, I still used a non-parametric statistic test to analyze this set of data.

Table 4.10

*Tests of Normality of the Scores in the Three Writing Tasks*

Task	Shapiro-Wilk		
	Statistic	df	Sig.
Task1	.921	18	.133
Task2	.909	18	.083
Task3	.981	18	.959

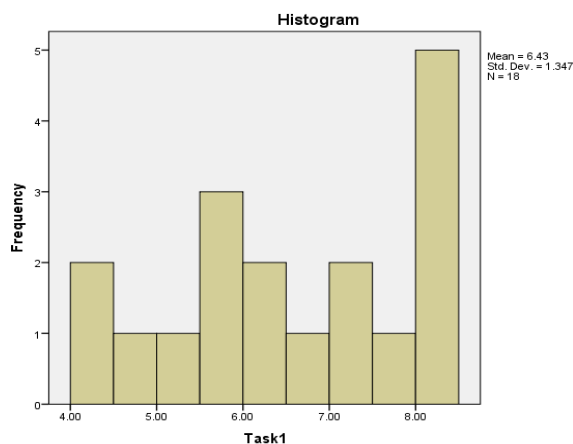


Figure 4.5. Histogram of the scores obtained by the two groups in Task 1.

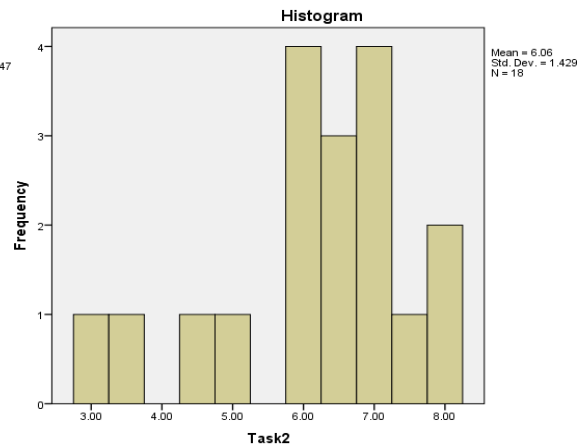


Figure 4.6. Histogram of the scores obtained by the two groups in Task 2.

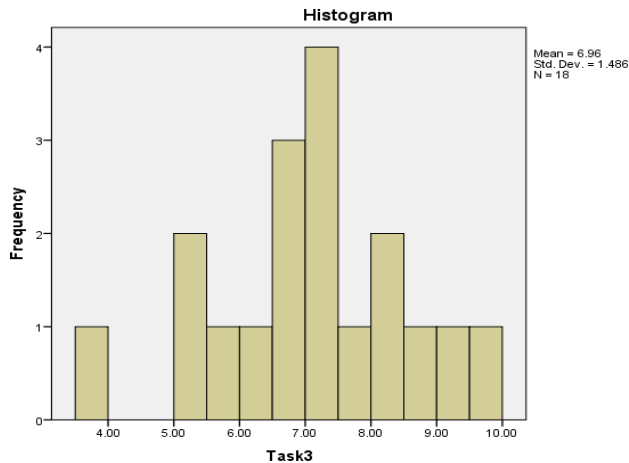


Figure 4.7. Histogram of the scores obtained by the two groups in Task 3.

In addition, the Mann-Whitney test is a test for analyzing the ranks of two random samples. A basic assumption of the Mann-Whitney test is that if two random samples are identically distributed, the ranks assigned to them will be distributed equally likely (Conover, 2006). For example, we can let  $X_1, X_2, \dots, X_n$  denote the random sample of size  $n$  from population one and let  $Y_1, Y_2, \dots, Y_m$  denote the random sample of size  $m$

Table 4.11

*The Average Score Each Participant Obtained in Each Writing Task*

Participant	Score in T1	Score in T2	Score in T3
ES1	8	8	9.5
ES2	8	7	8.25
ES3	8	7	6.75
ES4	8.25	8	8.5
ES5	5.25	3.25	3.75
ES6	4.75	6	7.25
ES7	6	6.25	7.25
ES8	6	6.75	8
ES9	4.25	3	5
Average	6.5	6.14	7.14
Total	58.5	55.25	64.25

Table 4.11 (continued)

Participant	Score in T1	Score in T2	Score in T3
CS1	7	5.75	6.5
CS2	8	7.25	9.25
CS3	5.5	6	5.5
CS4	7	7	7.25
CS5	5.75	6.25	7
CS6	4.25	6	6.25
CS7	5.75	4.75	5.25
CS8	6.5	4.25	7.5
CS9	7.5	6.5	6.5
Average	6.36	5.97	6.78
Total	57.25	53.75	61

*Note.* ES1=Experimental Group Student 1, CS1=Control Group Student 1. T1=writing task 1, T2=writing task 2, T3=writing task 3.

from population two. Then, we can assign the ranks 1 to  $n+m$  to the combined observations (scores here) from the smallest to the largest. If the observations (scores here) in the sample  $X_i$  and in the sample  $Y_j$  are identically distributed, the ranks assigned to those observations in the two samples will be distributed equally likely. This is the basic principle behind rank tests (Conover, 2006). Table 4.11 above displays the average score each participant obtained in each writing task. These data were input into SPSS software and the results are obtained through running the Mann-Whitney test.

Table 4.12 and Figure 4.8 display the descriptive statistics of the results of the second quantitative research question. From the table and the figure, it can be seen that the experimental group as a whole performed better in all three writing tasks than the control group. On average, both groups received the lowest scores in the second writing task, which was about introducing their campus life to a simulated Chinese net pal, and



both groups performed the best in the third writing task, which was about sharing their summer plan to the simulated Chinese net pal.

Table 4.12

*The Mean Scores of Three Writing Tasks Between the Two Groups*

Group	Task 1	Task 2	Task 3
Experimental	6.5	6.14	7.14
Control	6.36	5.97	6.78

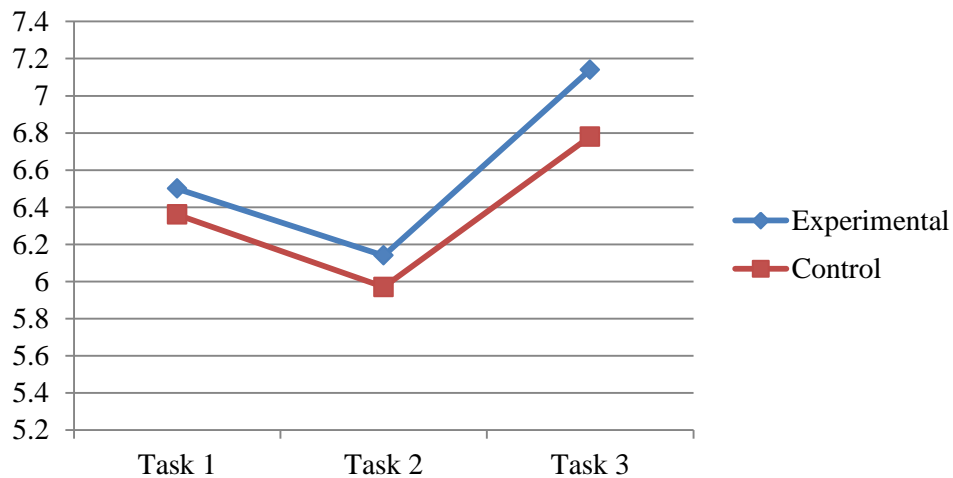


Figure 4.8. The mean score of three writing tasks between the two groups.

The Mann-Whitney test (see Table 4.13) shows that there was no significant difference in writing Task 1 in the scores obtained by the participants between the two groups ( $p = .689, >.05$ ). Therefore, although Table 4.12 shows that the experimental group performed slightly better in Task 1 than the control group, the Mann-Whitney test results indicate that this difference is not significant. In other words, the two groups were comparable in terms of the quality of their writing at the outset of the study. Table 4.13

also indicates that there were no significant differences in Tasks 2 and 3 between the two groups (i.e., both  $p$  values are greater than .05).

Table 4.13

*Mann-Whitney Test Results*

Statistics Test	Task 1	Task 2	Task 3
Mann-Whitney U	36.000	31.500	30.000
Wilcoxon W	81.000	76.500	75.000
Z	-.400	-.799	-.930
Asymp. Sig. (2-tailed)	.689	.424	.353

These results reveal that the participants in the experimental group as a whole did not perform significantly better than the control group in writing Task 2 and Task 3, which indicates that the Facebook posting activity did not demonstrate impact on the improvement of the participants' Chinese writing ability in the aspect of quality. Taken as a group, the students who regularly participated in posting entries in Chinese on Facebook in one semester did not improve significantly in the quality of their Chinese writing ability when compared to the students who did not use social media to practice Chinese outside of class.

**Summary of the Overall Results**

This study explored what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook and examined whether conducting weekly social communication in Chinese on Facebook impacted their writing ability. A mixed methods design was adopted with a

qualitative approach addressing discourse functions of student communication on Facebook and a quasi-experimental design examining the impact of conducting weekly social communication in Chinese on Facebook on student writing ability in Chinese.

Qualitative findings revealed that the participants used 22 types of discourse functions during their social communication on Facebook. The highest percentage of discourse function was *asking questions*. The next two frequently used discourse functions were *expressing opinions* and *describing events or activities unrelated to campus*. Other discourse functions listed among the top 10 were *sharing similar experiences or perspectives*, *expressing likes and dislikes*, *expressing wishes*, *making explanations* and *expressing thanks*. The least used functions were *expressing modesty*, *making predictions*, *expressing apology*, *delivering greetings*, *telling jokes or using humor*, and *offering help*. When asking questions, the participants mainly used *Wh-* questions and polar questions during their communication and interaction. Alternative questions were seldom used. With regard to question functions, findings revealed that more than half of the questions were asked to request information. Questions functioning as requesting clarification or confirmation covered around 20%. Less than 10% of questions were requesting explanation, requesting suggestion and requesting opinion. Rhetorical questions were the least and rarely used. In addition, more than half (54.9%) of the total 144 questions were not responded to by other students.

Quantitative results revealed that there was a significant difference in writing quantity (i.e. the number of Chinese characters produced) between the two groups, and that the experimental group produced significantly more Chinese characters than the control group in the later writing tasks, while there was no significant difference between

the two groups in the first writing task. In terms of the writing quality, results showed that there were no significant differences in the scores of later writing tasks between the two groups, which indicated that the participants who regularly participated in posting entries in Chinese on Facebook in one semester did not translate into improvement in Chinese writing ability in quality than those who did not participate.

## **Chapter V Discussion and Implications**

This chapter begins with interpreting the findings of the qualitative research questions as well as the results of the quantitative research questions. After that, the chapter presents a discussion of pedagogical implications of the overall research results and methodological implications of the present study. Then, the limitations of the study are presented and some suggestions are made for future research. The chapter ends with a conclusion section.

### **Interpreting and Making Connections of the Findings**

**Language functions in social communication.** Research has demonstrated that computer-mediated communication provides language learners with the opportunity to generate and initiate different kinds of discourse, which could enhance their ability to perform a great variety of language functions (Chun, 1994; Darhower, 2002; Koester, 2002; Sotillo, 2000). In the present study, qualitative findings of the participants' use of the target language on Facebook also show that Chinese language learners produced a wide range of language functions. A total of 22 types of discourse functions were identified in this study. Among the 22 types of discourse functions, these functions were also reported by prior researchers: questioning, making suggestions, agreeing or disagreeing, requesting information or confirmation, expressing opinions, expressing apology or thanks, and greeting (e.g., Chun, 1994; Habil, 2010; Kern, 1995; Kırkgöz,

2010; Sotillo, 2000; Vasquez, 2004; Zhu, 2001). Different from the findings of the previous research, the participants in this study also used expressing emotions, expressing likes and dislikes, expressing wishes, sharing similar experiences, describing events, expressing compliments and encouragement, using humor, expressing understanding, and expressing modesty. To be able to functionally use the target language is the ultimate goal of language learning in view that language is primarily a functional tool and a tool for communication, as systemic functional linguistics theory maintains (Chun, 1994; Darhower, 2002; Halliday, 1993; Koester, 2002; Kramsch, 1986). For example, when encountering the target language speakers in an online environment, learners need to perform some basic language functions, such as introducing themselves, to initiate the dialogue; they need to interact with the target language speakers through asking questions, sharing their interest and hobbies, etc.; and they need to establish and maintain relationship with the target language speakers through performing a repertoire of language functions, such as requesting information, sharing similar experiences, expressing opinions, etc.

**Social interaction on Facebook and second language learning.** Language learning can be conceptualized as both a social and cognitive process (Lantolf & Thorne, 2006; Vygotsky, 1978). The social and interactive nature of social networking tools presents the intriguing possibility of creating a fascinating learning environment to engage the students when such a tool as Facebook is used for language learning purposes (Mills, 2011; Roblyer, et al., 2010; Terantino, 2013; Thorne, Black, & Sykes, 2009). By encouraging the participants to conduct free communication with the target language on Facebook, the present study reveals that a total of 22 types of discourse functions were

performed by the participants. Asking questions was the most frequently used language function. Through asking questions, the participants requested information (e.g., 我们什么时候应该收到我们的签证和护照? *When should we receive our visa and passport?*), requested clarification or confirmation (e.g., 我的雨伞坏了。你让我借你的雨伞吗? 可不可以? *My umbrella is broken. May I use yours? Is it OK?*), requested explanation (e.g., 这些字是什么意思? *What do these words mean?*), requested opinions (e.g., 在这个世界, 什么是最重要的? *What do you think is the most important in this world?*), and requested suggestions (e.g., 我应该去哪里度假? *Where should I go for a vacation?*). Compared with making questions for drilling purposes in some language classrooms, these questions were more situational and closer to their real life. Therefore, it could be a pedagogical option for teachers to let students practice certain language patterns and functions. But it has to be acknowledged that without the teachers' monitor and feedback like the activity in the study, the students would have no idea whether those questions were correctly and appropriately used. In addition, when the students posted those questions, some of them may not care much about whether other students would respond to their questions. The finding that around half of the total questions were not responded to could be evidence that such an attitude existed. Since all Facebook posts in the activity were actually solicited from the researcher, there was no doubt that certain students posted entries simply because they consented to participating in the study. Therefore, cautions need to be taken about the claim that the social and interactive nature of social networking tools presents the intriguing possibility of creating a fascinating learning environment to engage the students.

Furthermore, according to the established tenets of interactionist SLA research (Chapelle, 2000; Long, 1996; Mackey, 2007; Swain, 1985; van Lier, 2000), the functional use of the target language in meaningful communication could trigger the learners' language output, which may create opportunities for language learning to take place. The students' perceptions seemed supporting the claim. According to the post-study interview, most of the Facebook participants reported that the free posting activity: a) allowed them to communicate with their peers about non-classroom topics in Chinese, which normally could not be sufficiently realized within limited classroom hours, b) involved them after class and extended classroom learning to the outside-class environment, c) particularly allowed them to communicate about things that they were interested in, and d) enabled them to recognize more Chinese characters and helped them to increase their Chinese vocabulary. However, these perceived benefits did not correspond well to the students' actual performance in the separate writing tasks based on the quantitative results of the study. Hence, careful consideration needs to be taken about the reported benefits from the participants.

**Social communication and second language writing.** One of the core research questions in this study was to investigate whether conducting weekly social communication in Chinese on Facebook impacted the intermediate-level learners' writing ability. It was perceived that Facebook could provide the participants with sufficient opportunities to practice using the target language and such social communication on Facebook could be conceptualized as a literacy practice in relation to writing (e.g., Mompean, 2010; Reid, 2011; Yancey, 2009). Therefore, one-semester social communication was hypothesized to positively impact the participants' writing ability.



However, quantitative results revealed that it did not improve the participants' writing ability in separate writing tasks in the aspect of quality although it had certain positive impact on the aspect of writing quantity. One possible reason was that the students' communication on Facebook was dominated by short pieces of text (less than 400 characters per post according to the Facebook rules), which is typical in the normal communication on Facebook. Particularly, the language used in most of the entries was "writing that reads like conversation" (Davis & Brewer, 1997), such as 明天的考试是听写的考试, 对吗? (*Tomorrow's exam is a listening exam. Is it correct?*), 这些字是什么意思? (*What do these words mean?*), etc. Although some participants contributed some long entries with sophisticated ideas and complex sentences (e.g., Pearl posted a four-sentence paragraph in an entry where she shared her observation of cultural behavior between Chinese friends on leave-taking; Jane posted a 10-sentence paragraph in a follow-up comment where she summarized the main idea of a story she learned in the class), this happened to only two or three students in one or two times. Therefore, practicing writing such short pieces for online social communication did not contribute to the improvement of the writing quality in essay composing, as the results of the present study revealed. Another possible reason was that the writing tasks used for testing all the participants' writing ability were conducted in the language lab and the situations in the writing prompts were designed rather than based on the real-life contexts. Therefore, there might be a weak connection, if any, between online written communication in a free and open social space and the essay writing in a constrained time and place with a given writing prompt. Additionally, it was also possible that all participants in the study did not

give much importance to the three writing tasks although the researcher told them that the three writing tasks were part of the graded assignments.

In summary, previous research has demonstrated the potential of a cross-modality transfer between asynchronous CMC to L2 writing skills (Armstrong & Retterer, 2008; Mark & Coniam, 2008; Raith, 2009; Shang, 2007). Results of the current study only partially supported the potential of transferability, namely, one-semester social communication on Facebook may be able to help students to increase the writing length in separate writing assessments, but could not contribute to the improvement of the writing quality.

**Use of Facebook in foreign language learning.** One of the rationales for adopting Facebook as a supplement to classroom instruction in the process of Chinese language learning is that Facebook is, without doubt, a daily part of most U.S. college students' lives (McBride, 2009; Mompean, 2010). Previous research conducted by Aubry (2009), Medley (2010), and Mills (2011) reported that language learners were highly motivated to communicate with their peers on Facebook and were more willing to share their ideas on Facebook than in the classroom. These findings might help to explain why the Facebook participants in the present study, as a whole, produced longer texts than the participants in the control group. Although the three writing tasks were not completed on Facebook, it is possible that after one-semester of posting on Facebook in Chinese, the participants in the experimental group became more used to using Chinese in CMC environments for sharing information about their personal life such as the campus life, daily activities, and summer plans, which were the topics in the writing tasks.

Additionally, the participants in the experimental group may have built up better and stronger skills in typing Chinese characters and in choosing Chinese characters through typing than those in the control group because they had more practice in these two skills during the study.

In terms of writing quantity, the results of the present study are also consistent with Liao (2010), who investigated the impact of online text chat (via MSN Messenger) on third-year Chinese L2 learners' composition skills. Results of Liao's (2010) study revealed that the participants' compositions, which were immediately written after each online chat session, displayed increasing amount in length compared with their compositions completed immediately after face-to-face conversations. Other studies have also reported the positive impact of CMC practice on L2 writing quantity, such as Armstrong and Retterer (2008) study, which examined the use of a blog in an intermediate level Spanish class and its effect upon students' perceived writing skills, and Mark and Coniam's (2008) study, which investigated collaborative writing through the use of wikis by secondary ESL learners.

Regarding writing quality, the results of the present study indicate that one-semester, or 14-weeks, of posting in Chinese on Facebook did not lead to significant improvements in participants' Chinese writing ability. In this area, our findings differ from those of other studies which have explored similar uses of Facebook. For example Shih's (2011) study investigated the effect of integrating Facebook and peer assessment with college English writing class instruction through a blended teaching approach. Shih (2011) reported that Facebook-integrated blended learning for the English writing course

was effective in improving the students' writing skills. However, it is important to point out that there was no control group in Shih's study and the investigated language in that study was English as a foreign language, which means the findings themselves may not be generalizable to the Chinese as a foreign language context. Furthermore, it is possible that the variable of peer assessment was also one of the factors that contributed to students' writing progress in that study. The results of the present study are also not consistent with those of Shang's (2007) study, which reported that after exchanging email messages of summarizing and synthesizing the assigned readings, EFL students made improvements on syntactic complexity, grammatical accuracy, as well as overall writing performance in the post writing assessment. It should be noted that Shang (2007) chose sentence complexity, the number of grammatical errors and the type/token ratio to represent the overall writing performance.

### **Pedagogical Implications**

Several pedagogical implications can be drawn from the present study. First, qualitative findings of the present study reveal that the Facebook participants used as many as 22 types of discourse functions during one-semester social communication on Facebook. This finding echoes previous L2 research in computer-mediated communication which demonstrated that CMC could provide learners with the opportunity to produce different kinds of discourse, which in turn facilitates their ability to apply a great variety of functions in different contexts (Chun, 1994; Darhower, 2002; Kern, 1995; Sotillo, 2000). This finding further suggests the importance of communicative use of the target language in the language learning process and the

indispensability of creating opportunities for students to actually perform communicative functions in authentic situations and in specific cultural contexts (e.g., Koester, 2002; Walker, 2010) as Facebook or other social media afford.

Second, qualitative findings of the present study also reveal that the Facebook participants frequently used the questioning function to interact with each other. Asking questions was the highest percentage of discourse function that the Facebook participants used. According to L2 interactionist researchers, the most effective way of developing successful L2 competence is to ensure that learners have sufficient opportunities to participate in conversations and to interact with each other, which could create opportunities for L2 learning (Mackey, 2007). Asking questions is no doubt a great strategy for learners to interact with each other. However, to ensure learning takes place, learners should be trained with effective questioning techniques. For example, learners, the learners above intermediate-level in particular, should learn how to ask open-ended questions, how to ask thought provoking questions, and how to engage the interlocutor to question their own views in order to promote higher order and critical thinking skills. In the present study, more than half (54.9%) of the total 144 questions were not responded to. The participants reported in the post-study interview that many posted questions were too obvious to be answered, which might be the main reason why many questions were not responded to. In Example 4.1, Diana's entry: *In this world, what is the most important thing? To me, it is to study hard, and then find a job that I like after graduation. How about you? What is the most important thing to you?* received the most follow-up comments, which shows that thought provoking questions are needed to truly engage those students.

Third, an important element of the present study is the adoption of the concept of free posting—a type of free writing—in view that Facebook is a social space and that it might not be appropriate to set any restrictions in this space. However, when the students were given too much “freedom”, they easily got lost and gradually became less interested and less motivated, not to mention the activity was actually a “pedagogical task” rather than a personal recreation. According to my observations, the students were in the regular pace in posting updates and interacting with each other in the first half of the semester, namely, before the spring break. After the spring break, the updates and comments gradually decreased and the great majority of entries were posted just before midnight on Sunday which was a kind of deadline I set for weekly contributions. This shows that the students may have considered the activity a task that had to be completed in the second half of the semester, which indicates most of them had lost interest and motivation towards the end of the semester. In the last week of classes, only Pearl and Celina continued posting updates and the other participants did not make any contributions. One obvious reason was that many exams and submissions of different types of projects were set in the second half of the semester, so the students were very busy. But other factors could not be neglected. In the post-study interview, three participants reported that they felt they had nothing to post and three participants suggested that providing some topics for them to share and discuss would be better. Therefore, if a similar activity is implemented, it might be better for language teachers to provide different topics for students to discuss. In addition, the language teachers can design some pre-determined learning outcomes for an activity to be conducted on Facebook so that students can have certain ideas about the goals of their language use and/or language learning (Kabilan, et

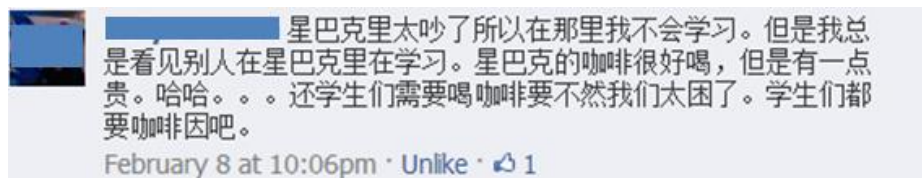
al., 2010). Of course, the topics could be designed by the students themselves and it is not necessary that all students are required to post or discuss about these topics. The designed topics could simply serve as springboards or triggers of the students' idea sharing and their entry posting. In short, a balance needs to be achieved between an informal social space and a geared learning environment for pedagogical purposes (Leitch & Warren, 2011).

Furthermore, the quantitative results reveal that the Facebook participants generated more Chinese characters than the non-Facebook participants in separate writing tasks, but the ability of producing more numbers of Chinese characters did not translate into the ability of composing better essays in quality. Though the quantitative results are not all positive, we could not simply deny the value of Facebook in language learning. It should be noted that the 21<sup>st</sup> century literacy practices are “multimodal, dynamically updating, situationally specific, and socially mediated practices” (Coiro, Knobel, Lankshear & Leu, 2008, cited by Greenhow & Gleason, 2012, p. 471), not limited to traditional reading and writing. The 21<sup>st</sup> century L2 literacy practices also include using the target language to participate in online social networking spaces and online discussion lists, to shoot instant messages, to participate in online chatting, to write emails and blogs, to maintain a website of the target language, to create and share music videos from the target culture, to podcast and video-cast, to conduct online searches of the information in the target language, to process and evaluate online information of the target language, etc. (Black, 2008; Coiro, et al., 2008; Gee, 2007; Greenhow & Gleason, 2012).

## Methodological Implications

One methodological implication of this study is to confirm Garrison, Anderson, and Archer's (2000) claim that one of the most challenging parts in concretizing an analytical framework is to determine an appropriate unit of analysis and to address the perplexing problems resulting from the decision. In this study, idea unit in a post, that is, the theme in a post, was adopted as the unit of analysis during the coding process. But deciding themes in a message is sometimes subjective. Below is an example.

### Example 5.1 An entry yielding different possibilities in unit of analysis



Translation: *It is too noisy in the Starbucks, so I cannot study over there, but I always saw people studying in the Starbucks. The Starbucks coffee is very good, but it is a little bit expensive. Aha ... In addition, students need to drink coffee. Otherwise, we are sleepy. All students probably need coffee.*

In this example, broadly speaking, this entry could be interpreted as one that is all about Starbucks. Therefore, it can be coded as a single unit and the discourse function is expressing opinion. When examining this entry at a micro-level, however, we can identify three idea units: the Starbucks as a place for study, the coffee in the Starbucks, and the need for students to drink coffee. These three ideas are separate themes and therefore they should be coded as three idea units. This was how I addressed in coding process. In view that the majority of the participants' entries on Facebook were short pieces, or shorter than the entry in Example 5.1, the inter-coder agreement in identifying the total idea units reached 91.2%, which falls into *excellent* category in achieving



agreement. Therefore, dynamic units of analysis such as unit of idea allow for identifying specific themes or discourse functions at a micro-level, which is better for answering the research questions in the present study, but this analysis invites subjective and inconsistent identification of the unit.

Another methodological implication of this study is that the adopted categories from Rourke, et al.'s (1999) social presence coding framework apply to the context in the present study in view that the inter-coder reliabilities of those categories were all above 50% during the independent coding stage. However, some self-assigned categories such as making explanations (19.3%), making predictions (18%) and making requests (26%) did not achieve acceptable levels of reliability, as showed in the parentheses, before the disagreements were reconciled. Therefore, more representative samples and examples of these categories should be identified and discussed during the coding training process. It indicates that a detailed protocol with sufficient examples should be created for identifying and categorizing the target categories during the training and both coders should be trained to apply this protocol in the same way in order to avoid the amount of subjectivity.

### **Limitations and Delimitations**

This mixed methods study has the following limitations. First, though the activity was featured as a “free” posting activity and it was designed to be “authentic”, the participants were actually expected to fulfill their “obligations”. Therefore, the activity was more of a “forced” nature and served partially for pedagogical purposes. Second, part of the researcher’s role was a participant in the Facebook posting activity. The

researcher's participation might have triggered some students to write posts in certain times. Particularly, the researcher's posts on Facebook provided a lot of target language input to the participants in the experimental group although the quantitative results revealed that such target language input did not make significant impact on the experimental group. Third, this study mainly focused on the meaning that the students constructed to perform different discourse functions on Facebook. The accuracy of the students' language use on Facebook was seldom considered. Quantitative results revealed that the Facebook participants as a group did not perform significantly better than the non-Facebook participants as a group in quality of delayed writing tasks. It is uncertain whether it was partly because the accuracy of the students' language use on Facebook was overlooked.

Furthermore, although this study investigated language functions performed by the students, the researcher did not take any intervening measures in teaching the students how to use certain language functions appropriately. Although the whole Chinese curriculum in the Department emphasized learning both the Chinese language and culture and the teachers normally modeled the students how to behave verbally and physically in Chinese ways in the classroom instruction, it would be better to also teach students some online socio-pragmatic knowledge and let students experiment with and practice in pragmatic language functions in online social contexts after class (Blattner & Fiori, 2009; Sykes, Oskoz & Thorne, 2008). In view that current college students are spending much time socializing and networking online, providing them with online socio-pragmatic knowledge would be of great benefit to them.

Additionally, this study investigated the discourse functions of the students' free communication on social media, therefore, the reported discourse functions may have unique characteristics, when compared with discourse functions used in different contexts reported by other researchers. It is better for readers and researchers to take the specific context into consideration when interpreting the findings of this study. In short, it might be wise to interpret the qualitative findings of this study with caution.

In the quantitative part, the first weakness is that the sample size was small for quasi-experimental comparison. A larger group of participants may yield different results when comparing the quantity and quality of the writing texts produced by the two groups of participants. Therefore, the results of the quasi-experimental comparison are hardly generalizable. Second, when comparing the length of the writing texts, this study only looked at the number of characters the participants produced. But it is also important to examine whether the characters the participants generated were correctly selected and appropriately used. In addition, when comparing the quality of the participants' writing texts, this study only examined the texts globally and did not compare specific categories of their writing such as vocabulary use, syntactic complexity of sentences, coherence of each text, etc. It might be possible that writing weekly posts on Facebook may have impacted the participants' writing ability in those local aspects although a significant difference was not found when the quality of those writing texts were compared globally.

### **Suggestions for Future Research**

In the qualitative part, this study explored learner language functions on social media—Facebook—where the students conducted social communication with each other.

Future research may explore Chinese language learners' ability of socio-pragmatic awareness and cross-cultural understanding. In view that language use governed by social and pragmatic patterns which frame the production and understanding of messages (Kern, 1995), cultural and pragmatic perspectives could help researchers to investigate the students' ability in applying Chinese culture and Chinese pragmatic knowledge in the real life context (Blattner & Fiori, 2009; Sykes, Oskoz & Thorne, 2008). For example, one student posted an entry on April Fool's Day: “今天是愚人节！我骗了我的朋友！我说我怀孕了！哈哈” (*Today is April Fool's Day! I tricked my friend. I lied to her that I was pregnant. haha*). Telling such a joke is typically inappropriate according to the Chinese norms, no matter whether it is appropriate or not in the American culture. In the Chinese culture, a female student at the same age would never joke about the pregnancy before getting married, even if she is in an overt relationship with an adult man. Though communication on Facebook is an online behavior, the communication is also highly context-dependent and it occurs to the real life situations. Therefore, exploring students' pragmatic use of the Chinese language in social media might be particularly meaningful. In addition, no native Chinese speakers were introduced to the present study except the researcher. It is unknown whether there would be any changes of those language functions used by the participants and whether the quantitative results would be different if native Chinese speakers were invited to join the online activity. Future research could take this factor into consideration.

In the quantitative part, the quasi-experimental section of this study examined the effect of weekly social communication on Facebook on Chinese language learners' writing ability. The results are apparently not generalizable in view of the small sample

size. Therefore, future research in this regard could be conducted in programs with larger student enrollments. This would allow for using more powerful statistics, and would contribute additional useful information on whether or not students' learning of an additional language is impacted by target language use in specific social media. Furthermore, it should be noted that the quasi-experimental section of the present study examined only a few variables – i.e., the length of the written texts (the number of characters the participants produced) and a global assessment of the texts' overall quality. In the future, research in this area could also explore additional constructs such as accuracy, vocabulary use, syntactic complexity of sentences, and coherence of each text – all of which contribute to overall writing quality. In addition, as Felix (2005, 2008), Selwyn and Grant (2009) and other researchers have argued, while much attention has been paid to the possibilities and prospects inherent in social media contexts for language learning, more empirical research is needed—especially research designs which employ a comparison or control group—to investigate to what extent social media can be used to facilitate foreign language learning and how effective different kinds of social media can help what specific area of language learning (del Puerto & Gamboa, 2009; Felix, 2005, 2008; Levy, 2002).

## **Conclusion**

This study first explored what kind of language functions intermediate-level Chinese language learners performed when they conducted social communication in Chinese on Facebook. Consistent with previous CMC research, qualitative findings of the present study revealed that Facebook could provide learners with the opportunity to produce a greater variety of discourse functions. The participants used as many as 22

types of discourse functions during their social communication on Facebook. Asking questions was the most frequently used discourse function. The other discourse functions that were among the top ten were *expressing opinions, describing events or activities unrelated to campus, sharing similar experiences or perspectives* (including expressing agreement), *expressing likes and dislikes, expressing wishes, making explanations, expressing thanks, giving advices, and expressing compliments*. When asking questions, the participants mainly used *Wh*-questions and polar questions during their communication and interaction. Alternative questions were seldom used.

In addition, this study also examined the impact of use of social media in the target language on learners' writing proficiency. Although the results of the present study did not find that the treatment of weekly Facebook posts in Chinese improved the overall quality of students' L2 writing, it is possible that it may have had some impact on several sub-skills related to L2 writing. For instance, in their post-study interviews, the Facebook participants reported that the activity helped them to: recognize more Chinese characters, increase their Chinese vocabulary, create opportunities to practice using sentence structures and sentence patterns, and increase their skill in keyboarding Chinese. Future research can target these (and other) specific variables, and test whether learners' perceptions of areas of improvement are supported by the realities of their output in Chinese. Regardless of the specific ways in which Facebook contributes to L2 literacy, it has been considered important for foreign language educators to incorporate online writing and personal writing, including writing for networking and writing for social communication, into foreign language instruction to meet the needs of the 21st century language learners (Yancey, 2009).

## Notes

1. For convenience, this study uses second language learning to refer to both second and foreign language learning.
2. By authentic, it refers to the fact that what students posted on Facebook was triggered by social or cultural contexts in specific situations. This is a contrast to the classroom interaction between the teacher and students where the learning context was normally simulated and the students said what the teacher expected (Ellis, 2008).
3. Facebook allows only up to 400 characters per post.
4. A couple of studies have been conducted on how the use of certain technologies facilitated Chinese character acquisition (e.g., Jin, 2006; Ping & Jen, 2005; Wang, 2005; Zhu & Hong, 2005). This topic is out of the scope of this study. Therefore, these studies were not included.
5. In addition to the Chinese language courses, the Department of World Languages also offers some non-language related courses, such as Chinese Cinema, Contemporary Chinese Language and Society, and Chinese Literature in Translation.
6. Diana was selected as a representative of college students from the southern US to attend the World Chinese Language and Culture Competition in that semester and she won the second prize on that competition.
7. The College Board is a non-profit organization that connects students to college success and opportunity. College professors together with AP teachers develop the course and exam content. The AP® program was created to expand access to higher education. The great majority of colleges recognize AP credits. There are two sections in the AP Chinese Language and Culture Exam. Section I consists of multiple-choice questions that assess communication skills in the interpersonal and interpretive modes. Section II, the free-response section, assesses communication skills in the interpersonal and presentational modes by requiring the student to produce written and spoken responses. The whole exam is approximately three hours in length  
[http://apcentral.collegeboard.com/apc/members/exam/exam\\_questions/157009.html?affiliateId=APSamp&bannerId=chin](http://apcentral.collegeboard.com/apc/members/exam/exam_questions/157009.html?affiliateId=APSamp&bannerId=chin).
8. The final exam (reading and writing portions) in the Fall of 2011 was composed of two reading passages with eight true or false questions and three short-answer questions in each passage, 10 sentences to be connected with provided conjunction words and phrases, and 15 sentences to be completed with Chinese characters according to the provided Pinyin—Romanized Chinese. The question items in the midterm exam in the Spring of 2012 were similar to those items in the Fall final of 2011. The difference was that there was only one longer reading passage plus an added question type consisting of six items of sentence completion with clues. The question types in the final exam in the Spring of 2012 was the same as the midterm exam in that semester.

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## Appendices

### Appendix I Survey in the Pilot Study

#### I. Background Information

1. Your academic department:
2. Do you have any mandarin Chinese learning experience before you started to learn Chinese at USF?
3. Have you ever been exposed to mandarin Chinese environment before you started to learn Chinese at USF?
4. Could you tell me why you chose to learn Chinese?

#### II. Your Class Facebook Experience

1. Did you use Facebook before this after class activity?
2. How long per week on average did you spend on this after class activity?
3. Did you write updates in Chinese on Facebook before this after class activity?
4. What was your initial response to the after class Facebook activity?
5. Now what do you think of this after class activity? (The focus of this question is the activity.)
6. What do you think of using Facebook as a tool to practice writing in Chinese? (The focus of this question is Facebook.)
7. Have you learned anything through participating in this after class activity? If yes, what did you learn? If no, why? (The more details the better)
8. Are there any other benefits of the after class Facebook activity in addition to language learning? If so, what are they?
9. Are there any drawbacks of the after class Facebook activity? If so, what are they?
10. Do you have any other comments to make or any experiences to share?

## Appendix II Pre-treatment Survey

### I. Your background information

1. Your name: \_\_\_\_\_
2. Your age (choose a letter): \_\_\_\_\_  
a) 15~19                      b) 20~24                      c) 25 and over
3. Your academic department: \_\_\_\_\_
4. Are your parents or other family members speaking Chinese mandarin?  
If yes, please tick here \_\_\_\_\_;      If no, please tick here \_\_\_\_\_
5. Are your parents or other family members speaking Cantonese?  
If yes, please tick here \_\_\_\_\_;      If no, please tick here \_\_\_\_\_
6. Do you have any mandarin Chinese learning experience in a formal school setting before you started to learn Chinese at USF?  
If no, please tick here \_\_\_\_\_;  
If yes, please briefly tell me your pre-USF mandarin Chinese learning experience (such as the school name, when you studied Chinese there, how many semesters/years you have studied there, etc.)  

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7. Could you briefly tell me why you chose to learn Chinese?  

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### II. Your Facebook Experience and Conception

1. In general, are you using Facebook? If no, please tick here \_\_\_\_\_  
If yes, which of the following best describes your use of Facebook?
  - a) Two or more than two hours per day
  - b) between one to two hours per day
  - c) between 30 minutes to one hour per day
  - d) around 30 minutes or less per day
2. Did you work on any other extra-curriculum Chinese writing activities (e.g., blogging, twittering, journaling, or writing diaries in Chinese) in addition to the Facebook writing activity last semester? If yes, could you briefly tell me about the medium and the frequency of your extra-curriculum Chinese writing activities?
3. During the winter break, did you write any posts in Chinese on Facebook or in other media (e.g., blogging, twittering, personal journals or diaries)? If yes, could you briefly tell me about the medium and the frequency of your Chinese writing experience?
4. What do you think of using Facebook as a tool to practice writing/communicating in Chinese?
5. Do you have any other information you would like to add?

### Appendix III Post-treatment Survey

I. Your background information

1. Your name: \_\_\_\_\_
2. How many semesters (normal semester, not including summer sessions) have you been in your program? \_\_\_\_\_

II. The use of social media other than Facebook

1. Are you using Twitter?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
2. Are you Twittering in Chinese?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
3. Are you using Google+?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
4. Are you using Chinese on Google+?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
5. Are you using LinkedIn?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
6. Are you using Chinese on LinkedIn?  
If no, tick here \_\_\_\_\_;  
If yes, how often (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally
7. Are you using other text-based social media (not including email) in Chinese?  
If no, tick here \_\_\_\_\_;  
If yes, what is the name of the social medium? \_\_\_\_\_; How often do you use it (please circle one option)?  
A. almost every day B. around every other day C. sometimes D. occasionally



- III. Posting or writing activity other than on the class Facebook group
1. Did you also write updates or comment on other people in Chinese somewhere else other than on our Facebook group page during the Spring semester?  
If no, please tick here \_\_\_\_\_  
If yes, which of the following best describes your experience in using Chinese somewhere else other than on our Facebook group page during the Spring semester?
    - a) Around two to three times or more per week
    - b) Around one to two times per week
    - c) Around one to two times every other week
    - d) Only one or two times since the end of Fall semester
  2. Did you write diaries, journals, or other type of free writing in Chinese during the Spring semester? If no, please tick here \_\_\_\_\_  
If yes, which of the following best describes your experience in using Chinese somewhere else other than on our Facebook group page during the Spring semester?
    - a) Around two to three times or more per week
    - b) Around one to two times per week
    - c) Around one to two times every other week
    - d) Only a few times during the whole semester

The following two questions are for the NON-Facebook participants.

1. Did you write updates or comment on other people in Chinese on Facebook during the Spring semester? If no, please tick here \_\_\_\_\_  
If yes, which of the following best describes your experience in using Chinese on Facebook during the Spring semester?
  - a) Around two to three times or more per week
  - b) Around one to two times per week
  - c) Around one to two times every other week
  - d) Only one or two times since the end of Fall semester
2. Did you write diaries, journals, or other type of free writing in Chinese during the Spring semester? If no, please tick here \_\_\_\_\_  
If yes, which of the following best describes your experience in using Chinese somewhere else other than on our Facebook group page during the Spring semester?
  - a) Around two to three times or more per week
  - b) Around one to two times per week
  - c) Around one to two times every other week
  - d) Only a few times during the whole semester

#### **Appendix IV Interview Questions**

1. In general, what do you think of this FB free posting activity?
2. Have you learned anything through participating in this activity? If yes, in what areas? If no, why?
3. Based on my observations, there were not many follow-up comments after each post. Do you think what might be the reasons?
4. Based on my observations, there were many posted questions that were not answered. Do you think what might be the reasons?
5. After writing posts in Chinese on FB for a semester, what do you think of its effect on your writing (not handwriting but composing) ability in terms of QUANTITY (the ability to produce a certain number of characters and words in a given time)?
6. After writing posts in Chinese on FB for a semester, what do you think of its effect on your writing (not handwriting but composing) ability in terms of QUALITY (the ability to produce a piece of writing which shows the variety of vocabulary, the accuracy in grammar, the complexity in sentence pattern and structure, etc.)?
7. Do you have any other comments?

## Appendix V Writing Prompts

**Writing task I:** Read the following message from a net pal and then reply the message in Chinese. You should write in as complete and as culturally appropriate a manner as possible. The time limit is 40 minutes. During the writing process, you are not allowed to use online dictionary, online translation tools, and any other online materials. You cannot ask help from your classmates either. After completing your message, you will first print it out and then click send to the original email.

**Sender:** Zhang San (张三)

**Subject:** Self-Introduction

**Content:**

My name is Zhang San. I am a freshman in Qingdao Ocean University. My major is English. The reason I chose to major in English is that I love learning English and I think it might be easy for me to find a job after graduation. I am the only child in my family. My father is a manager of a trading company. My mother is a middle school teacher. We are living in the downtown of Qingdao. I love to play Pingpong and soccer. I would very much like to be your net pal. May I have some information about you? In addition, I heard that you are studying Chinese. Could you tell me how you are learning Chinese and what challenges you have during your learning process? I am looking forward to your reply. Thank you.

**Writing task II:** Read the following message from a net pal and then reply the message in Chinese. You should write in as complete and as culturally appropriate a manner as possible. The time limit is 40 minutes. After completing your message, you will first print it out and then send it to this email address swang5@mail.usf.edu. (This writing task is adapted from 2011 Chinese Language and Culture Exam administered by College Board AP® Program. The original prompt was provided in Chinese.):

**Sender:** Zhang San (张三)

**Subject:** Campus Life (校园生活)

**Content:**

Thank you very much for your self-introduction you sent to me last time. I am very pleased to be your net pal. Since I have yet got any chance to visit the U.S., I have always been curious about the American college life. I am not sure whether you would

like to share anything about your campus life, such as how many classes you are taking, what kind of homework you have, what kind of after-class activities you are involved in, how you spend your weekend, etc. Hope we could know more about each other and learn more from each other. Thank you.

**Writing task III:** Read the following message from a net pal and then reply the message in Chinese. You should write in as complete and as culturally appropriate a manner as possible. The time limit is 40 minutes. After completing your message, you will first print it out and then send it to this email address swang5@mail.usf.edu. (This writing task is adapted from 2010 Chinese Language and Culture Exam administered by College Board AP® Program. The original prompt was provided in Chinese.):

**Sender:** Zhang San (张三)

**Subject:** Summer Plan (暑期计划)

**Content:**

I will graduate from the Qingdao Ocean University next Spring. Currently, I have two plans for this summer. One is to intern in a trading company—a Sino-American joint venture and to see whether I could be employed by the company after I graduate. The other is to attend an intensive GRE test training program in order to get a high score for the GRE test; and then I will apply a master program in a university in the US to continue my education. This is what I am going to do in the summer. Do you mind sharing with me what you will do this summer?

**Appendix VI Scoring Rubrics (adapted from 2011 Chinese Language and Culture Exam administered by College Board AP® Program)**

Score	Scale	Experiential Meaning	Interpersonal Meaning	Textual Meaning
9~10	<b>EXCELLENT</b> Demonstrates excellence in interpersonal writing	<ul style="list-style-type: none"> <li>Rich information has been provided</li> <li>Well-connected discourse with a clear progression of ideas</li> </ul>	<ul style="list-style-type: none"> <li>Frequent use of inclusive pronouns to interact with the sender</li> <li>Frequent use of questions or interaction-oriented statements to communicate with the sender</li> </ul>	<ul style="list-style-type: none"> <li>Rich and appropriate vocabulary with minimal errors</li> <li>Wide range of grammatical structures and sentence patterns, with minimal errors</li> </ul>
7~8	<b>GOOD</b> Suggests excellence in interpersonal writing	<ul style="list-style-type: none"> <li>Sufficient information has been provided</li> <li>Connected discourse with a progression of ideas that is generally clear</li> </ul>	<ul style="list-style-type: none"> <li>Frequent use of inclusive pronouns to interact with the sender</li> <li>Frequent use of questions or interaction-oriented statements to communicate with the sender</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate vocabulary with sporadic errors</li> <li>A variety of grammatical structures and sentence patterns with sporadic errors</li> </ul>
5~6	<b>ACCEPTABLE</b> Demonstrates competence in interpersonal writing	<ul style="list-style-type: none"> <li>Some information has been provided</li> <li>Loosely connected discourse with some obscure ideas</li> </ul>	<ul style="list-style-type: none"> <li>Sufficient use of inclusive pronouns to interact with the sender</li> <li>Sufficient use of questions or interaction-oriented statements to communicate with the sender</li> </ul>	<ul style="list-style-type: none"> <li>Mostly appropriate vocabulary with errors that do not generally obscure meaning</li> <li>Mostly appropriate grammatical structures and sentence patterns, with errors that do not generally obscure meaning</li> </ul>
3~4	<b>WEAK</b> Suggests lack of competence in interpersonal writing	<ul style="list-style-type: none"> <li>Little information has been provided</li> <li>Disconnected discourse with generally obscure ideas</li> </ul>	<ul style="list-style-type: none"> <li>Little use of inclusive pronouns to interact with the sender</li> <li>Little use of questions or interaction-oriented statements to communicate with the sender</li> </ul>	<ul style="list-style-type: none"> <li>Minimal appropriate vocabulary with frequent errors that obscure meaning; repeated interference from another language</li> <li>Limited grammatical structures and sentence patterns, with frequent errors that obscure meaning</li> </ul>
1~2	<b>VERY WEAK</b> Demonstrates lack of competence in interpersonal writing	<ul style="list-style-type: none"> <li>Limited or extremely little information has been provided</li> <li>Fragmented sentences with scattered information</li> </ul>	<ul style="list-style-type: none"> <li>Little or no use of inclusive pronouns to interact with the sender</li> <li>Little or no use of questions or interaction-oriented statements to communicate with the sender</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient, inappropriate vocabulary with frequent errors that significantly obscure meaning; constant interference from another language</li> <li>Little or no control of grammatical structures and sentence patterns, with frequent errors that significantly obscure meaning</li> </ul>

## Appendix VII The IRB Approval Letter



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE  
Institutional Review Boards, FWA No. 00001669  
12901 Bruce B. Downs Blvd. MDC035 • Tampa, FL 33612-4799  
(813) 974-5638 • FAX (813) 974-5618

January 5, 2012

Shenggao Wang  
Secondary Education  
4102 Skipper Rd. Apt. 308  
Tampa, FL 33613

RE: **Expedited Approval for Initial Review**  
IRB#: Pro00006377  
Title: **Intermediate-Level Chinese Language Learners' Social Communication in Chinese on Facebook: A Mixed Methods Study**

Dear Shenggao Wang:

On 1/5/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol. Please note that your approval for this study will expire on 1/5/2013.

Approved Items:

**Protocol Document(s):**  
[Intermediate-Level Chinese Language Learners' Social Communication in Chinese on Facebook: A Mixed Methods Study](#)

**Consent/Assent Document(s):**  
[Adult IC Minimal Risk.docx.pdf](#)

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review categories:

(5) Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

**Please use only the official, IRB- stamped consent/assent document(s) found under the "Attachment Tab" in the recruitment of participants.** Please note that these documents are only valid during the approval period indicated on the stamped document. If you have been granted a Waiver of Informed Consent Documentation you do not need your document IRB-stamped.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

A handwritten signature in cursive script that reads "John A. Schinka, Ph.D.".

John A. Schinka, Ph.D., Chairperson  
USF Institutional Review Board

## Appendix VIII Informed Consent Form



### **Informed Consent to Participate in Research Information to Consider Before Taking Part in this Research Study**

IRB Study # Pro00006377

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You are being asked to take part in a research study because you are enrolled in Modern Chinese IV. Please note you must be age 18 or older to participate. Research studies include only people who choose to take part. This document is called an informed consent form. Please read this information carefully and take your time making your decision. Ask the researcher or study staff to discuss this consent form with you, please ask him to explain any words or information you do not clearly understand. We encourage you to talk with your family and friends before you decide to take part in this research study. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

We are asking you to take part in a research study called:  
*Intermediate-Level Chinese Language Learners' Social Communication in Chinese on Facebook*

The person who is in charge of this research study is *Shenggao wang*. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. He is being guided in this research by *Dr. Camilla Vasquez*.

The research will be conducted at *Department of World Languages, College of Arts & Science*.

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#### **Purpose of the study**

The purpose of this study is to:

- *to explore what kind of language functions the participants perform when they conduct social communication in Chinese on Facebook;*
- *to investigate how they interact with each other through asking questions;*
- *to examine whether conducting weekly social communication in Chinese on Facebook impacts their writing ability.*



## Study Procedures

If you take part in this study, you will be asked to:

1. *Attend an around 20-minute training in the first week in a language lab in the World Languages Department. In the training session, the researcher will teach you how to use certain Chinese language input software, how to keyboard Chinese characters, Chinese phrases and idioms more quickly, and how to switch from simplified Chinese to traditional style of Chinese. These techniques will benefit you whenever you write in Chinese with a computer or a mobile device. You can choose NOT to attend this training session. If so, your grade for this course will NOT be affected.*
2. *Post in Chinese weekly entries and comment on your peers' posts each week on the researcher-created Facebook page during the 14 weeks of the spring semester (not including the first week and the week of spring break) if you agree to voluntarily participate in writing free posts and making free comments in Chinese on Facebook. The suggested, NOT required, number of entries and comments to be posted each week is 2 and 4 respectively. If you do not agree to participate in this writing activity on Facebook, you will not be asked to write posts and make comments in Chinese on the researcher-created Facebook group page. This Facebook writing activity is NOT a course requirement. Your grade will NOT be affected if you choose NOT to participate in it. In this case, you will sign in a place indicating you will not participate in the Facebook activity.*
3. *Provide your answers to two short survey which will be administered at the beginning and at the end of the spring semester. It will take you at most 10 minutes to complete each survey.*
4. *Give permission to use your writing products for three writing tasks to be analyzed for research purposes. During the semester, your instructor will ask you to perform three writing tasks at different times of the semester. These three writing tasks are part of the course assignments. Specific instructions will be provided when you perform each writing task. If you prefer that your writing products are not to be used for this research study, I will not use your writing products for research purposes. If you choose not to have your class papers analyzed for research purposes your course grade will NOT be affected.*

*In the quantitative section of this study, there will be two groups made up of voluntarily participating students: an experimental group and a control group. The students who agree to participate in writing free posts in Chinese on Facebook and permit the researcher to use their three writing products for research purposes will make up the experimental group. The students who do not participate in writing free posts in Chinese on Facebook but permit the researcher to use their three writing products for research purposes will constitute the control group. The only difference between the two groups in the above procedures is that participants in the experimental group will write weekly posts in Chinese on the researcher-created Facebook page in addition to being involved in other procedures. Your grade will NOT be affected if you choose not to be involved in any of the above procedures, namely, choose not to participate in this study.*

## Total Number of Participants

*The total number of students that could potentially be consented to participate in this study is 25.*

## **Alternatives**

*Students who do not participate in the Facebook activity can also earn extra credit via writing a reflection paper in Chinese at the end of the semester. The maximum extra credit will be equal to the credit that Facebook participants will be awarded.*

## **Benefits**

The potential benefits of participating in this research study include:

- *To be taught some tricks and techniques in keyboarding Chinese characters, phrases and idioms on the computer or a mobile device;*
- *To further improve your Chinese language ability, particularly in online communication skills and computer-assisted Chinese writing ability;*
- *To be notified the research findings;*

## **Risks or Discomfort**

*This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.*

## **Compensation**

*Participants in the Facebook activity will receive extra eight points which is the highest possible points for one class meeting participation. (Daily grade system is adopted in this course. Each class meeting on each weekday will be graded on a scale of 8 maximum possible points based on the students' class performance. These daily grades cover 50 percent of the total grade.) In addition, the Facebook participants will be compensated with a \$10 gift card as a token of appreciation at the end of the study. The \$10 gift card will only be awarded to the participants who complete the activity in the whole semester.*

*If you withdraw from the Facebook writing activity before the 8th week (the middle of the semester), but permit the researcher to use your three writing products for research purposes, you will receive half of full extra points. If you withdraw after the 8th week (the middle of the semester), you will receive full extra points but not the \$10 gift card.*

*If you do not participate in writing free posts in Chinese on Facebook but permit the researcher to use your three writing products for research purposes, you will receive half of full extra points.*

## **Cost**

No costs will be incurred to you if you participate in this study.

## **Privacy and Confidentiality**

We will keep your study records private and confidential. Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

- The research team, including the Principal Investigator (me) and my supervisor Dr. Camilla Vasquez.
- Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.
- Any agency of the federal, state, or local government that regulates this research. This includes the Department of Health and Human Services (DHHS) and the Office for Human Research Protection (OHRP).
- The USF Institutional Review Board (IRB) and its related staff who have oversight responsibilities for this study, staff in the USF Office of Research and Innovation, USF Division of Research Integrity and Compliance, and other USF offices who oversee this research.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are.

## **Voluntary Participation / Withdrawal**

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. *Decision to participate or not to participate will not affect your course grade.*

## **New information about the study**

During the course of this study, we may find more information that could be important to you. This includes information that, once learned, might cause you to change your mind about being in the study. We will notify you as soon as possible if such information becomes available.

## **You can get the answers to your questions, concerns, or complaints**

If you have any questions, concerns or complaints about this study, or experience an adverse event or unanticipated problem, call *Shenggao Wang* at 813-919-9014.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the USF IRB at (813) 974-5638.

## **Consent to Take Part in this Research Study**

It is up to you to decide whether you want to take part in this study. If you want to take part, please sign the form, if the following statements are true.

I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

---

Signature of Person Taking Part in Study <b>(including the Facebook activity)</b>	Date
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Signature of Person Taking Part in Study <b>(but excluding the Facebook activity)</b>	Date
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Printed Name of Person Taking Part in Study

## **Statement of Person Obtaining Informed Consent**

I have carefully explained to the person taking part in the study what he or she can expect from their participation. I hereby certify that when this person signs this form, to the best of my knowledge, he/ she understands:

- What the study is about;
- What procedures will be used;
- What the potential benefits might be; and
- What the known risks might be.

I can confirm that this research subject speaks the language that was used to explain this research and is receiving an informed consent form in the appropriate language. Additionally, this subject reads well enough to understand this document or, if not, this person is able to hear and understand when the form is read to him or her. This subject does not have a medical/psychological problem that would compromise comprehension and therefore makes it hard to understand what is being explained and can, therefore, give legally effective informed consent. This subject is not under any type of anesthesia or analgesic that may cloud their judgment or make it hard to understand what is being explained and, therefore, can be considered competent to give informed consent.

---

Signature of Person Obtaining Informed Consent / Research Authorization	Date
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Printed Name of Person Obtaining Informed Consent / Research Authorization