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Chinese International Students' Informal Second Language (L2) Learning Through Technology for Enhancing Lived Experiences in Canada

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Graduate Program in Education

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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Abstract

An increasing amount of attention has been drawn to international students' academic development in the context of studying abroad; however, few studies shed light on students' studying and lived experiences outside of school. This thesis explores how technology can enhance Chinese international students' informal acquisition of second language (L2) and their lived experiences in Canada. Through a qualitative case study, I describe what language difficulties newly arrived Chinese international students encounter, and how they cope with those language difficulties through technology-assisted informal L2 learning. Data sources include in-depth interviews and follow-up interviews, participants' personal narratives, and researchers' reflective journals. Theories of multiliteracies, basic interpersonal communicative skills and cognitive academic language proficiency distinction, as well as a communicative competence framework have been adopted as the theoretical frameworks for data analysis. The findings show that newly arrived Chinese international students' major language difficulties includes lack of non-academic vocabulary, lack of understanding of sociocultural differences, and unfamiliarity with informal context embedded phrases. To overcome these language difficulties, they creatively design informal L2 learning experiences through the combinational use of technology tools. The results have significant implications for newly arrived Chinese international students' informal L2 learning.

Keywords

Informal learning, Technology assisted L2 learning, Study abroad, Chinese international student, Language difficulties, Multiliteracies, communicative competence

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Chapter 1

1 Introduction

Internationalization makes our world diverse. With internationalization, million of international students become vehicles for the generation of cultural exchange and integration. This study has two primary research questions: what language difficulties do newly arrived Chinese international students encounter; and, how do they use technology to facilitate informal second language (L2) learning for enhancing lived experiences in Canada.

In this chapter, I first raise readers' attention to difficulties that newly arrived international students may encounter while studying abroad. Then, I shed light on Chinese international students' language difficulties by illustrating the existing findings and my own perspective as an "insider". This exploration cannot be done without an introduction on how technology supports L2 learners' informal learning. Furthermore, along with my research purpose and questions, I present the significance of this study and the outline of this thesis.

1.1 Background

1.1.1 Chinese international students in Canada

It has been stated that internationalization is the greatest revolutionary development of higher education in the 21st century (Seddoh, 2001). Every year, students leave their home countries with enthusiasm and expectations, to pursue education in unfamiliar countries. Although they may come for numerous purposes, the first lesson that they should learn is to adapt. As Hayes and Lin (1994) suggested, coming alone to a new country, international students lose shared identity that they have built with family and peers in their home countries, which brings about a feeling of isolation. In addition, grounded in their own unique educational and cultural backgrounds, international students may experience a variety of difficulties when reconciling their existing knowledge with new knowledge. Language shock is one of the most urgent issues for newly arrived international students (Robertson, Line, Jones, & Thomas, 2000).

It has been reported by the Chinese Ministry of Education that China sent 459,800 students to study abroad in 2014, with an 11.1% increase over the year before (Gu, 2015). Canada has always been a key destination for international students. The Canadian Bureau for International Education (2014) revealed that, between 2012 and 2013, the population of Chinese international students had rapidly increased, making up 32.42% of the total population of international students in Canada. Several factors contribute to this steady growth in the popularity of Canada as a destination point. Some students view studying in a Western country as a pathway to finding a good job with a higher salary level and, in turn, leading to a better life (Yang, Noels, & Saumure, 2006). Some international students just want to experience a different life. The research conducted by Kim, Guo, Wang and Agrusa (2007) revealed that Asian students' motivations for studying abroad include improving their career opportunities, pursuing academic achievements, and the belief that studying abroad will be easier than studying in Asia. However, no matter what motivates students to study abroad, they must overcome many challenges and obstacles once they arrive. With the growing size of this group of students, increased attention has been drawn to their learning and lived experiences overseas.

1.1.2 Language difficulties in a study abroad context

It has been reported that newly arrived international students encounter a variety of difficulties (e.g., language shock, culture shock, or homesickness) (Marr, 2005; Sakthivel, 2003). Among the difficulties they must cope with, language difficulties are the most urgent in both formal and informal communicative settings (e.g., Robertson et al., 2000). According to Kinginger (2009), researchers have divided the communicative settings that international students may frequently encounter into three main categories: (1) educational institutions and classrooms; (2) places and residence, with most of the research focusing on the hypothetical 'homestay advantage'; and (3) service encounters and other informal contact with expert speakers (p. 115). The first setting refers to formal communicative contexts, while the others refer to informal communicative contexts. Apparently, studying abroad also means living in a foreign country where L2 is the primary means for fulfilling communication needs. International students, especially non-European students, face challenges not only in academic contexts but also interpersonal

communication (Zhang, 2015). Thus, the language difficulties faced by international students can be implied in both academic schooling context and informal communicative context.

In educational institutions and classrooms, language difficulties, such as lacking academic vocabulary or struggling to meet the requirements for academic writing, manifest mostly in classroom communication (Sawir et al., 2012). In addition, according to Robertson et al. (2000), international students often have little confidence in spoken English, feel unsatisfied with their oral performance in front of native classmates, and cannot completely understand lecturers. For Chinese international students, Zhou (2012) reported that preferring to stay in their own Chinese communities impedes their progress of immersing themselves in an input-rich environment (Storch & Hill, 2008), which further intensifies their language shock. However, compared to language difficulties in academic settings, it has been reported that many students who study abroad are actually facing bigger challenges in informal communicative settings (Kinginer, 2009).

It is undeniable that studies of informal communication with expert speakers (e.g. L2 speakers who provide services in certain field) are of key importance (Kinginer, 2009); however, only few existing findings illustrate international students' language difficulties in informal communicative settings, as well as their strategies to cope with those situations. In fact, as Regan, Howard, and Lemée (2009) claimed, although formal learning in the classroom is useful for acquiring the categorical features of L2, such as grammar, the most challenging and beneficial dimension of studying abroad is the variability in communication in informal service encounters. Levin's (2001) study illustrates how the students she followed avoided service encounters that they found unpredictable and difficult. In her observation, international students often substituted a Coke or an extra cookie to avoid buying a salad in order to avoid the communication with the staff in the cafeteria.

Language shock is not an issue to be ignored. Because of language shock, newly arrived international students often keep silent and isolate themselves, which make them more anxious in class (Liu, 2005). Meanwhile, outside of schools, language shock also isolates

international students from native speakers (Ippolito, 2007; Trice, 2003). Although international students look forward to communicating and integrating with native speakers, it is difficult for them to express their ideas, as well as to communicate clearly and fluently (Liu & Jackson, 2008; Sawir, 2005; Zhang & Mi, 2009). As a result, they tend to stay in their own language or cultural groups. Previous research reported that some international students are worried, hesitant, and reluctant to join activities in which they have to communicate with native speakers (Zeng, 2010). The isolation not only affects their psychological adjustment but also causes a certain level of stress (Redmond, 2000; Yeh & Inose, 2003), which leads to unpleasant lived experiences in a study abroad context.

1.1.3 Chinese international students' language difficulties

Qian and Krugly-Smolska (2008) distinguished Chinese ESL students from ESL students from other countries in various aspects. As they illustrated, because of the enormous differences in conceptual and grammatical constructions of Chinese (L1) and English (L2), including phonology, morphology, syntax and beyond (Lay, 1991), it is difficult for Chinese learners to master English. Meanwhile, Chinese ESL learners are deeply influenced by their cultural thinking and discursive organizational patterns (González, Chen, & Sanchez, 2001), which intensifies their difficulties in L2 learning. For example, in González et al. (2001)'s study, the authors indicated that in the academic writing of Chinese EFL learners, their cultural thinking often moves them toward using "set phrases in the form of metaphorical of proverbial figures" (p.644), which are not used as a cultural convention among English speakers. Although research has revealed Chinese international students' language difficulties in academic settings (González et al., 2001; Gu, 2009; Liu & Jackson, 2008; Qian & Krugly-Smolska, 2008; Zhang & Mi, 2010), few studies shed light on their language difficulties in informal communication settings.

Several researchers focused on the issues of the Chinese EFL curriculum, which most Chinese international students have received for more than ten before studying abroad. Li (2007) reported that most teachers are in charge of the whole learning process that is preplanned and structured according to the syllabus, and they rarely view students as the center of learning activities. Earlier research revealed that traditional Chinese EFL curriculum focused too much on grammar while ignored the importance of communicative competence (Wang, 2010). In fact, the grammar translation teaching method, the outdated teaching material, the insufficiency of qualified teachers and equipment, and the rigid written assessment system all contributed to the low level of communicative competence in English among Chinese students (Rao, 2002; Wang, 2010; Wenfeng & Gao, 2008). These limitations led to students' lack of sociolinguistic and strategic competence, which was derived from the reality of large class sizes, a centralized curriculum and an examination-oriented syllabus (Burnaby & Sun, 1989; Wu, 2001). As Rao (2002) stated, the Communicative Language Teaching approach has been introduced into Chinese EFL curriculum since early 1980s. However, the outcome is not as fruitful as is expected (Liu, 2015). As Yu (2001) indicated, teachers are still not teaching communicatively because their language proficiencies do not allow for free interaction. It is not a surprise that newly arrived Chinese international students would experience difficulties in basic interpersonal communication when they newly arrive to Canada.

Therefore, the first research focus of this study is to understand Chinese international students' language difficulties in informal communicative settings, such as in a restaurant, shopping mall, cafeteria, and other service sites.

1.1.4 Informal L2 learning through technology

Given the insufficient L2 learning resources available in classroom instructions and textbooks (Liu, 2015; Rao, 2002; Wu, 2001; Xu, 2015; Xue, 2009), socializing with native English speakers is viewed as an important strategy to enhance L2 proficiency (Fischer, 2013; Rochecouste, Oliver, & Mulligan, 2012). However, Zhou's (2012) research regarding Chinese international students in Canada revealed that they preferred to associate within their Chinese communities. One of the reasons, according to Wang and Cottrell's (2016) study, is that most newcomers are worried about making mistakes in communications. These newly arrived Chinese international students usually have extremely high expectations for accuracy, which is prevalent in their previous educational backgrounds in China (Wang & Cottrell, 2016). Thus, a large number of newly arrived Chinese international students prefer to undertake L2 learning through technology, which

is considered an effective way to enhance their L2 proficiency (Bahrani, Tam, & Zuraidah, 2014; Qian, 2008).

1.2 Statement of the problem

Although topics regarding technology-assisted second language (L2) learning are not new, minimal research attention has been directed toward international students' informal L2 learning through technology for enhancing lived experiences. The large number of existing studies focus on the potential of technology to facilitate L2 learning, such as providing easy access to authentic input (Gilmore, 2007; Li, 2007; Ma, 2012), supporting collaboration and interaction (Kukulska-hulme & Shield, 2008; Lee, McLoughlin, & Chan, 2008; Selwyn, 2007), and motivating students to learn (Deepwell & Malik, 2008; Ma, 2012; Zhao, 2005). Current research also indicates a growing appreciation of the need to support learner's control over the entire learning process (Dron, 2007). In the long term, it also helps students obtain the attributes and capabilities to be better prepared for future work and live (Brown & Adler, 2008; Kennedy et al., 2009; McLoughlin & Lee, 2010).

In general, as Parker (2008) argued, existing studies focus too much on individual technology instead of combining potential of all technologies that could facilitate students' learning activities. However, the practical situation is that, due to the dramatic development of technology, people are now able to access the same application on different digital devices. For example, in the past, people could only access YouTube by opening the website on their computers, but now they can use it on smart phones, tablets, or even on their watches. Born as "digital natives" (Prensky, 2001), students always embrace new technology easily. The combinational use of different technologies makes learning anywhere and anytime (Kim et al., 2012). Meanwhile, as McLoughlin and Lee (2010) claimed, "if employed in conjunction with appropriate strategies, learning technologies are capable of supporting and encouraging informal conversation, dialogue, collaborative content generation and the sharing of knowledge, thereby opening up access to a vast array of representations and ideas" (p. 29). Therefore, this study investigates how newly arrived Chinese international students alternatively use those technologies to assist their informal L2 learning.

Furthermore, the majority of present studies concern what happened within classroom contexts (Chen et al., 2013; de la Fuente, 2014; Herrington & Parker, 2013; Lam, 2003; Lazarevic & McNulty, 2012; Li, 2007; M. Lawn & E. Lawn, 2015; Paraiso, 2012; Ranney, 2012; Shen, 2014). However, only few explore international students' informal L2 learning through technology for enhancing their lived experiences (Clark, 2007; Danzak, 2011; Lai & Gu, 2011; M. Smolcec, Vance, & F. Smolcec, 2014). Thus, this qualitative case study focuses on a group of newly arrived Chinese international students in Canada, who are deeply influenced by traditional Chinese EFL curriculum as well as the culture of digital technologies and expect to enhance their lived experiences through technology-assisted informal L2 learning.

Thurs, the second research focus of this study is to describe how newly arrived Chinese international students foster their L2 competences through technology-assisted informal L2 learning.

1.3 Purpose and research questions

Sawir et al. (2012) revealed that even international students who have high achievement scores in academic English have demonstrated language difficulties in informal communications beyond their reach (Sawir et al., 2012). Most of the existing research attempts to connect informal contacts with measured proficiency in L2 (Kinginer, 2009). However, as Kinginer (2009) pointed out, the most obvious difficulties in those studies are to capture the most valid and reliable data for measurement. Therefore, in the current study, I do not target at measurement; instead, I explore Chinese international students' competence of creatively utilizing available technology to facilitate their informal L2 learning.

In this thesis, I study Chinese international students' language difficulties in lived experiences when they are newly arrived in Canada; and how they conduct informal L2 learning through different technologies in order to enhance lived experiences. To investigate this problem, I start by investigating the language difficulties newcomers encountered upon arriving in Canada. The results for this question provide backgrounds of participants' personal experiences, which contribute to the understanding of their goals for informal L2 learning through technology. Then, I seek for their strategies and preferences for technology-assisted L2 learning. I aim to understand their learning experiences and how they achieve their goals.

Therefore, I propose two research questions:

- 1. In their lived experiences, what language difficulties do newly arrived Chinese international students encounter?
- 2. How do newly arrived Chinese international students use technology to facilitate informal L2 learning for enhancing lived experiences in Canada?

The result of this study reveals some of the most urgent L2 difficulties that international students may encounter when they first arrive, which provides significant implications for students who are preparing to study abroad. Also, it benefits international students who are still experiencing language difficulties by providing examples of technology- assisted informal L2 learning. Moreover, the result reveals implications for designers of educational digital products.

1.4 Researcher's background

In this study, I view myself as an "insider". Living in Canada as an international graduate student for sixteen months, I started to think about my own experience of language shock when I first arrived. Like other Chinese international students, I studied English for more than fifteen years before studying abroad. I used to feel confident in my L2 communicative skills until I found out that I did not know how to express myself in a natural way, especially in several informal communicative situations. For example, one time at a coffee shop, I was standing in line, and I suddenly realized that I did not even know how to order a coffee. There were many terms that were unfamiliar to me, such as different cup sizes, choice of syrups, and flavors. I could not respond the clerk's questions fluently. It was then that I realized that my English proficiency was not strong enough to support my everyday communication, as I lacked of authentic communication experiences. The unexpected language and cultural shocks made me anxious for a long time until I decided to enhance my L2 communicative competence through learning with technology. I start to immerse myself in programs on TED podcast regularly, which

provides me with accesses to authentic materials. Gradually, learning through technology has changed my lifestyle. In the morning, I start my day with listening to an English podcast and watch YouTube channels while cooking. I believe these activities have helped me overcome language difficulties in a shorter period. Therefore, I view myself as an insider and as an insider I become motivated to explore how technology assists Chinese international students' informal L2 learning and enhances their daily-lived experiences in Canada.

1.5 The significance of the study

The significance of this study manifests in two aspects. To begin with, this study distinguishes itself from many existing studies that adopt quantitative methods to provide statistical evidence in order to measure L2 proficiencies (e.g., Li, 2007; Ranalli, 2008; Vu, 2011). Many studies attempted to measure learners' L2 development through quantitative methods (Briggs, 2015; Nation, 1990). However, it is difficult to hear L2 learners' voices. Instead, this study adopts a qualitative approach to provide detailed information in Chinese international students' lived and learning experiences, focusing on understanding their language difficulties in informal communicative contexts (Kim et al., 2012). My belief is that learners are individuals who need to be in charge of their own experiences and learning processes. They come from different backgrounds and these backgrounds contribute to their unique learning styles. Thus, it is essential to understand individuals' perspectives and how these perspectives guide their learning processes, in addition to looking at their learning outcomes.

Secondly, this study adopts "a pedagogy of multiliteracies" to examine Chinese international students' strategies for coping with language difficulties (Kim, 2013). *A pedagogy of multiliteracies* stresses the diversity of individuals. In different communicative settings, especially in informal settings, learners are encouraged to construct meaning using various media and literacy modes. Instead of simply assessing learners' communicative competence, a pedagogy of multiliteracies sheds light on individual's creativity, and is "open to differences, change and innovation" (Cope & Kalantzis, 2009b, p. 175). This study analyzes both Chinese international students' basic interpersonal communicative skills and their design thinking (Kim, 2013) for enhancing lived experience.

1.6 Outline of the thesis

In chapter two, I present the literature review and the theoretical framework for this study. Chapter two includes the background and the current findings regarding informal L2 learning through the use of technology. Chapter three discusses the methodology of qualitative case study, while elaborating on the methods and instruments for data collection and analysis in this study. Chapter four presents findings through individual case analysis. Chapter five provides discussion and implication based on current findings.

Chapter 2

2 Literature review

2.1 Introduction

In this chapter, I first explore a pedagogy of multiliteracies as the foundation of informal L2 learning through technology. A pedagogy of multiliteracies provides an understanding of L2 learning, based on equity and social justice for the inclusion of diverse ways of communicating in a diverse society. It highlights multimodal ways of communication (Kress, 2003), including employing a variety of modes through the assistance of technology. Meanwhile, the idea of learners-as-designers (Kim, 2013; The New London Group, 1996) emphasizes learners' agency in designing informal L2 learning activities. In addition, I review Canale and Swain's (1980) communicative competence framework, in combination with Jim Cummins's (1981) basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP) distinction, as well as the existing evidences in Chinese international students' communicative competence development, as a foundation of this study.

2.2 Multiliteracies

The concept of multiliteracies was first introduced by The New London Group in 1996. As Cope and Kalantzis (2009b) claimed,

[multiliteracies] describes the dramatically changing social and technological contexts of communication and learning, develops a language with which to talks about representation and communication in educational contexts, and addresses the question of what constitutes appropriate literacy pedagogy for our times (p. 1).

It was the concern with social change that led The New London Group to create this new approach. The development of society, technology, and economics keeps changing our living and learning styles. Similarly, literacy teaching and learning is no longer about improving an individual language competence, but integrated with intercultural and methodological competence that enable learner to solve problems and learn autonomously (Elsner & Viebrock, 2013). Through the concept of multiliteracies, The

New London Group intended to address two significant dimensions of literacy: multilingualism and multimodality.

The first dimension that drew Cope and Kalantzis's (2009b) attention was the growing significance of multilingualism (Cope & Kalantzis, 2009b). According to Cazden (2006), multilingualism was becoming increasingly important and as such an educational response was needed in order to acknowledge globalization and value the increase in minority languages. Moreover, the discourse of differences within a language also emerged significantly (Cope & Kalantzis, 2009b). Cope and Kalantzis (2009b) argued that the *discourse differences* both within a language and a traditional curriculum had not been adequately valued. Gee (1996) also contributed to the central interpretation of multilingualism, which he called 'social languages' in professional, national, ethnic, subcultural, interest or affinity group contexts. As Cope and Kalantzis (2009a) further proposed, there is no universal standard in literacy curriculum since "our everyday experience of meaning making was increasingly one of negotiating discourse differences" (p. 3). Therefore, the tensions between the growing significance of the multilingualism and the neglect of discourse differences in literacy curriculum aroused The New London Group's intention to create the concept of multiliteracies (Cope & Kalantzis, 2009b).

Meanwhile, the increasing presence of multimodality also contributed to the generation of the concept of multiliteracies. The multimodality in communication represents a series of transformations over the course of the twentieth century (Cope & Kalantzis, 2004). For the past 500 years, print literacy had been a pervasive source of knowledge and power before the advent of photography (Cope & Kalantzis, 2009a). Meanwhile, the emergence of digital technology accelerated the process that literacy became multimodal. From the mid-1990s, the Internet started to blur the boundaries of written text, icons, and image (Cope & Kalantzis, 2009a). Over the past half-century, changes in technology, society, and economics made other modes privileged over mono-texts, such as print text (Kress, 2003). As Kress (2003) indicated in his book, it is undeniable that literacy has become multimodal: "It is no longer isolated; instead, it surrounded by a vast array of social, technological and economic factors" (p.1). Indeed, the majority of our everyday representational experiences are essentially multimodal as well (Cope & Kalantzis, 2009a; Kim, 2014b). To conclude, the dramatic development of multilingualism and multimodality contributed to the emergence of this new, multimodal literacy – multiliteracies.

2.2.1 A pedagogy of Multiliteracies

Hall (2008) stated that the multiliteracies approach proposed by The New London Group is different from all previous approaches in at least two ways. The significant distinction is that it assumes all individuals are linguistically and culturally diverse. Secondly, it considers learning not only to be mastery but also inventions. In his perspective, multiliteracies fosters learners' abilities to "see things from multiple perspectives, to be flexible in their thinking, to solve problems creatively and, ultimately, to develop new ways of becoming involved in their worlds" (P. 51). Multiliteracies is a complex concept that contains multilayered components. It concerns traditional notions of literacy, as well as reflect contemporary cultural, technological and media developments (Elsner & Viebrock, 2013).

In a pedagogy of multiliteracies, there are three aspects of meaning-making: "Available Designs" (the available meaning-making resources, and patterns and conventions of meaning in a particular cultural context); the "Designing" (the process of shaping emergent meaning which involves re-presentation and recontextualisation); and "The Redesigned" (the outcome of designing, something through which the meaning-maker has remade themselves and created a new meaning-making resource) (Cope & Kalantzis, 2009b). Meaning-making could be realized through the mode (linguistic, visual, audio, gestural, tactile and spatial), genre, or discourse (Kress, 2003). A pedagogy of multiliteracies is not simply about teaching the structures of those modalities, but rather about designing "learning experiences through which learners develop strategies for reading the new and unfamiliar, in whatever from these may manifest themselves" (Cope and Kalantzis, 2009b, p. 177). In designing process, the meaning makers, or learners, create a new design based on the available designs, adding their own understanding and voices by drawing upon the unique mix of meaning-making resources, the codes and conventions that come from their own contexts and cultures (Cope & Kalantzis, 2009b). After designing, one person's design becomes another person's resource of Available

Designs. Meanwhile, learners receive available patterns of meaning-making and social conventions while becoming active creators and designers (Kim, 2013; The New London Group, 1996). As Kalantzis (2006) indicated, a pedagogy of multiliteracies is typically transformative because it builds on the concept of design and meaning-as-transformation. The overall process of transformation is the essence of learning (Cope & Kalantzis, 2009b).

There are four main dimensions in transformative pedagogy of multiliteracies: situated practice, overt instruction, critical framing and transformed practice (Cope & Kalantzis, 2009b). Cope and Kalantzis (2009b) reframed these concepts in terms of knowledge processes of experiencing, conceptualizing, analyzing and applying.

The first knowledge process, *experiencing*, stresses that meanings are built from real world of patterns of experience, action and subjective interest (Gee, 2004). Cazden (2006) called the cross-connections between formal learning in school context and informal experiences in out-of-school context cultural weavings. There are two pedagogical weavings: between formal instruction and living experiences, and between familiar and unfamiliar experiences (Cope & Kalantzis, 2009b). Experiencing includes two modes. First, experiencing the known, which refers to how learners integrate their own knowledge into the learning situation, such as by connecting with personal experiences or being self-aware of representational modalities (Cope & Kalantzis, 2011). Secondly, experiencing the new entails that bringing new information to their experiences (Cope & Kalantzis, 2009b). An example could be when a student conducts an interview to gather more information on a topic about which they have previous knowledge (Cope & Kalantzis, 2011).

Conceptualizing represents the process in which learners become active conceptualizers. It is a process that learners make the tacit explicit and generalize from the particular (Cope & Kalantzis, 2009b). There are two ways of conceptualizing, including conceptualizing by naming and conceptualizing with theory. In conceptualizing by naming, learners label things through abstract names and developing concepts (Vygotsky, 1962). Conceptualizing with theory refers to how learners make generalizations and gather major terms together into interpretative frameworks. In this cognitive knowledge process, weaving between the experiences and the concepts is needed (Kalantzis & Cope, 2005).

Analyzing is also a part of impactful learning. It involves two kinds of analysis: analysis functionally and analysis critically. Analysis functionally refers to learners' abilities to explore causes and effects; while analysis critically requires learners to interrogate the interests behind phenomena (Kalantzis & Cope, 2005). Analysis functionally includes "establishing cause and interpreting effect" and "specifying plans, projects, programs" etc. (Cope & Kalantzis, 2011, p. 57), while analyzing critically means exploring scenarios or creating narratives for instance (Cope & Kalantzis, 2011).

Applying appropriately entails the employment of individual knowledge and understandings to the real world situations while testing their validity. By these means, learners apply their knowledge "in a predictable and expected way in a 'real world' situation or a situation that simulates the 'real world'" (Cope & Kalantzis, 2009b; p. 186). Applying creatively requires learners to use their own activities to influence the world in a new way, or transfer their former experiences to a new setting (Kalantzis & Cope, 2005), such as using available materials in an unanticipated way (Cope & Kalantzis, 2011).

As Cope and Kalantzis (2011) claimed, these four processes come in no necessary order. However, it is assumed that if the knowledge processes were made more explicit, not only would teachers and learners possibly be more fluent in their use, but the classroom climate would also become more positive (Yelland, Cope, & Kalantzis, 2008).

2.2.2 Multiliteracies and L2 learning

According to Kalantzis and Cope (2008), literacy is becoming multimodal mainly in two ways. Firstly, with the increasing diversity, English literacy is becoming a global literacy that could be used in "different cultural, social or professional contexts" (p. 203). The other aspect of multimodality manifests in the nature of new communications

technologies. The advent of new technologies accelerates the process that meaning is increasingly made in multimodal ways.

Cope and Kalantzis (2009a) indicated that in the past "literacy teaching has confined itself to the forms of written language" (p. 362). However, the new emerging modes became more powerful than print literacy in modern society. Therefore, they suggested seven modes of meaning that need to be incorporated into the pedagogy of 'Multiliteracies' (Cope & Kalantzis, 2009a). As Cope and Kalantzis (2009b) asserted, the various modes are inherently different and yet parallel in the same time. Multiliteracies theory specifically refers to "the switching of representational modes to convey the same or similar meanings" (Cope & Kalantzis, 2009a, p. 363). The modes that they proposed include,

- Written Language: writing (representing meaning to another) and reading (representing meaning to oneself) handwriting, the printed page, the screen.
- Oral Language: live or recorded speech (representing meaning to another); listening (representing meaning to oneself).
- Visual Representation: still or moving image, sculpture, craft (representing meaning to another); view, vista, scene, perspective (representing meaning to oneself).
- Audio Representation: music, ambient sounds, noises, alerts (representing meaning to another); hearing, listening (representing meaning to oneself).
- Tactile Representation: touch, smell and taste: the representation to oneself of bodily sensations and feelings or representations to others that 'touch' them bodily. Forms of tactile representation include kinesthesia, physical contact, skin sensations (heat/cold, texture, pressure), grasp, manipulable objects, artifacts, cooking and eating, aromas.
- Gestural Representation: movements of the hands and arms, expressions of the face, eye movements and gaze, demeanors of the body, gait, clothing and fashion, hair style, dance, action sequences (Scollon, 2001), timing, frequency, ceremony and ritual. Here gesture is understood broadly and metaphorically as a physical act of signing (as in 'a gesture to ...'), rather than the narrower literal meaning of hand and arm movement. Representation to oneself may take the form of feelings and emotions or rehearsing action sequences in one's mind's eye. Representation of oneself may take the form of feelings and emotions of rehearsing action sequences in one's mind's eye.

• Spatial Representation: proximity, spacing, layout, interpersonal distance, territoriality, architecture/building, streetscape, cityscape, landscape. (Cope & Kalantzis, 2009a, p. 362)

In L2 learning context, multiliteracies pedagogy highlights literacy's different uses in different contexts. Kalantzis and Cope (2008) stressed that "the capabilities of literacy involve not only knowledge of grammatical conventions but also effective communication in diverse settings, and using tools of text design which may include word processing, desktop publishing and image manipulation" (p. 203). The diverse learners may be more comfortable using one mode than another, depending on their preference of representation – the mode in which they feel best to communicate with this world (Cope & Kalantzis, 2009b). Moreover, in multiliteracies pedagogy, literacy learning is not only about rules and accuracy; it is also about understanding how the text works in order to participate in its meaning, and about actively and effectively communicating in an unfamiliar context (Kalantzis & Cope, 2008).

Existing findings support the application of multiliteracies pedagogy in schooling for L2 teaching and learning. Lavoie, Sarkar, Mark, and Jenniss (2012) conducted a research with an application of multiliteracies pedagogy in a Canadian indigenous context to test its applicability. They found that it was completely compatible within an Indigenous context and proved that a pedagogy of multiliteracies was an effective approach for language teaching, as it valued Indigenous knowledge, culture, teaching, and learning traditions. Hardware and Burke (2015) emphasized the effectiveness of multiliteracies pedagogy when it encountered with minority students, by pointing out that, comparing to traditional approaches, multiliteracies pedagogy utilized minority students' lived experiences as teaching resources considerably. In Danzak's (2011) study, he employed multiliteracies pedagogy to teach English learners from Mexico, as he made connections between L2 learning and learners' families' immigration experiences. This pedagogy not only offered students opportunities to share their personal stories, but also established a classroom culture of respecting and trusting, which successfully facilitated students' literacy learning.

2.2.3 Informal L2 learning

As Rogers (2004) suggested, informal language learning is the most essential part of learning that all of us do in every day of our lives. There are several definitions of informal learning from different perspectives. Earlier recognition of informal learning was mainly about learning activities that "outside formal educational establishments" (Straka, 2004, p. 3). In Llorente and Coben (2003)'s recognition, informal learning is a practice that explicitly differs from what to be seen in formal educational environments. Livingstone (2001) defined informal learning as "any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria" (p. 4). In his description, Livingstone (2001) highlighted that the context should be outside the pre-established curricular of educative institutions; and it should be determined by individuals and groups who decide to engage in. He also addressed that formal learning takes place in highly institutional and unstructured setting. In this article, I adopt Livingstone's (2001) definition on "informal learning".

Street, one of the fore-founders of multiliteracies, contributes to the definition of informal learning. He argued that schooling has narrowed the idea of literacy. Therefore, he founded New Literacies Studies (Gee, 1996; Street, 1993). According to him, literacy is a social practice that is embedded within everyday practice rather than a neutral language or a set of technical skills (Street, 1995). His work inspired numerous studies in different cultures and institutions, especially in out-of-school contexts (Schultz & Hull, 2008). In a similar manner, Gee (1990), a linguist who has been central to this field, introduced and popularized a broader category, "discourse". Gee (1990) viewed discourse as "ways of behaving, interacting, valuing, thinking, believing, speaking, and often reading and writing that are accepted as instantiations of particular roles by specific groups of people" (p. 19). He emphasized that literacy must be situated in its social, cultural, historical, economic, and political contexts in both formal (in school) and informal (out of school) ways (Gee, 1990). Multiliteracies, a term that is summed up from existing literacy studies, represents "multiple communication channels, hybrid text forms, new social relations, and the increasing salience of linguistic and cultural diversity" (Schultz & Hull, 2002, p.26).

Existing studies of informal L2 learning have generally shown that L2 learners engage themselves in a variety of informal learning activities to develop their L2 proficiency. Freeman (1999) investigated second language learners' out-of-class language learning. In his study, Pearson (2004) conducted a research among Chinese international students who studied in New Zealand while discovering that students preferred to participate in plenty of informal learning activities, such as watching news, reading newspapers, and making native friends, in order to explore opportunities for language learning. In addition, Maloney (2007) revealed that Facebook is capable of supporting informal collaborative learning in which students would invest time and energy in their social connections and knowledge communities.

2.2.4 Technology and L2 learning

Multiliteracies pedagogy accounts for the application of multimodality in communication, while multimodality refers to how people realize meaning making through different modes (Kim, 2014b; Rowsell & Walsh, 2011). As Schultz and Hull (2008) mentioned, the emergence of new technologies made it possible for literacy to travel across space and time. Levy and Debski (1999) concluded the most urgent function of using technologies for L2 learning, which is "to engage native speakers at a distance, to utilize authentic materials and to enable learners to interact with rich, multi-dimensional learning environments" (p. 7).

There are ample findings that illustrate the effectiveness of technology-assisted L2 learning. M. Smolcec et al. (2014) reported a case that a 10 year-old Croatian student facilitated his literacy skills through watching YouTube videos. The student had acquired a high level of literacy skills by making his own game tutorial videos to explain his techniques to other players. Chung, Graves, Wesche, and Barfurth (2005) investigated L2 learning as a socially mediated process through technology in an international language class. In the study, twenty-six students, including Korean- and English-speaking peers, paired together to learn each other's language. They found that online collaborative discourse supported knowledge development within cross-linguistic learning environment. Bo-Kristensen and Meyer (2008) considered mobile lab as the incarnation of language lab, which also could simultaneously link learners through mobile devices

and facilitate authentic resources as the virtual lab does. However, as they indicated, it leaves more agencies to learners' self-directed abilities. Zheng, Wagner, Young and Brewer (2009) conducted a study on Chinese L2 learners' engagement in online game Quest Atlantis to examine how it could support L2 learning. The authors noted that L2 learners learned English effectively through the "coordinate in-the-moment actions" (p. 489) in this game. M. Lawn and E. Lawn (2015) took a pilot course using a commercial online English learning service at a private university in Nagasaki Japan. They discovered the potential for E-learning and found out that all students in this project received significant improvement in L2 communicative competence. The reason for such positive results were, according to M. Lawn and E. Lawn (2015), the online English learning provided great motivations for those Japanese students to interact with native English speakers, while increasing their overall self-confidence as well.

In previous studies, many researchers have endorsed the effectiveness of technologyassisted informal language learning. Lightbown and Spada (2001) argued that in informal language learning settings, language learners interact with native speakers in target language, using various technologies at home or at work, such as watching a movie or listening to music, could facilitate language learning. Other researchers also confirmed this conclusion. Behrani and Sim (2012) conducted a study among 30 intermediate language learners, from which they found that L2 learners' speaking proficiency could be improved significantly through informal exposures through audiovisual mass media technologies. Livingstone (2001) pointed out that Canadian adults spend an average of fifteen hours per week on informal learning activities, which was even more than hours they spend on formal learning. Clough, Jones, McAndrew, and Scanlon (2009) designed a survey to investigate those enthusiastic mobile device owners' informal L2 learning practices. The result showed that mobile devices support a wide range of informal learning activities (p. 109).

Golonka et al. (2014) summarized evidences for the effectiveness of different technology used in foreign language learning and cataloged digital technologies into four main types, including "classroom-based technologies", "individual study tools", "network-based

social computing", and "mobile and portable devices". Table 1 provides a list of technologies that have been reviewed in their report.

Table 1: Digital technologies and brief descriptions

Catalog	Description	
Schoolhouse- or classroom-based technologies		
Course management system (CMS)	Server-based application used to present materials and services required for blended or distance learning.	
Interactive white board	An interactive display that comprises three pieces of equipment: a computer, a projector, and a display panel, which is a large free- standing or wall- mounted touch-sensitive screen.	
ePortfolio	A digital archive of student work created by a learner that records evidence of the learner's experiences, progress, achievements, and self- reflections	
Individual study tools		
Corpus	A collection of authentic language in spoken form, written form, or both. Corpora vary in terms of design (fixed size vs. expandable), content (general vs. specialized), and medium (written vs. spoken)	
Electronic dictionary	A dictionary in electronic form – either handheld or online	
Electronic gloss or annotation	A method of reference, usually in a form of a hyperlink, that allows learners to access glosses (word- or sentence-level, context-specific translations) or annotations (explanatory or background information) while reading an electronic text	
Intelligent tutoring system	A program that simulates a tutor by providing direct, customized instruction and/ or feedback to a learner. Such a system is generally comprised of four components: an interface (platform), an expert model (domain of knowledge the student is intended to acquire), a student model (current state of student's knowledge), and a tutor model (which provides appropriate feedback and instruction by using the identified gaps between the student and the expert models)	

Grammar checker	A program designed to evaluate a written text's well-formedness in terms of grammaticality. Such programs are often packaged, along with spellcheckers, within word- processing programs
Automatic speech recognition (ASR) and pronunciation program	A technology that allows a computer to identify the words a person speaks into a microphone. ASR is often a component of speech pronunciation software, and as such, identifies particular parameters of the learner's output, such as prosody or specific sounds, and provides feedback on these aspects of performance
Network-based social computing	
Virtual world or serious game	A virtual world is a program that allows learners to move a representation of a character, or "avatar", through a 3-D graphical environment. A serious game is a virtual environment or traditional computer game in which activities are guided or restricted by the program and users have a specified goal or set of goals to complete
Chat	A form of synchronous computer-mediated communication; either text based or include audio
Social networking	Social networking, of which Facebook and MySpace are the best-known examples, enables peer-to-peer communication and collaboration. Users develop their own presence on social networking by creating profile pages about themselves, and then joining networks based on geography, interests, associations, or friendships
Blog	A web application that displays entries authored by the blog owner with time and date stamps and is visible to other web users
Internet forum or message board	An asynchronous system in which messages are sent to multiple recipients. Messages are threaded according to topic and a notification is often sent to a user's e-mail address when an update is posted
Wiki	A website that allows multiple users to post or edit information
Mobile and portable devices	

Tablet PC or PDA	A tablet personal computer (tablet PC) is a portable personal computer with a touchscreen. A personal digital assistant (PDA) is a hand-held mobile computing device that combines many features now common to other mobile devices: a calendar, contacts list, word processing, and depending on the OS, applications, such as Excel, PowerPoint, and Adobe Reader
iPod	A portable media player produced by Apple, Inc. It can also serve as external data storage devices with a wide range of memory capacities. iPods can be used to play downloaded television shows and movies and have a small screen for viewing this media. Podcasts, or audio and video digital-media files, can also be downloaded for use with the iPod or other digital media player
Cell phone or smart phone	A cell phone is a mobile telephone and a smartphone is a mobile phone with advanced capabilities, and often, PC-like functionality. A smartphone often has a keyboard or other text entry functionality, internet and e-mail abilities, and the capacity to run an operating system and related software

Note. Reprinted from "Technologies for foreign language learning: a review of technology types and their effectiveness", by Golonka, E., Bowles, A., Frank, V., Richardson, D., & Freynik, S. (2014). *Computer Assisted Language Learning, 27*(1), p. 72-77

According to Golonka et al. (2014), they summarized four categories from over 350 potentially relevant publications that met their criteria. There are ample evidences that support the effectiveness of technology-assisted L2 learning based on those categories. However, I exclude the review of first category – *classroom-based technologies* – since it is adopted in formal instructions, which is beyond the scope of this research.

Golonka et al. (2014) summarized six technologies under the categories of *individual study tools*, including corpus, electronic dictionary, electronic gloss or annotation, intelligent tutoring system, grammar checker, and automatic speech recognition (ASR) and pronunciation program. Li (2007) stated that electronic glosses are normally related to reading comprehension, vocabulary growth, and learning attitudes. There is plenty of research regarding learners' uses of electronic dictionary. Tang (1997) reported that among 254 secondary Chinese students who studied in Vancouver, 87% owned portable electronic dictionaries. Bower and McMillan's survey (2007) claimed an even higher

proportion that 96% of the students owned portable electronic dictionary and most of them were active users.

The categories of *network-based social computing* include virtual world or serious game, chat, social networking tools, blog, Internet forum and message boards, and wiki. M. Lawn and E. Lawn (2015) reported that the online English learning service provided significant motivation for those Japanese students to interact with native English speakers, while increasing their overall self-confidence as well. Also, M. Smolcec et al. (2014) reported how a 10-year-old Croatian student facilitates literacy skills through watching YouTube videos. The student had acquired a high level of English through making his own game tutorial videos to explain his techniques to other players. To be more specific, Yang and Fleming (2013) summarized five major ways of sense making for L2 learning through watching TV series, including (1) comprehending the pilot; (2) comparing: identifying differences; (3) comparing: identifying similarities; (4) re-contextualizing; and (5) perceiving as realistic (p. 300). Meanwhile, Lo (2012) conducted a study to explore participants' experiences of using YouTube as a L2 learning tool. He pointed out that the design of YouTube offered learners flexibility, for that they could pause the video in any point. In addition, he also mentioned another advantage, which learners could even re-access the same video on different devices (e.g. laptop, cellphone, tablet), as long as they have applied a same personal account on all devices. Chung et al. (2005) found that online collaborative discourse supported knowledge development within cross-linguistic learning environments. Zheng et al. (2009) conducted a study on Chinese L2 learners' engagement in online game Quest Atlantis and drew the conclusion that L2 learners do learning real-world English effectively through the "coordinate in-themoment actions" (p. 489) in the game. Ranalli (2008) investigated learners' perspective on the effectiveness of informal L2 learning through the popular computer simulation game – The SIMs. The results revealed participants' beliefs that The SIMs has the potentials to facilitate L2 learning, although it could not be a replacement for traditional course-based instruction.

There are three technology tools in the categories of *mobile and portable devices*: tablet PC or PDA, iPod, and cell phone or smart phone. Many studies indicated that the most

frequently suggested learning activity on mobile phone is employing text messaging for vocabulary learning (Andrews, 2003; Levy & Kennedy, 2005). Bo-Kristensen and Meyer (2008) considered mobile lab as the incarnation of language lab, which also could simultaneously link learners through mobile devices and facilitate authentic resources as the virtual lab does. However, as they indicated, its effectiveness often relies on learners' self-directed ability. In addition, Lan, Sung, and Chang (2007) utilized tablet PCs to undertake "mobile-supported peer-assisted learning" for EFL learners in Taiwan. They encouraged participants' to facilitate each other's L2 learning by peer communication and collaboration, which was proved effective in their study.

2.3 Communicative competence

Since the latter third of the 20th century, researchers have commonly concurred, "language ability should be defined in terms of communicative competence, or the ability of express, interpret, and negotiate meaning" (Kinginger, 2009, p. 70). Schiefelbusch (1984) defined communicative competence as "the totality of experience-derived knowledge and skill" (p. 5) that enables a speaker to convey his meaning through structurally organized, referentially accurate, and socially appropriate language in communications, as well as to understand others' meaning as a joint function of structural characteristics and social contexts. However, Hymes's (1971) argument may be the most influential in the development of communicative competence (Zhang, 2005). He stressed the importance of sociolinguistic dimension to communicative competence by arguing that social factors not only impact on speakers' competence but also are central to grammar (Hymes, 1971). Based on the previous understanding regarding communicative competence, Canele and Swain (1980) proposed communicative competence framework to provide guidance in L2 learning and teaching.

2.3.1 Communicative competence framework

In 1980, Canele and Swain (1980) proposed a framework of communicative competence, which was designed to support a communicative approach for second language teaching and learning. In their understanding, communication is based in "sociocultural, interpersonal interaction" (p. 29). It involves unpredictability and creativity, and use of

authentic language, while being "judged as successful or not on the basis of behavioral outcomes" (Canale & Swain, 1980, p. 29). Meanwhile, they assumed that literacy in different sociocultural discourses and contexts conveys different meanings. In addition, they stated that communication involves verbal and non-verbal symbols, oral and written modes, and production and comprehension skills (Canale & Swain, 1980), which is aligned with the concept of multiliteracies.

In this framework, Canale and Swain (1980) included three main components: grammatical competence, sociolinguistic competence, and strategic competence (p. 28). They further defined *grammatical competence* as "the knowledge of lexical items and of rules of morphology, syntax sentences-grammar semantics and phonology" (Canale & Swain, 1980, p. 29). Grammatical competence is concerned with how grammatical accuracy conveys messages (Zhang, 2005). Sociolinguistic competence, according to Canele and Swain (1980), includes rules of use and rules of discourse (p. 30). Sociocultural rules of language use focuses on certain context and the extent to which language learners' propositions, communication, style, and attitude are appropriate; while rules of discourse concerns about language learners' application of appropriate grammatical forms to create coherent discourse (Canale & Swain, 1980). Finally, Canale and Swain (1980) defined strategic competence as those verbal and non-verbal communication strategies applied by language users to facilitate the effectiveness of communication. Færch and Kasper (1984) presented several communicative strategies, including reduction strategies and achievement strategies. They proposed two subcategories in reduction strategies, including formal reduction and functional reduction. Formal reduction refers to how learners avoid unfamiliar rules and vocabulary. Functional reduction is further divided into "actional functional reduction" "propositional functional reduction" and "modal functional reduction" (Færch & Kasper, 1984, p. 48-49). Learners adopt actional functional reduction to avoid presenting certain speech acts, while using propositional functional reduction to avoid certain topics and messages. By using modal functional reduction, learners decide not to "mark a speech act for relational (politeness) and expressive functions" (Færch & Kasper, 1984, p. 49). Moreover, the achievement strategies are applied to achieve speakers' original communicative goals (Færch & Kasper, 1984). There are two ways to realize achievement strategies, including "non-cooperative strategies" (p. 50), in which learners change their ways to convey the messages, and "cooperative strategies" (p. 50), in which learners accomplish the communication goals through interlocutor's assistance.

To sum up, Canale and Swain (1980)'s communicative competence framework provides a scope to measure L2 competence into specific dimensions, with a focus on language use. In this study, I use Canale and Swain (1980)'s communicative competence framework, along with a pedagogy of multiliteracies, to examine Chinese international students' language difficulties and their strategies to facilitate the efficiency of communication.

2.3.2 BICS and CALP distinction

Jim Cummins (1979, 1981) first brought up the distinction between basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP) in his research. This idea originated in English as Second Language (ESL) education to remind educators of the challenges that bilingual children may encounter when they tried to catch up to their native classmates in academic respects. According to Cummins (2008), "BICS refers to conversational fluency in a language while CALP refers to students' ability to understand and express, in both oral and written modes, concepts and ideas that are relevant to success in school" (p. 71). Cummins maintained that BICS develops through social interaction starting from birth; it differs from CALP after schooling (Cummins, 2008). Cummins (1981) also found immigrant students' conversational aspects of proficiency reach peer-appropriate levels usually within about 2 years of exposure in English, while they often need 5 to 7 years to approach grade norms in academic aspects of English.

The BICS/CALP distinction provides implication to L2 curriculums. Cummins (2000) stressed that "the distinction was not proposed as an overall theory of language but a conceptual distinction addressed to specific issues concerning the education of second language learners" (p. 73). It emphasizes the importance of instruction to support learning through high context, which Cummins described as including the use of visuals, plentiful face-to-face interaction, and the building or activation of background knowledge (Ranney, 2012). According to Cummins (2000), learners' background knowledge is included to allow for a better understanding of familiar topics. Moreover, through the BICS/CALP distinction, we can recognize the low correlations between measures of reading scores and oral language proficiency (Goldenberg & Coleman, 2010). Cummins (2001) also

stated that vocabulary instruction could raise students' awareness of how language would be used in different social contexts. To prevent the situation that L2 acquisition would be abstract and classroom-bound, Cummins (2001) suggested that L2 acquisition should focus on language use, by providing authentic, meaningful, and holistic communication opportunities. He also viewed learning as a social process where students acquire meaning through social interaction (Cummins, 2001).

In addition, BICS/CALP distinction highlights the disparity between conversational fluency and academic language proficiency. Cummins (2008) claimed that, for immigrant children, it often takes 2 years to reach peer-appropriate levels in BICS proficiency while they often need 5-7 years to approach grad norms in academic aspects of English. However, the case of Chinese international students seems to be completely reversed. Zhang (2005) adopted BICS/CALP distinctions to assess Chinese international students' L2 oral competence development. The finding revealed that Chinese students in Canada showed a varied pattern. He further explained,

Although it is true that students whose BICS are well developed usually do well in their CALP development, it seemed that CALP, at least in its literacy form, does not necessarily call for the development of BICS to a certain level or threshold (Zhang, 2005, p. 155).

As Cummins (2000) responded to the critiques on BICS/CALP distinction: "it was suggested as typical in the specific situation of immigrant children learning a second language" (p. 74). He further explained that it must involve cognitive skills in most forms of social interaction (Cummins, 2000). Chamot and O'Malley (1996) also stated that L2 learning would be most effective when students are able to learn meaningful language that could be applied easily in a context to accomplish goals that are important to students. Therefore, for newly arrived Chinese international students, who have barely experienced the exposure in English before studying abroad, the situation is certainly different.

To conclude, the BICS/CALP distinction addressed similar phenomena to Canale's (1983) communicative/autonomous language proficiency (Cummins, 2001). As Cummins (2001) described, "Canale points out that the capacity for such interpersonal language uses is

universal although socialization within particular discourse communities (e.g., schools) will determine the range and contexts within which such functions will be used" (p. 62).

2.3.3 Chinese students' L2 competence development

In Chinese traditional educational context, most students start to learn English as a compulsory subject in grade 3 (Xu & Case, 2015). According to Canadian Bureau for International Education (2014), over half (55%) Chinese international students study at the university level in Canada, meaning that the majority of them have received more than 10-years Chinese EFL education before they study in Canada.

Plenty of studies investigate Chinese EFL education in different growth stages. In the research regarding Chinese Early Childhood English education, Yu and Ruan (2012) mentioned that nowadays children are able to see growing presence of English, which has led to their desire for English learning. Meanwhile, Jiang (2007) reported that parents' beliefs that the earlier their children start to learn English, the more effective learning would be contribute to Chinese children's early exposures to English. However, Yu and Ruan (2012) also illustrated challenges for Chinese Early Childhood EFL education, such as the traditional way of teaching English was devoid of meaningful learning contexts and lack of qualified EFL teachers. Chinese EFL learners often start to receive formal EFL instruction in primary school (Zhang, 2012). Zhang (2012) explained that the current EFL curriculum standards specified the goals that include not only the four basic English skills (listening, speaking, reading, and writing) and linguistic knowledge (pronunciation, vocabulary, grammar and communicative functions), but also learning strategies and cultural awareness (p. 73). However, challenges still remained. For example, heavily relying on print learning material constrains Chinese EFL learners' literacy acquisition (Zhang, 2012). Wang and Chen (2012) reported the overall goals of EFL education for high schools reflect "a clear shift of emphasis from a transmission mode of teaching to a more communicative and learner-centered approach" (p. 92), whereas the tensions impede this shift in practice. Wang and Chen (2012) revealed the issues, including "due to the exam pressure, students still expect teachers to explain grammar and vocabulary" (p. 100), and "summative assessment is still the major tool for evaluating learning" (p.100). To conclude, Chinese EFL learners' development of L2 communicative

competence has been constrained; it is not surprise that newly arrived Chinese international students would experience a hard time in both formal and informal communicative settings.

The insufficient L2 competence remarkably manifests in a study abroad context. As Kinginger (2009) claimed that the majority of international students are only exposed to L2 in the classroom. Thus, these students need to "expand their repertoire of spoken language in order to interact appropriately within informal settings" (p. 70). Other research on Chinese international students' language difficulties has supported Kinginger's (2009) argument. Zhang and Brunton (2007) reported Chinese international students in New Zealand found it difficult to speak with host nationals due to a previous lack of opportunities to practice in China. Meanwhile, As Zhang (2005) revealed, few Chinese international students reported to have encountered most language difficulties in their lived experiences, rather than in academic contexts, which echoes Cummins's BICS/CALP distinction (1981).

Kinginger (2009) indicated, "when students set aside their fear of appearing incompetent within encounters where their interlocutors are willing to engage in negotiation of meaning, they are eventually able to overcome their limitations" (p. 146). However, Chinese EFL learners come with their own unique culture and personalities. Gao, Ting-Toomey, and Gudykunst (1996) have documented a number of studies showing that Chinese students are often worried about what interlocutors' reactions are toward them. Liu and Jackson (2008) also reported that the majority of Chinese students in their study do not want to take risks when speaking English even though they are willing to participate in interpersonal conversations. Nevertheless, informal L2 learning through technology can precisely meet Chinese international students' needs for enhancing communicative competence, especially with respect to sociolinguistic competence and strategic competence (Gilmore, 2007; Li, 2007; Ma, 2012).

Chapter 3

3 The study

3.1 Introduction

According to my research questions, I review existing literatures regarding three major domains, including a pedagogy of multiliteracies (The New London Group, 1996), the BICS/CALP distinctions (Cummins, 1981), and the communicative competence framework (Canale & Swain, 1980), as well as Chinese international students' L2 development. The review shows the tensions between Chinese international students' learning experiences in China and their language difficulties in a study abroad context, as well as the effectiveness of informal L2 learning through technology. My own experience as an international student and my concerns to better understand their language difficulties (Sakthivel, 2003) motivate me to develop this case study. In this study, I interview three Chinese international students who have recently arrived in Ontario, Canada. These semi-structured interviews provide insights into their language difficulties in informal communicative settings and their experiences in informal L2 learning with technology.

As a Chinese international student in Canada, I view myself as an "insider". I have met similar situations as my participants do. Therefore, in this study, I use my own experiences as references to guide my research. In addition, when selecting participants, I choose participants who have similar experiences, which makes sample narrower, and data collection and analysis more explicit (Gay, Mills, & Airasian, 2006).

As noted previously, I will explore the following research questions:

- 1. In their lived experiences, what language difficulties do newly arrived Chinese international students encounter?
- 2. How do newly arrived Chinese international students use technology to facilitate informal L2 learning for enhancing lived experiences in Canada?

In this chapter, I first explain the methodological approach used in this thesis. To be specific, I introduce my intention of choosing qualitative case study and how a case study approach works perfectly for developing an in-depth understanding of Chinese international students' language difficulties and learning strategies. Then, I describe the research design of this study, including participants, data collection and data analysis.

3.2 A qualitative case study methodology

In order to understand Chinese international students' informal L2 learning experiences through technology, I design a qualitative case study. The rationale is to understand the language difficulties that Chinese international students have encountered in informal communicative settings and their technology assisted informal L2 learning experiences, while interpreting their meaning from an insider's perspective (Glesne & Peshkin, 1992).

Although qualitative case study is widely adopted in educational research, there is no universal definition (Bassey, 2001). According to Creswell (2007),

Case study research is a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case themes (p. 97).

Yin (2013) stated, "a case study investigates a contemporary phenomenon (the 'case') in its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p. 2). In addition, as Robson indicated in 2002, a case study is a strategy for study that involves an empirical investigation of a particular contemporary phenomenon within its real life context through multiple sources of evidence. A case study is usually employed when researchers plan to explore a phenomenon about which is not much known, or to describe something in detail (Cohen, Manion, & Morrison, 2011). Among various qualitative research designs, I select a case study that, through rich description, is powerful in illustrating both international students' lived experiences in Canada and their informal learning experiences with technology. Participants' experiences and perceptions were mainly captured through in-depth interviews. Compared to other methods, a case study has an advantage that, as Stroobants (2005) suggested, it involves both rich and meaningful data to the thinking and understanding of individuals. High-quality narratives approach the complexities and contradictions of real-life experiences (Flyvbjerg, 2006), which echoes my research purpose. Also, as Kong (2014) claimed, "participants' detailed narratives unfold vivid examples that other approaches cannot have elicited" (p. 59). In my case, the case study approach allows me to provide rich and vivid descriptions (Cohen et al., 2011) of Chinese international students' lived experiences in the context of studying abroad. The case study approach also contributes to an in-depth understanding of participants' informal learning activities through technology.

Moreover, my first research question concerns participants' language difficulties in their lived experiences, which would be distinctive depended on their individual L2 learning backgrounds and language needs. My second research question targets how they organize informal L2 learning, which could be appropriately addressed by a case study, as Cohen et al. (2011) indicated, "case study can establish cause and effect ('how' and 'why')" (p. 289). Therefore, from the definition and function of case study, it is obvious that, compared to other research methods, case study allows me to discover more unique features of my participants' experiences so that I may understand them holistically.

3.3 A social constructivist perspective

As Kim (2014a) indicated, in contrast to interpretivist understanding and philosophical hermeneutics, social constructivism concentrates on "the construction of meaning in terms of the social, cultural, and historical dimensions of understanding in order to make sense of human experience" (p. 4). Qualitative research embedded in a social constructivist perspective tends to "discover meaning and understanding through researchers' active involvement of the construction of meaning" (Kim, 2014a, p. 4).

In this study, I investigate Chinese International students' informal L2 learning through technology for enhancing lived experiences based on a social constructivist perspective. According to Guba and Lincoln (1994), ontologically in the social constructivist

paradigm, knowledge is constructed through social interaction instead of transmitted or discovered by learners. Epistemologically, constructivism is seen as transactional and subjectivist, while Guba and Lincoln (1994) argued, "the investigator and object of investigation are assumed to be interactively linked so that the 'findings' are literally created as the investigation proceeds" (p. 111). In terms of methodology, constructivism is hermeneutical and dialectical. Explicitly, only through the interaction between researcher and respondent can individual construction be elicited and refined (Guba & Lincoln, 1994).

3.4 Participants

According to Cummins's (1979, 1981) BICS/CALP distinction, it often takes two years for bilingual children to gain basic interpersonal communicative skills. Also, as Zhang and Mi (2010) indicated in their findings that after two years in a study abroad context, international students no longer suffered from basic communicative problems (p. 380). Therefore, in my study, I define my participants as recently arrived Chinese international students, who arrived in Canada in the past two years. Furthermore, because the nature of case study investigates real-life events (Cohen et al., 2011), my participants should have experienced language difficulties in informal communicative settings, while also having experiences of improved communicative skills by informal L2 learning through technology.

As Cohen et al. (2011) indicated, in a qualitative research, "the emphasis is placed on the uniqueness, the idiographic and exclusive distinctiveness of the phenomenon, group of individuals in question, i.e., they only represent themselves, and nothing or nobody else" (p. 161). Thus, this study does not aim to make generalizations, which builds no standard on how many participants to be recruited. Therefore, based on limited time and resources, I recruit three participants who fulfill the aforementioned selection criteria.

I adopt "purposive sampling" (Cohen et al., 2011, p. 156) to recruit my participants. As Cohen et al. (2011) indicated, in purposive sampling, researchers handpick the cases to be included in the study on the basis of particular criteria. Ball (1991) added that purposive sampling often undertook to access 'knowledge people' those who have in-depth knowledge about certain issues. In this case, participants should have deep understanding in informal L2 learning through technology. As a graduate student in Ontario, Canada, I use my personal network to approach potential participants. Firstly, I sent recruitment emails, enclosing within the Letter of Information of this study, to my Chinese friends and asked them to pass the email to whoever might be qualified as a participant. Then, I waited for the potential participants to respond to me. Through the process, I eventually recruit three participants – Kate, Louis, and Doris.

Kate is a MA student majored in Education, who has been studying in Canada for 14 months. She plans to obtain her master's degree this year. She was referred because of her significant accomplishment in informal L2 learning through technology, which is substantiated in the interview. Kate told me that she was happy to share her stories so that she might influence other students. When my second participant, Louis, agreed to participate in my study, he was preparing his oral defense of his Master of Science thesis. He has been in Canada for 18 months. He described language difficulties and informal learning strategies intensely throughout the interview. Doris is my last participant in this research. She has only studied in Canada for 7 months; however, she masters exploiting her resources to facilitate the development of communicative competence in English.

3.5 Data collection

Data of this study were collected from February 21th to March 29th 2016 through three instruments: in-depth interviews, participants' personal narratives and researcher's reflective journals.

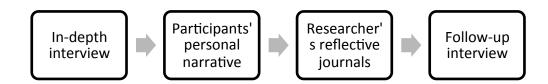


Figure 1: The process of data collection

When Kate, Louis, and Doris agreed to participate in my study, I informed them immediately of my data collection processes. Then, I set up the appropriate interview times based on their schedules. After the individual interview of each participant, they were invited to write a personal narrative about their L2 learning experiences before studying abroad. After the initial interviews, I finished my transcription and my own reflective journal. The journal is used to reflect on data I have collected both from the interviews and personal narratives. I especially reflect on my understanding towards participants' non-verbal communications during interviews. I shared my transcription and reflective journal with each participant during the follow-up interview, and invited them to critically reflect on them. Table 2 demonstrates the timeline of data collection process.

Participants	In-depth Interview	Personal Narrative	Researcher's reflection	Follow-up interview	
Kate	February 21 2016	February 23 2016	February 24 2016	March 3 2016	
	45 minutes			20 minutes	
Louis	February 28 2016	March 5 2016	March 9 2016	March 17 2016	
	65 minutes			25 minutes	
Doris	March 14 2016	March 21 2016	March 23 2016	March 29 2016	
	40 minutes			20 minutes	

3.5.1 Interview

I conduct an individual interview and a follow-up interview for each participant. Through interviews, I collect data for both of my research questions. After the first interview I share my reflective journal with participants while inviting them to critically reflect on them during the follow-up interview. The individual interview normally took about 45 minutes, while the follow-up interview lasted for around 20 minutes. Once the individual interview came to a close, I invite participants to write their personal narratives about their English learning backgrounds before studying abroad.

According to Mears (2012), "in-depth interviews are purposeful interactions in which an investigator attempts to learn what another person knows about a topic, to discover and record what that person has experienced, what he or she thinks and feels about it, and what significance or meaning it might have" (p. 170). Essentially, at the root of in-depth interviewing is to understand experiences (Seidman, 2006). To understand participants' experiences, interview often address matters of what or how related to lived experiences, which is entirely aligned with for my research questions. Existing studies also support the effectiveness of interviewing in understanding participants' experiences. Zhang (2005) conducted a multiple case study to understand Chinese international students' oral development in Canada. He argued that interviews and follow-up interviews enabled him to "solicit more in-depth information" (p. 68) on subjects' experiences. He also found that participants preferred to communicate in Chinese during the interview, because it made them feel more comfortable. Tanous (2014) found that he could elicit responses from L2 students through interviewing. In Elfeel (2014)'s study of international students' beliefs in language learning, she suggested that interviews helped "explore participants" insights into their experience in a dynamic and interactive way" (p. 66). As Mears (2012) suggested, to achieve a level of in-depth reflection, usually researchers have to conduct multiple interviews with each participant. The follow-up interview brings enriched understanding and fresh sights to the interviewer (Mears, 2012). Therefore, in my study, I conduct both individual interviews and follow-up interviews for each participant with a break in between that lasted one to two weeks to allow for deeper reflection.

Patton (1980) outlined four types of interviews: "informal conversational interviews, interview guide approach, standardized open-ended interviews, and closed qualitative interviews" (p. 206). Eisazadeh (2014) employed an interview guide approach, to collect data during interviews. This approach allowed her to stay on topic, but also encouraged conversational dialogue. One of the significant strengths of this approach is that data collection is systematic and comprehensive (Cohen et al., 2011). In my case, I embrace participants' unique experiences and feelings that I might not have aware of (Cohen et al., 2011); therefore, I also adopt "interview guide approach" and all interviews are semi-structured. My focus is to understand participants' personal experiences regarding to the

topic, so I utilize open-ended questions that allow participants to respond using their own frame of reference (Bourdieu & Thompson, 1991).

To elicit the participants' stories in a natural flow of interaction, the interviews are conducted in a conversational style. Meanwhile, I spend some time generating openended interview questions in order to gain rich data. Through interviews, I aim to discover the participants' language difficulties in a study abroad context, and explore their informal L2 learning styles through technology. As such, my interview questions consist of information regarding their learning within social, historical and cultural contexts: for example, (1) Experience questions, such as "Could you tell me the story that you encountered language difficulties in informal settings?" (2) Behavior questions, such as "What did you do under the current circumstance?" (3) Opinion and value questions, such as, "In your opinion, what are the possible reasons for experiencing language difficulties in informal settings?" Also, I raise spontaneous questions to achieve deeper understanding in their experiences, such as "How do you feel about your first week here?"

Meanwhile, all interviews are conducted in appropriate atmospheres, such as in café or restaurant, where participants feel secure to talk freely (Kvale, 1996). Because every interview is audio recorded for further analysis, I conduct recording tests before the interview began to ensure that every detail of participants' narratives could be captured clearly. Meanwhile, considering my participants are newly arrived Chinese international students who might still suffer from language shock, all interviews are conducted in Mandarin first and translated by the researcher (Zhang, 2005) before conducting the next one (Mears, 2012). The reason for this procedure is to "provide important detail and an accurate verbatim record of the interview" (Cohen et al., p. 537). When I meet my participants individually for the follow-up interview, I invite them to do narrator check to review and reflect on my interpretation of their meaning to ensure that the information was correct (Mears, 2012).

3.5.2 Personal narrative

Participants' personal narratives provide a holistic picture of their personal experience. I utilize participants' personal narratives to triangulate the interview data, providing deeper

understanding in participants' language difficulties in a study abroad context. Also, as Mears (2012) indicated, during an interview, when a researcher asks a question, related information may not always rise in participant's memory immediately. Therefore, in order to access more comprehensive information, I invite my participants to write their personal narratives for further analysis. Eisazadeh (2014) provided an example in her study. She invited participants to write personal narratives regarding to their own literacy practice as preschool educators, which contributed to deeper understanding of their lived experiences in her study. In my analysis, for instance, I discover that Kate's language difficulties in pronunciations might be due to inadequate time spent listening to and speaking English in high school.

In addition, the personal narrative provides detailed information on participants' familiar topics. As Cummins (1981) reported, it is necessary to include participants' learning backgrounds, which indicate their familiar topics, to analyze their L2 competences based on BICS/CALP distinction. Therefore, I share my own personal narrative regarding my English learning experiences in China with every participant as a reference before inviting them to write their own. All personal narratives are written in Chinese, and translated by the researcher. I share my transcription and translation with participants and confirmed with them in details face-to-face during the follow-up interviews. Their feedback offer me new understanding of their learning experiences and familiar topics.

3.5.3 Reflective journal

In qualitative studies, keeping reflective journals is viewed as a great strategy to facilitate reflexivity, engage researcher's value instead of attempting to control it (Ortlipp, 2008). I write my reflective journal after every interview, which helps me to clarify my research intentions and the approaches that I employ. When I write reflective journal, it is also a chance to refresh my understanding of the topic, the data and my own role as a researcher. Also, as Ortlipp (2008) indicated, reflective journal assists researchers to figure out ideas of conceptual frameworks for data analysis. Moreover, keeping a reflective journal allows me to review every movement, feelings, thoughts and expression of my participants in my mind, which would not be visible in the interview data or the transcriptions (Ortlipp, 2008). Meanwhile, I record participants' non-verbal

communication in my reflective journal, such as their gestures, expressions, and movements, which, as Cohen et al. (2011) indicated, contribute more information to the study than the verbal communication. For example, when I asked Kate's feeling about her learning results, she offered me a positive answer. However, I saw the uncertainty in her eyes so I kept asking the detail of her feelings, and also discussed it in the findings. In addition, as an "insider" who has gone through the similar situations as my participants, I also utilized my reflection to bridge participants' experiences and my individual experiences, in order to present a more thought-provoking discussion.

3.6 Data analysis

Qualitative studies usually seek to understand a small group of participants' certain experiences, thus the data tend to be rich and detailed (Cohen et al., 2011). As Cohen et al. (2011) indicated, qualitative data analysis is "almost inevitably interpretive, hence the data analysis is less a completely accurate representation but more of a reflexive, reactive interaction between the researcher and the decontextualized data that are already interpretations of a social encounter" (p. 427). In addition, Gadd (2004) suggested that it is important for researchers to understand whether the same words from different participants are describing similar experiences during analysis. However, as Creswell (2007) argued, narrative has the least prescribed procedure for analyzing data, which provides more flexibility for researchers to create an appropriate procedure in data analysis for the study.

In this study, to analyze data, I conduct three procedures in sequence to achieve deeper understanding, including transcription, coding, and thick descriptions. Meanwhile, I establish a folder for each participant. The documents include their interview audio recordings, personal narratives, the list of themes that emerged in their interview, and my reflective journal.

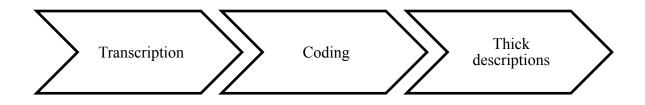


Figure 2: Three procedures of data analysis

Transcription is usually viewed as the first and most crucial step in working with interview data. It is a process of transforming raw data into a new form (Gibson & Brown, 2009). As I mentioned in data collection, I transcribed every interview data before conducting another one. Therefore, my data analysis actually began in the data collection process. When I transcribed data, as Cohen et al. (2011) suggested, I also paid attention to participants' tone of voice, the inflection of the voice, and attitudes. A complete transcript is made first based on the audio recording of individual interviews and followup interviews. Also, to protect participants' privacy, all names used in this study were pseudonym.

After transcription, I analyze data through Coding. Coding is an analysis tool that researchers commonly choose when dealing with qualitative data (Cohen et al., 2011). Kerlinger (1970) defined coding as the translation of question responses and respondent information to certain categories for analysis. Coding enables researchers to identify similar information, as well as searching and retrieving the data during analysis (Cohen et al., 2011). There are various kinds of code, such as an open code, an analytic code, an axial code, and a selective code. As Cohen et al. (2011) introduced, open coding is usually adopted at the early stage of analysis to generate categories and define their properties and dimensions (p. 561). Analytic coding derives from the theme or topic of the research (p. 561). Axial coding works within one category, connecting related codes and subcategories into a larger categories of text data, before integrating them to form a theory (p. 562). As an example, Schwartz (2012) analyzed his interview data through

three kinds of coding. He first coded data with a focus on "developing greater understanding of and connection with each participant" (p. 100), then began the process of open coding both manually and digitally, followed by axial coding to value the qualitative differences between emerged theme.

As shown in Figure 3, I follow five steps to code the data. First, I read all transcriptions thoroughly, writing down any ideas that stood out. Then, I use open coding to catalog their features and dimensions. According to Strauss and Corbin (1990), an open code is simply a new label that researcher attaches to describe a piece of text. I describe every story with a short phrase to define its property.

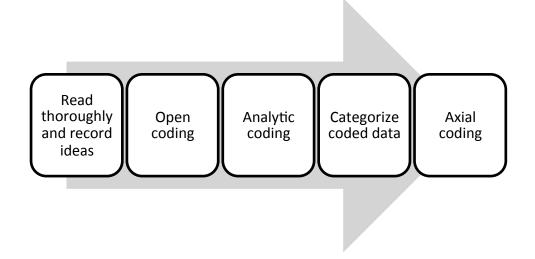


Figure 3: Five steps to code the data

For the first research question, I generate four categories, including (1) contexts categories, (2) language difficulties categories, (3) strategies categories, and (4) reason categories. For the second research question, there are five categories, including (1) technology tools categories, (2) carriers categories, (3) contexts/occasions categories, (4) contents/functions categories, and (5) improvement in learners' belief categories. After the first round of open coding, I have generated over 60 codes from the interview data, including language difficulties categories such as lack of vocabulary, sociocultural differences, and lack of listening practice, and technology tools categories such as Siri, TV series and The Talk Show. Meanwhile, I adopt an analytic code to derive from the

major theme. An analytic code is more interpretive than a descriptive code (Cohen et al., 2011). I add my interpretations to the major themes to make it clear and holistic. For example, when I code Kate's personal narrative in the first round, the theme "no listening practice" came out; in analytic coding, I supplement with the interpretation – "excluded from the examination". When adding my interpretations to the code, I also categorize the coded data into theoretical categories. For example, I sort out different strategies that participants adopted when encountering language difficulties into seven modes of multiliteracies (Cope & Kalantzis, 2009a), such as visual representations, gestures, and written literacy. Finally, I employ axial coding to analyze data within one category, while connecting related code into a larger category (Cohen et al., 2011). For example, in technology tools categories, I divide themes into subcategories that I find in previous literature. The subcategories include individual learning tools categories, network-based social computing categories, and mobile and portable devices (Golonka et al., 2014). Then, after classifying themes into subcategories, I explore the connections with other categories. In this stage, I draw graphs to display the categorized data and attempted to discover connections among them (Miles & Huberman, 1994).

In addition, when I organize the data, I utilize "thick descriptions" (Geertz, 1973) to record ideas about the specific meaning of the data, which facilitated the analysis during interpretation and enhanced the trustworthiness of the results (Creswell, 2007). First, when I transcribe data, I also draw maps, which helps me clarify the relevance between data and my research purpose (see Figure 4). Then, I compare the transcribed data with my own reflective journal to check the trustworthiness of my transcription and provide multiple layers to understand their speech. Also, I reflect on the data from my reflective journal to gather more details.

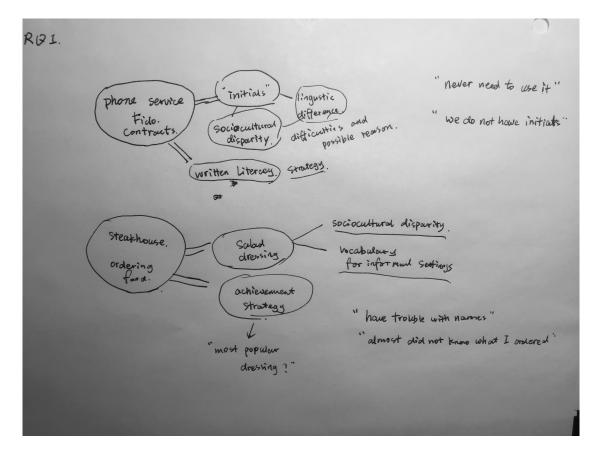


Figure 4: An example of my thick description to analyze data

After analysis, I employ a cross-case analysis to compare and contrast all individuals. Although all participants have their unique experiences, I summarize several shared themes, including their common language difficulties and the ways they informally learn L2 through technology.

3.7 Trustworthiness

As McGloin (2008) indicated, case study is fraught with criticisms mainly because of the lack of trustworthiness of data (Bryar, 2000; Pegram, 1999). Consequently, Guba (1981) argued that it is crucial for researcher to implement a model that could assess the trustworthiness of data in a case study. In Guba (1981)'s model, there are four criteria of trustworthiness, including truth value, applicability, consistency, and neutrality.

The first criteria, truth value, refers to how much confidence the researcher has with the truth of the study's results (Lincoln & Guba, 1985). There are multiple strategies to

achieve truth value, such as peer review (Thompson, 2004). In my study, I transcribe interview data immediately before taking another one; meanwhile, I write my reflective journal about details that I perceive to be closely related to the findings after every interview, such as participant's gesture, facial expression, and attitude. During the follow-up interview, I also invite my participant to reflect on my transcription and reflective journal to add support to the trustworthiness of data (Thompson, 2004).

Applicability, the second criteria in Guba (1981)'s model, concerns the degree to which findings can be applied to other objectives (Krefting, 1991). Although it is widely agreed that the findings of a case study cannot be simply applied to a broader research population (Burns & Grove, 1997; Woods, 1997; Yin, 1994), I try to attain applicability by focusing on a small sample to achieve the generation of "deep data" (Yin, 2003). As I introduced previously, to achieve in-depth understanding on my research questions, I adopt "purposive sampling" to recruit participants; meanwhile, I collect participants' personal narratives regarding their previous L2 learning experiences to assist the analysis.

The third and the fourth criteria in Guba's (1981) model are consistency and neutrality. Consistency refers to "whether the findings would be consistent if the study were to be replicated" (McGloin, 2008, p. 52). Neutrality ensures that the findings are not the result of other influences and biases (Kreftling, 1991). In this study, all interview data is audio recorded or documented. Both researcher and participant examine the transcription of interview data to enhance the trustworthiness. In addition, triangulation is used to establish neutrality in this case study (Krefting, 1991).

Triangulation is viewed as one of the strategies that could assess the trustworthiness of a qualitative case study (Thompson, 2004; Campbell & Fiske, 1959). As Cohen et al. (2011) claimed, triangulation could be defined as "the use of two or more methods of data collection" (p. 195). Denzin (1970) has proposed six categories of triangulation, including time triangulation, space triangulation, combined levels of triangulation, theoretical triangulation, investigator triangulation, and methodological triangulation. In this study, I adopt methodological triangulation. As shown in Figure 2, I use three data collection methods to triangulate the data, including interviews, participants' personal

narratives and researcher's reflective journals. For example, in Kate's first interview, I investigated her thoughts on if and how her previous learning experiences supported her basic communications in Canada. At that time, she could not think of an answer. She looked anxious and tired that day so I stopped the interview and told her to get some rest. The next day, she emailed me the answer, and told me when she was writing her personal narratives regarding previous L2 learning experiences; the answer just came to her mind naturally. In addition, she further explained her thoughts in the follow-up interview after checking my transcription and reflective journals. To conclude, the three instruments together offer opportunities for both researcher and participant to deliberate on the data, which contributes to the trustworthiness of the findings of this study.

3.8 Ethical considerations

As Stake (2006) indicated, ethical considerations must guide the holistic research process. Since I planed to conduct my research through a qualitative case study, which concerns interpersonal interaction and produce information about human experiences (Cohen et al., 2011), I submitted the ethics application to the Western research ethic review process. As Cohen et al. (2011) indicated, there are three main areas of ethical issues: informed consent, confidentiality, and the consequences (p. 442). Therefore, first of all, all participants were fully informed of the nature and scope of this study before they were invited to participate. I presented informed consent papers to each participant prior to interview. Secondly, I avoided questions that were related to participants' privacy during the interview, such as their addresses and phone numbers. Meanwhile, I maintained anonymity of participants' identities by using pseudonyms while omitting details that may reveal their identities.

Chapter 4

4 Findings

4.1 Introduction

The purpose of this study is to discover newly arrived Chinese international students' language difficulties that manifest in their informal lived experiences, and describe their informal L2 learning strategies with technologies to cope with those language difficulties. I conduct a qualitative case study to obtain in-depth data regarding three participants' experiences. It is not my intention to measure L2 proficiency or communicative competence in a study abroad context; rather, I aim to describe, from a multiliteracies perspective, their active "knowledge process" (Kalantzis & Cope, 2005) and creative design in informal L2 learning activities. As Cope and Kalantzis (2009b) commented on literacy learning, "it is aimed at creating a kind of person, an active designer of meaning, with a sensibility open to differences, change and innovation" (p. 175). In addition, I utilize Canale and Swain's (1980) communicative competence framework and Cummins's (1981) BICS/CALP distinction as a supplement, to further examine the data. The purpose of the entire study is to seek answers to the following research questions:

- 1. In their lived experiences, what language difficulties do newly arrived Chinese international students encounter?
- 2. How do newly arrived Chinese international students use technology to facilitate informal L2 learning for enhancing lived experiences in Canada?

In this chapter, I present data that I collected from the three participants – Kate, Louis, and Doris – as three individual cases. In every case, I start with an introduction on participants' personal English learning experiences before studying abroad, which are collected from participants' personal narratives; then, I present description on participants' language difficulties that are manifested in informal communicative settings, which is gathered from interviews and researcher's reflective journals; finally, I describe their strategies of informal L2 learning through technology for enhancing lived experiences that I have learnt from participants' interviews.

4.2 Participant I : Kate

Kate is a student completing an MA in Education, at an institution in Ontario, Canada. Before the interview, her friend proudly told me that Kate was a high academic achiever before coming to Canada. She got her undergraduate degree from one of the top universities in China. In Canada, she continues to achieve remarkable scores in every course she takes. While waiting for Kate, I pictured an ambitious, intelligent and powerful woman. However, when she actually appeared, I saw a quiet and graceful lady who was smiling at me.

"It is the topic that makes me want to participate," Kate told me at the beginning of our interview. She explained that in the first year of studying abroad she almost lost her pride because of the anxiety of communicating. She hoped her participation in this study could help more Chinese international students overcome language difficulties.

4.2.1 English learning experience in China

In Kate's personal narrative, she described her English learning experience in China as a "disaster". She started to take English classes in primary school when she was nine years old. However, before that, her parents had already begun to teach her some basic vocabularies at home, such as "apple" or "desk". Kate wrote about her experience:

I started earlier than my peers. However, my English class before middle school was like a candy, which means nothing but sweet. I didn't learn a real thing until middle school. I spent six years on learning grammar and vocabulary in high school, while listening and oral speaking were totally ignored because they would not be scored in the College Entrance Examination.

The College Entrance Examination that Kate mentioned is viewed as the most significant examination of school life in China, which every Chinese high school student fights for. Along with Chinese and Mathematics, English is a main component of the examination; however, not dissimilar to other regions of China, Kate's hometown school excluded listening and speaking from the English examination. In Kate's words, "There is barely listening and speaking practice in my English class. We only kept consolidating the grammar knowledge". Kate's talent and hard work paid off, when she was accepted into

the top university in China. However, the EFL curriculum in university did not increase her L2 communicative competence.

After I entered my dream university, I experienced an English placement test in my freshman year. There were five levels to measure our English competence, and we need to get all way up to level five to complete the English course. However, it was no surprise that the placement test was still grammar-centered. I heard that, at that time, there was an international student who was a native English speaker from the U.S. being assigned to level two. Basically, after finishing my English course, I totally gave up in English until I made up my mind to study abroad.

Kate's English learning experience is one element of the greater landscape of traditional Chinese EFL education. Zhang (2012) similarly reported that a low level of English Language proficiency resulted from traditional Chinese English education. According to his research, many students who have studied English for more than 10 years could not carry out the most basic conversations in English (Zhang, 2012).

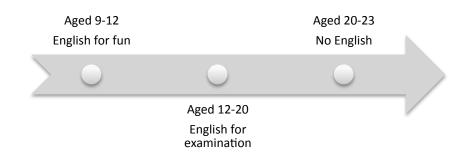


Figure 5: Kate's English learning process in China

Although Kate has learned English for ten years before coming to Canada, her learning experience seldom contributed to her development of oral literacy and communicative competence. Among four major knowledge processes that Kalantzis & Cope (2005) proposed, I can only see the first process – experiencing – in Kate's case. She experienced the new entails (Cope & Kalantzis, 2009b) in EFL class; however, without the support of the other three key processes, including conceptualizing, analyzing, and applying, her knowledge process seems to be weak and incomplete. She told me that she

did not realize her L2 proficiency was too weak to support her L2 communications until studying in Canada.

4.2.2 Language difficulties in informal settings

During the interview, when I asked Kate if she has encountered any language difficulties in her lived experience in Canada, she answered "of course" firmly and quickly. While I kept asking for details, the first story almost jumped out of her mouth. She described a story, in which she spent a long time to figure out what the clerk in a cellphone service store indicated.

The first week was just tough enough. I went to a cellphone service store with my roommates to get us new phone numbers. The staff warmly introduced various phone packages and promotions. However, the only thing that I remember later was that he spoke too fast for me to understand. All I did was just keep nodding with my friends. Of course later they told me that they had the same confusion with me. After we decided our package, the staff passed a contract for me to sign. I read roughly and signed in the last page before he reminded me that I also needed to write down my initial on every page. To be honest, I never used initials before, because in our Chinese names, we do not have initials. And also I was not sure where and how he wanted us to sign. My roommates and I gazed at the staff cluelessly. The staff did not understand our problem yet. Finally I just wrote down my full name, and ask the staff to help me figure out what were my initials.

After listening to Kate's story, I tried to figure out the essence of her L2 difficulty. When I asked her if she understood the lexical meaning of "initials", she gave me a correct answer. "But we never need to use it in China, right?" She stressed again. Although the initials are widely used in Western countries officially, I can easily understand what Kate meant by "never need to use it". The disparity here is that English names, like other vocabularies in English, are constructed by twenty-six alphabets, while ethnic Chinese names are constructed with Chinese characters. The Chinese characters, also called *hanzi*, are ideographic, which are totally different from English alphabets. Therefore, from a linguistic perspective, initials do not exist intrinsically in an ethnic Chinese name, which is the reason why Kate said although she understood the lexical meaning of the word 'initials'; she was not sure about its application.

Kate's strategies for enhancing the efficiency of communication were prevalent in her story. When she felt that she could not express her doubt orally, she simply wrote down her full name on the paper and asked the staff to point out the initials that she needed to sign. Thus, she used a combination of oral and written communication to relay her question. Cope and Kalantzis (2009) reported that most of our everyday communications are multimodal. The seven modes of multiliteracies proposed by Cope and Kalantzis (2009a) are similar to and yet fundamentally different from one another (Cope & Kalantzis, 2009b). Individuals may have their preferred modes of representation; in Kate's case, she seems to prefer written communication.

Kate described another experience regarding her language difficulties that she encountered when she was ordering food at a western-style restaurant:

What troubled me most when I newly arrived was ordering food in a restaurant that offered traditional western-style cuisine. Once, we celebrated Chinese New Year in a steakhouse, which was my first time going there. The waiter came to ask if we want anything to drink. I intended to order a cocktail but had trouble with those names. There was no picture on the menu so the only thing I could do is to find a word that I knew, and then order it. I almost did not know what I had ordered. Ordering a main course was even challenging. For example, when the waiter asked what kind of dressing did I want, I was almost stunned. Firstly, I was wondering what dressing was. Was it some kind of cloth? And also, I did not know what were the options. I carefully asked what was the most popular dressing in their restaurant. I cannot remember what the waiter answered at that time, but I still remember that I was just keeping saying "okay" and how awful the meal was.

Essentially, in this story, Kate actually mentioned two aspects of language difficulties when she was ordering food at a western-style restaurant. First, she wanted to order a cocktail but was unfamiliar with names of those alcoholic drinks. As I mentioned before, the English instruction that Kate had received in China focused too much on academic purposes and thus did bot foster her informal communicative skills. Meanwhile, the sociocultural difference also intensifies the language difficulties. Certainly there are many steakhouses in Kate's hometown; however, the ordering experiences are totally different. Kate told me that she had been unaware of how many decisions she would have to make when ordering a steak in Canada. In China, steakhouses offered preset combos that include an appetizer, a main course, and a dessert. They does not require decisions to be made on what side dishes and dressing customers would like or how well done they wanted their steaks. Kate also observed that at many Western-style restaurants, there are no ordering instructions offered on the menu. Because there are so many unfamiliar words and options, it is harder for newcomers to make a choice when they are required to. Moreover, in this story, I recognized that Kate used achievement strategies (Færch and Kasper, 1984), in which she rephrased her sentences to achieve the same communicative goal.

During the follow up interview, Kate additionally shared two stories about language difficulties she encountered while shopping. She told me it was the insufficient vocabulary resources that challenged her shopping experiences most. Table 3 illustrates two stories that she described.

Context	Situation	Strategy		
A Canadian retail drug store	Kate planned to buy a make-up remover of one certain brand. She wanted to ask the staff if the product was available in the store, however, she could not pronounce that brand correctly in English.	Kate searched the Chinese name of this brand through the Google App on her cellphone, then found a picture of the product, and showed it to the staff to ask if it was available. The staff helped her to find the product immediately.		
A Canadian athletic apparel retailer	Kate wanted to buy a hoodie from this brand. She wanted to ask the staff where she could find one but forgot what was the word.	Kate first approached one staff and told her that she wanted to "find a cloth with" and she acted like she was covering her head with a hood. However, the staff did not understand her need. Then, she took out her cellphone and opened the electronic dictionary app, typing in Chinese and showed the staff the English word.		

Table 3: Kate's strategies when encountering language difficulties

In both stories, the main reason that led to Kate's language difficulties is lack of proficiency in non-academic vocabularies. However, it is delightful to see her using multimodal strategies to cope with those situations. In the first story, Kate found that she could not pronounce the name accurately so she simply switched modes from oral to

visual representation (providing image), gestures (acting like she was covering her head with a hood), and oral language (inquiry). The multimodality helped convey her message to the staff by offering direct visual representation, while increasing the effectiveness of this communication. In the second story, she utilized gestures, combined with oral and written literacy, to achieve her communicative goal more effectively.

4.2.3 Informal L2 learning through technology

The last question of my interview was "what attracts you to learn L2 through technology? " Kate answered this question without hesitation:

Because it is low cost. I'm not saying that I don't pay for that. I mean if you go out and interact with native speakers face to face, certainly your communicative skill will be fostered soon. However, there are also some chances that you will feel humiliated or embarrassed. Sometimes people don't want to talk to you because it is too hard for you to understand each other. People always choose the easier way, right? It is human nature. However, there is no risk if you learn through technology.

I have to admit that Kate did have a point. As Kinginger (2009) argued, "when students set aside their fear of appearing incompetent within encounters where their interlocutors are willing to engage in negotiation of meaning, they are eventually able to overcome their limitations" (p. 146). However, different learners come with their own unique culture and personalities. Gao, Ting-Toomey, and Gudykunst (1996) have documented plenty of instances showing that Chinese students are preoccupied with how might interlocutors react. In an empirical study by Liu and Jackson (2008), it was found that most Chinese students do not want to take risks to use and speak English even through they are willing to participant in interpersonal conversations. In addition, more than one third of participants in their study had anxiety when engaged in English communication. Therefore, technology, to some extent, offers a new way of learning that avoids some of the possible challenges to a L2 learner.

During the interview, Kate mentioned three ways of employing technology to facilitate L2 learning, including TV series, mobile application, and the English learning website. I illustrate them one by one.

4.2.3.1 TV series

Kate told me that TV series is the most important resource for her to learn English. However, when I asked if she could illustrate one word or idiom that she has learned from those TV series, she paused a while and smiled, "sorry, nothing comes to my mind at this moment, but I'm sure it helps a lot."

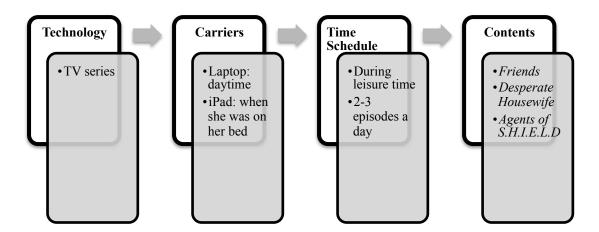


Figure 6: Kate's informal L2 learning through TV series

Kate is used to watching TV shows on her laptop and iPad. Her schedule for watching TV depends on how much leisure time she has. Kate prefers to watch sitcoms because she can relate to them. "Sometimes it is for learning purpose, but most of time is for entertainment", she answered when I asked for her goal of watching TV series. She stressed that her focuses are twofold, including learning the phrases that people used to address their feelings and learning the sociocultural knowledge through subtitles. In her words,

However, I do learn from watching TV series. I often watch two or three series per day. It depends. When I was watching, I did not pay attention to the specific vocabularies; instead, I noticed how they address their feelings. The way people output their thoughts, which was my weakness when communicating in English. Also, of course, I focused on plot. Sometimes I could even learn from subtitles. I do not know if you would watch TV series, but the subtitles often include explanations of some key plots, which are very helpful for us who are non-native speakers to understand.

Kate mentioned two major ways to improve L2 in this dialog. First, she said she learnt from "the way people output their thoughts", an idea that aligns with the sociolinguistic

competence in Canale and Swain's (1980) communicative competence framework. Sociolinguistic competence is about "rules of use and rules of discourse" (p. 30), a concept that echoes Kate's needs. Second, she learnt sociocultural conventions from subtitles:

Sometime it is really hard to get a joke if you are not familiar with some of the background information, but the group who produce Chinese subtitles will also put the related information on the screen as remarks so that everybody can get the point. That is one of my most expected resources of learning through watching TV series. You know, learning their culture.

This finding is also aligned with Chinese students' five main categories of sense-making activities through watching TV series, which was concluded in Yang and Fleming (2013)'s findings. The five major ways of sense making through watch TV series, according to Yang and Fleming's (2013) study, are (1) comprehending the plot; (2) comparing: identifying differences; (3) comparing: identifying similarities; (4) recontextualizing; and (5) perceiving as realistic (p.300).

During the follow-up interview, Kate elaborated one phrase that she has learnt from the series:

I guess what I have learnt from TV series most is how young people address their feelings. For example, yesterday my Chinese friends shared good news with me; the first word that jumped out of my mouth was an English idiom, "wow, super cool!" It might sound like a normal word, but to me, I felt a little bit surprise that I spoke it out so naturally. Afterward, I tried to figure out how it happened and found that I actually learnt it from the TV series that I watched these days. I feel that sometimes the English word, instead of Chinese, could even convey my message more accurately.

The phrase "super cool" was not complicated at all; however, it is a phrase that Chinese students may not combine together to address their feelings, unless they had heard of it somewhere before. As Cummins (1981) proposed, immigrant children's Basic Interpersonal Communicative Skills (BICS) is fostered from birth until they have received formal instruction, from which their Cognitive Academic Language Proficiency (CALP) begins. This situation here seems to be different from what Cummins (1981) suggested in BICS/CALP distinction. In Kate's case, her CALP was indeed developed earlier than her BICS. Moreover, this story also brings up another advantage of L2 learning through watch TV series – the issue of "authenticity".

Consulting Golonka et al. (2014)'s categories, I do not find a category into which learning through watching TV would fit. However, the authenticity that TV series offers is essential for L2 learners (Kaiser, 2011). Morrow (1977) has pointed out that authentic materials contain "real language, produced by a real speaker or writer for a real audience and designed to convey a real message of some sort" (p. 13). Kaiser (2011) added that movies and TV series often include several types of speech, such as those for children and non-native speakers, slang and jargon, rural and urban speeches, and also local communication forms that learners may encounter. To be specific, research also highlighted the effectiveness of watching TV series/movies to enhance vocabulary (Yuksel & Tanriverdi, 2009), listening comprehension (Huang & Eskey, 1999), and motivation of L2 learning (Gebhardt, 2004; Heffernan, 2005).

Kate's EFL education relied heavily on written representation; however, real life communication is multimodal. In TV shows, for example, real life communication could be presented through visual and audio representation, combined with tactile, gestural, and spatial representations. This multimodality can assist L2 learners to master their own modes to achieve meaning making in their real lives (Cope & Kalantzis, 2009b).

This multimodal learning is affiliated with a pedagogy of multiliteracies, which highlights the importance of experiencing and applying new concepts while learning a language (Kalantzis & Cope, 2005). For Kate, she observed how young people express their feelings from TV series, and compared it to her own L2 knowledge. This underlines the process of experiencing. When she learnt the phrase "super cool" from the TV show, she appropriately applied it in her real life, a case that exemplifies the applying process.

4.2.3.2 BBC News (mobile application)

Kate took out her cell phone and showed me the application that she used regularly these days to practice L2 listening. It was called "BBC News", designed by BBC Worldwide. Essentially it is an electronic newspaper that spreads the latest, breaking global news.

However, different from traditional newspaper, the BBC News also offers Live BBC World Service Radio, which allows users to obtain the information by listening. Users can watch videos and pictures to further learn about the news as well. The content of BBC News includes Business, Technology, Entertainment and Health. According to Golonka et al. (2014)'s categories, BBC News is an application that is carried on mobile phones.



Figure 7: A screenshot of BBC News application and Kate's informal L2 learning through the application

Kate told me that she preferred to learn through this mobile application in the morning. "I use it as my alarm clock," she said,

I listen to the radio every morning. I wake up early but always stay in my bed for a long time. I want to make most of my time, so I downloaded this app and use it to practice my listening. While I listen, sometimes I close my eyes to immerse myself in this beautiful accent. I usually pay much attention to the pronunciation and to some specific words. For example, I heard news regarding to 'Saudi Arabia' thousands times these days and I finally remembered the word. When I discovered any unfamiliar words during listening, I usually paused the radio and checked the spelling on the screen. That helped me recognize and remember this word. Sometimes I also read after the radio to correct my pronunciation. Besides, I also enjoy listening to the news when I was running. I go to gym three times a week and I listen to it every time I run. I guess this activity indeed improve my speaking and listening skills, as well as finding me some topics to talk about with my native friends as well.

In Kate's opinion, this mobile application enhances her literacy learning in three ways: improving pronunciation, enhancing vocabularies, and facilitating social cultural understanding.

Regarding pronunciation, Kate told me that her goal was not to attain native-like pronunciation through informal L2 learning, but to ensure that her pronunciation could be clearly understood. Wang (2010) has sorted out two reasons that possibly lead to Chinese students' insufficient L2 pronunciation learning. The first factor mentioned by Wang (2010) is insufficient teaching of pronunciation, which refers to the situation that teachers barely offer instructions on student's pronunciation. The second reason is insufficient teaching of listening skills. Wang (2010) pointed out that listening competence is overlooked in the examination-oriented L2 class. Reflecting on Kate's L2 learning experiences, listening and speaking competences have not been fostered in her EFL education. Therefore, for Kate, it is a great and necessary practice to improve her pronunciation.

As previously mentioned, lack of vocabulary has hindered Kate's L2 proficiency. Similar to the advantage of watching TV series, vocabularies used in the news are authentic and practical, which makes TV series an effective learning tool. In this case, the news also facilitates L2 learners' understanding in sociocultural conventions. A large variety of sociocultural knowledge is embedded in everyday News, which offers learners great opportunities to gain holistic understandings of the headlines. Having a mobile app also enhances the effectiveness of informal L2 learning by allowing for transportability and flexible accessibility. For example, in Kate's case, she listens to the News while running or lying in bed. Through this learning activity, she not only enhances her L2 competence, but also makes most of her leisure time.

4.2.3.3 Speak Languages (website)

When the interview was about to close, Kate shared a website on her cell phone and told me it was a "secret weapon" she uses to learn vocabulary and phrases.

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SpeakLanguages		Travel			Ordering the meal			
		Asking and giving directions						
		Motoring Car hire			could I see the menu, please?			
								Home
Travelling by bus and train								
English		Travelling by air		can I get you any drinks?				
		Travelling by bo	pat		can i get you any utiliks:			
This site contains a wide range of		Passport contro	ol and customs		are you ready to order?			
	0	Hotols and ass	ammodation					
	help you learn English. Pick		Hotels and accommodation			do you have any specials?		
	up some basic phrases, expand your vocabulary, or find a language partner to		Making a reservation Checking in			do you have any specials:		
vocabulary, o					what's the soup of the day?			
practise with.		During your stay			what do you recommend?			
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Figure 8: Screenshots of Speak Language

See, this website is amazing. It has almost every thing I need in my life. I accidentally found it and have already used it for several times. I only use its free service, including learning phrases and vocabulary. You see, if I click 'phrases', there are many phrases categorized under different topics. If I want to learn how to order food, I simply choose 'at a restaurant' before the commonly used phrases come out. It is easy and effective.

The website that Kate showed me called "Speak Languages"

(https://www.speaklanguages.com/). Kate seemed to be skillful to find any information that she wanted to know from this website. As she said, learning through this website is truly easy and effective. It provides phrases and vocabularies that are most frequently used in informal communicative settings.

Kate added that she often uses this website under two circumstances. Normally, she logs into the website two or three days a time and tries to learn the phrases and vocabularies. In this situation, she often gives preference to the category that she is most interested in. The other time she consults the website is when she has a certain topic that she needs to discuss and thus requires assistance with appropriate vernacular.

This type of technology can be both classified into network-based social computing and mobile devices (Golonka et al., 2014). In my view, this website is more than a supplier of L2 learning materials for informal settings. The most effective function of this website is its ability to turn "unpredictability" into "predictability". In Zhang (2005)'s study of Chinese students' oral communication development, some of his participants mentioned that communication in informal settings were actually more challenging (p. 91). Kinginger (2009) explained this problem by indicating that the most challenging part of interpersonal communication is the unpredictability. Therefore, the website can assist L2 learning by making the conversations more predictable.

4.2.4 Summary

From Kate's personal narrative regarding her L2 learning experience before studying abroad, I see tensions between her insufficient practice in L2 communicative skills and her L2 needs in a study-abroad context. Her interview manifests three major language difficulties that she encountered in her lived experiences, including unfamiliar to sociocultural and sociolinguistic differences, and lack of non-academic vocabulary. Meanwhile, her L2 informal learning strategies with technology include fostering sociolinguistic competence through watching TV shows and visiting websites such as Speak Language, and by improving grammatical competence through listening to BBC News (mobile application).

4.3 Participant II : Louis

Louis was my second participant. At the time I interviewed him, he was preparing for his thesis defense. He completed his first Master's degree in China, before coming to Canada to pursue the second one. I was not surprised when he introduced himself as a "typical science student", because I perceived him as an extremely organized and meticulous person. However, what did impress me was his ability to transform every mistake that he made in communication into a chance for improving.

4.3.1 English learning experience in China

Louis has studied L2 for almost twenty years before studying abroad. "It might be the longest career in my life", he wrote. Compared to Kate, Louis started his L2 learning journey earlier when he was four; however, the purpose of the early start was to "stimulate interests". In his words,

To be accurate, I started learning English at the age of four when other kids were still on the playground. My mom was my first English teacher, and she taught me twenty-four simple vocabularies together with twenty-four alphabets. For instance, I still remember some of them, such as 'A-apple, B-bread and C-cake'. At that time, I was curious, but did not literally understand one single meaning. It was until my seven-year birthday that I gained the chance to learn English as a subject. Nonetheless, the class still focused on stimulating the interests of learning English.

In Louis's case, his mother believed that the earlier he started learning English, the better prepared he would be for university. A survey conducted by Jiang (2007) reveals that 43.3% of the Chinese parents in the study hold the same perspective that the sooner children start to learn English, the more effective the learning would be; and 39.4% of the parents believe that English proficiency is essential for their children's future success. Louis continued to introduce his L2 learning experience regarding learning basic everyday conversations in primary school:

What I had learnt in primary school were basically some simple daily English, such as 'Hello' 'Good morning' as well as 'Fine, thank you, and you'. Like my peers, I began to learn English under traditional Chinese EFL instruction in middle school. The situation was the same in high school. Personally speaking, my English was barely improved until I graduated from university.

To me, Louis's description of learning greeting skills resonated because almost every Chinese student has learnt the same conversation from Chinese EFL curriculum. Louis's learning experience is not an exception. Every participant in the study, even every Chinese international student with whom I have officially or unofficially spoken, has shared with me very similar observations. The conversations they were taught followed the same formula: "How are you?" "Fine, thank you, and you?" Louis told me in the interview that the greeting term has lived in his mind for more than fifteen years, which almost became a natural response when someone greeted him. However, after studying in Canada, all of my participants, including Louis, reported that no one actually speaks in that rigid template: "There are various ways to response greeting, such as 'I'm good' 'not bad' or 'thanks'. In western culture, sometimes greeting is only a manner to show respect, not a real question that you need to think carefully before answering." Other participants also shared similar stories of learning inauthentic greeting conversations in the EFL classroom: "Why do every Chinese students know that conversation? It is because our English education required us to remember the words before they truly understood them." Kate also has shared her understanding on this point. Louis attributed it to the lack of authentic material:

I do not know whether others would agree with me on this. In my view, it is because the material is outdated and lacks of authenticity. Also, I can see Chinese thinking mode through those conversations in English learning materials. It was not authentic at all.

There is plenty of research regarding the learning materials of Chinese L2 curriculum. It is reported that children's EFL learning relies heavily on their exposure to print materials (e.g., Cipielewski & Stanovich, 1992; Philips, 2005). Therefore, as Zhang (2012) claimed, "lacking of availability and accessibility of print severely constrains EFL literacy acquisition" (p. 76). Although Curriculum Standards that Chinese government has issued in 2011 encourages teachers and schools to develop curriculum resources through new technologies, such as TV series, DVDs, and the Internet; it still remains challenging to fulfill this suggestion according to researchers (Dong, 2003; Hu, 2007).

Louis reported that his L2 competence did not improve during middle school. However, in high school, he started his informal English learning by watching TV shows:

I practiced listening regularly by watching TV series during high school. Honestly speaking, English learning in school did not facilitate my communicative competence. My vocabulary has not been increased since I was fifteen, even until now. During my college, my English competence deteriorated dramatically because I neither had many chances to practice, nor the pressure on examination. At the first year of my graduate study in Beijing, I hired a native English speaker as my teacher. I felt very nervous every time when I had to make speech in his class, owing to my funny accent and deficiency of vocabulary. Before studying abroad, I joined a GRE tutoring class and a TOFEL tutoring class after school, which also helped me to correct my pronunciation. Fortunately, watching TV

series is an edutainment for me. By virtue of the activity, my vocabulary has increased and my pronunciation seems to be better.

In Louis's description, he mentioned after-class learning several times. The impact that after-class learning has had on Chinese students' English learning cannot be underestimated. Compared to traditional EFL class in school, after-class learning often focuses on addressing students' individual characteristics and needs (Liu, 2012). For example, in Louis's case, he participated in an after class program that majored in correcting students' English speaking pronunciation, which literally worked for his situation.

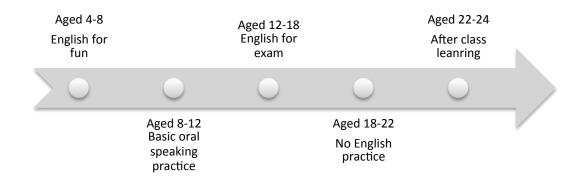


Figure 9: Louis's English learning process in China

Louis's personal learning experience reveals that he is an active and self-directed EFL learner. He is capable of making most of his available resources to integrate with new opportunities of learning. Like he told me during the interview: "I encountered language difficulties all the time during study abroad; however, I viewed them as opportunities to learn." Moreover, when I asked about his knowledge processes in the interview, he told me that it was in the after school class that he actually had chances to complete the first process and the last process - receiving new knowledge (experiencing) and applying the L2 knowledge "in a predictable and expected way in a 'real world' situation or a situation that simulates the 'real world'" (Kalantzis & Cope, 2005, p. 186).

4.3.2 Language difficulties in informal settings

"I'm not a social animal, however, it is interesting that every time I interact with the local people, there are always some embarrassing moments," reports Louis after I asked him about his language difficulties. The first story Louis shared happened at a retail store.

Once, my roommate and I wanted to bake something at home. Thus, I went to a grocery store to buy aluminum foil. It is the first time that I buy it, because oven is not necessary for cooking in Chinese people's home. Indeed, we do not bake much. At least, I have never baked anything at my Chinese home. Due to the fact that I did not know which category it belongs to, I had no idea about where I can find aluminum foil. Also, I did not know the exact word to describe it. Hence, it becomes quite difficult to ask the staff for help. After spending long time to look for it, I finally gave up and started trying to explain what I was going to buy to one of the staff. I explained, 'if I want to bake something, and I have already got a baking plate, what else do I need? ' Based on my explanation, the staff named one thing (I cannot remember what it is right now) that I had never heard of. Thus, she just started to describe the thing in her own words to double check with me. After listening to her explanation. I found out that it might be close to the one I needed. Then, the staff affirmatively led me to the shelf. However, it turned out that we still misunderstood each other's meaning. Then, we started another round of meaning negotiation. This time, I started to describe the function of aluminum foil, such as 'it separates the food and the baking tray, while making the food heated evenly'. At that moment, she eventually got my words and helped me to find the aluminum foil.

Louis breezily shared this story. Later when I reflected on it, the results were also significant. The term "aluminum foil" was unfamiliar to Louis, maybe also to most of Chinese students, due to two main reasons. First of all, we see a deficit in vocabulary, which impeded his grammatical competence. In Louis's previous English learning experience, most vocabulary that learned was academic. As Gao (2003) reported, in his research, Chinese students' vocabulary learning seemed to focus on academic words that related to their own field. Terms such as "aluminum foil" appeared neither in Chinese students' textbook, nor in their lives before studying abroad. Similarly, Littlewood (1981) claimed that Chinese EFL learners' "lack of similarity with real-life situations" (p. 39). It is no accident that he found it difficult to find the item and to ask for help. Second, the sociocultural differences intensify the language difficulty. As Louis reported, in traditional Chinese cuisine, aluminum foil is not a necessity and thus not widely available

in Chinese stores. The unfamiliarity with aluminum foil and uncertainty of its uses hindered Louis's communication.

Moreover, in this story, Louis adopted his own strategies to facilitate communication. When he found it too difficult to find the aluminum foil, he used both oral (describing the nature of the item) and gestural representation (acting that he was baking something) to achieve his communication goal. As Kress (2003) stressed, there are several ways to realize meaning making; individuals can choose whatever from those ways that may manifest themselves most (Cope & Kalantzis, 2009b).

The second story that Louis told me was unpleasant for him to recall. It centered on how he was almost misdiagnosed because his failed to describe his symptoms adequately to a doctor due to poor proficiency in non-academic vocabulary. He joked about it and said, "It was an a-ha moment that I finally realized how important it is to learn English." Meanwhile, he took out his phone and showed me a picture of him lying on a hospital bed:

One time I felt pain in my back, thus I went to hospital. When I saw the doctor, I told him 'Oh I do not feel well in my back and there is pain intermittently in my belly'. When he checked where I felt the pain mostly, I can merely point on my body with figures because I did not know many terms concerning body part. If I tell these symptoms to the doctor in Chinese, it will increase the difficulty for him to diagnose, let alone in a language I was not familiar with. At that time, my pain was intensively in my back, which did not seem like appendicitis. Hence, the doctor only suggested me to do an examination for my back. After coming back to home, I typed all of my symptoms into Google in Chinese, and found that there were some chances for appendicitis. Thus, I immediately contacted my doctor and made an appointment to do the examination. It turned out that I was right. It was appendicitis. Now, if I recall the memories couple days before I got ill, I did have a fever and pain in my inners. Somehow because my communicative skill in English was not good enough, I could not provide sufficient information to the doctor. Also, I missed some of his inquiries.

Although Louis told me this story calmly, I was lost in reflection. It was a fearful story. I cannot imagine how bad the situation would be if he had not checked his symptoms online. The information that I could read from Louis's story was that his lexical category was too limited. He might have mastered a great number of academic vocabularies but this type of vocabulary was not helpful when dealing with an emergency situation.

However, during this unpleasant journey, Louis demonstrated his strategies to facilitate communication. When he described his symptoms to the doctor, he tried to use spoken language in combination with gestures. By doing so, successfully conveyed his message and was diagnosed accurately.

The third story occurred at a party. Louis had invited his friends, including some native English speakers, to his apartment for dinner. During dinnertime, his Canadian friend tried to share a joke with him; however, after his friend finished, there was silence.

He said a joke about 'stick'. The question was 'what looks like stick most'. I tried to ask whether it was chopsticks. He said 'no', and I continually named couple similar answers, which he all denied. Hence, I just told him that I had no idea. He said excitedly 'it is stick that looks like stick most!', and then laughed for about two minutes. Admittedly, I was quite speechless at that time, because I failed to get his point. I did not see anything funny from his joke. However, I laughed as delight as he was as a response. Otherwise, it would look so awkward if I did not. Then, I spent long time to figure out what was the point of his joke, but failed.

All my participants have reported similar situations: "I do not understand what they are trying to say" "I always look stupid when my Canadian friends tell a joke because I cannot get the point for most of times" "I do not want to embarrass my friends as well as myself, so I have no choice but laugh with them". From a communicative perspective, this situation happens due to several reasons. First, Chinese international students' grammatical competence, specifically in lexical resources, cannot support their understanding on these conversations. In Louis' story, there is one possible interpretation that "stick" is a polysemantic word, which represents twig and rod at the same time. Also, some reported that native speakers' speed of speaking is affected by how much time they spend processing meaning. Once they understand, they can react. Thus, genuine reaction may not occur immediately (Bell, 2007; Cheng, 2003). Secondly, few jokes that closely relates to sociocultural factors are too difficult to comprehend. Existing studies regarding to humor in intercultural communication confirms the difficulty of getting humor in cross-cultural situations (Bell, 2007; Cheng, 2003). Moreover, the content of jokes is often unpredictable, which requires more impromptu reaction.

In this story, the strategies that Louis adopted to cope with the situation were what Færch and Kasper (1984) called "functional reduction". There are two kinds of reduction strategies involved, formal reduction and functional reduction. Formal reduction refers to avoiding the vocabulary or phrase that learners are unfamiliar with; functional reduction includes actional function reduction, propositional function reduction and modal functional reduction (Færch & Kasper, 1984). In this case, Louis chose to take action (laughed and changed the topic) to cope with the situation.

4.3.3 Informal L2 learning through technology

Louis called himself a "master of technology-assisted L2 learning". Regarding my recruitment of him, he proudly said, "You have approached the right person." In his personal narrative, I have learnt that he started to learn L2 through technology since high school. The learning activity undeniably contributed to his improvement in L2 and understanding to the culture of Western society. During the interview, he further explained how technology influences his L2 learning. I introduce three stories regarding to his L2 learning strategies, involved with mobile dictionary, Siri, and mobile game.

4.3.3.1 Mobile electronic dictionary

In the last decade, electronic dictionary has started to be popular with language learners, especially with those from the Eastern Asian countries (Tang, 1997; Midlane, 2005). Tang (1997) stated that, in Vancouver, among the 254 secondary Chinese students, 87% owned portable electronic dictionaries. Bower and McMillan's survey (2007) claimed an even higher proportion that 96% of the students owned portable electronic dictionary and most of them were active users. With the dramatic development of digital technology, mobile dictionaries have replaced portable electronic dictionary, becoming even more popular for L2 learners.

Louis told me that he usually used mobile dictionaries when reading on his mobile devices. One of the most compelling reasons to use a dictionary app is its convenience. In his description,

Under most occasions, I utilize it everywhere I go. Of course, I use it when I discover a word or term that I do not know. Also, I utilize it during the conversation when I forget some key words I must address. However, I tend to read the news or some English articles on my phone everyday. Actually, when you are waiting for bus or waiting in line, you will feel boring if you do not have your phone with you. To kill time, I normally read daily news on my phone. However, I found a couple of professional terminologies that I did not understand. It seems that the mobile dictionary is extremely useful and convenient at that time. I do not even need to close the news page and open the dictionary system to find that new vocabulary. Instead, I just need to tap my finger on that word until the interpretation emerges. Isn't it convenient? Moreover, apart from the written interpretation, it also comes with images and audios that could assist my understanding. Even better, the mobile dictionary will automatically save your research record so that you can review those words anytime you want. For me, it is a truly effective way to improve lexical proficiency.

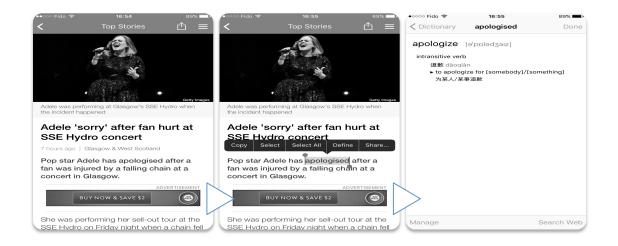


Figure 10: Screenshots of using mobile dictionary to assist mobile reading

Figure 6 illustrates an example of how Louis describes the "convenience" of a mobile dictionary. This convenience attributes to his design that alternately use two different digital technologies to facilitate his learning. This capacity of design is affiliated to the design thinking (Kim, 2013) in a pedagogy of multiliteracies, which learners, also as designers, utilize available resources to create new resources. In this case, news websites and electronic dictionaries are seen as available resources that are already created by other designers; while Louis's combinational use of both resources creates a new way of meaning making. In addition, Louis mentioned how mobile dictionary assisted his vocabulary learning in multimodal ways, such as written interpretation, images and

audios. As Cope and Kalantzis (2009) stated, a pedagogy of multiliteracies is not simply about application of those modalities, but rather about the design that individuals make to facilitate their unique learning styles.

Electronic dictionaries have included in Golonka et al. (2014)'s categories of technologies that have been proved effective to L2 learning. Moreover, electronic dictionaries can also be included in the mobile devices category, since Louis uses them to assist with his mobile reading.

4.3.3.2 Siri

According to Wikipedia, Siri (Speech Interpretation and Recognition Interface) is a "computer program that works as an intelligent personal assistant and knowledge navigator, part of Apple Inc.'s IOS, watch OS, and TV OS operating systems". Siri adopts a natural language user interface to answer questions, make recommendations, and perform actions by delegating requests to a set of web services. Nevertheless, first of all, the feature has to receive users' order by interpreting their verbal instructions. It is an individual study tool in Golonka et al. (2014)'s categories.

However, Louis has his own way with Siri. For him, Siri is no longer a mobile assistance system for navigation; it is his "personal pronunciation assistant" that helps to correct his pronunciation. Louis further explained,

My purpose of utilizing Siri is not to book a restaurant or find a destination on the map. I adopt it to correct my English pronunciation. When I learn a new word, I will try to read it to Siri so as to check whether it understands what I am saying. If it gets me, I will know that my pronunciation is correct. Indeed, it is quite challenging to talk to Siri. After all, it is not smart as human beings. However, as long as it can identify my pronunciation, normally people can also identify it. All in all, it is a nice tool for practice.

During the interview, he also showed me how Siri responded when he pronounced a same word in both correct and incorrect way (see Figure 11).

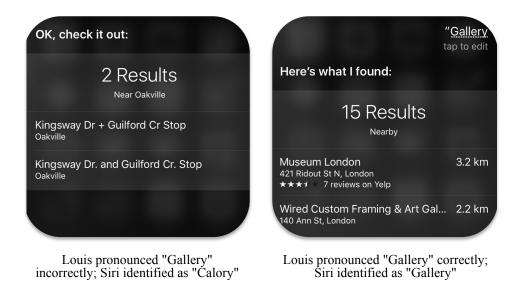


Figure 11: Screenshots of Siri

As shown in Figure 11, when Louis pronounced the word "gallery" accurately, Siri identified it and offered recommendations based on the content. When Louis intentionally changed his pronunciation, Siri did not understand and offered wrong information. "It is easy, right? You should try very hard to get yourself identified by Siri. However, it is a very good practice before you talk to a real person who is definitely smarter than this system," Louis said with a smile.

In this story, Louis showed how he turned Siri into a L2 learning tool. He used the voice recognition system of Siri to foster his L2 grammatical competence. In addition, because Siri is designed for mobile devices, learning L2 through Siri can be carried out almost anytime and anywhere. It is also a multimodal strategy that combines the modes of written and oral literacy together.

4.3.3.3 Lifeline (mobile game)

"Have you heard of Lifeline? It is a very popular mobile game." Louis excitedly said, "I feel it helps me improve vocabulary." I invited him to introduce this mobile game to me and he said,

It is a survival game, in which you are the 'saver'. It assumes that a man is in danger and you are the only one he has accidently approached. In this game, you

will be required to make decisions for him concerning life or death and meanwhile confront with the consequences together. Since it is carried out by message communication, you will receive the message from the person in danger. Furthermore, you can choose alternatively from the pre-designed response. To play this game, I basically need to read plenty of English messages and respond in this game, from which I could learn some of real idioms or terms. Also, there are several jokes that are quite practicable to be applied in everyday conversations. The message will come anytime of the day, just like the real one. Thus, you may need to reply to the man many times a day in order to continue the game.



Figure 12: Screenshots of Lifeline (3 Minute Games, 2015)

As shown in Figure 12, in order to master this game, players need to first understand the plot through written language, then make decisions based on the information they had. Players, and learners, are required to read and analyze all messages, which may include several terms with which they are unfamiliar. To make better decisions, players have to understand the key words, forcing them to learn those words, as well as sentence structure. Thus, while playing students are improving L2 competence. In addition, players will learn how to address their messages under certain circumstance, which is aligned with sociolinguistic competence. Moreover, this game can also fit into network-based social computing and mobile devices categories (Golonka et al., 2014).

4.3.4 Summary

From Louis's personal narrative, I summarize three major themes. First, he has an "early start" in L2 learning, both manifesting in an early start in exposure to L2 environment and an early start in informal L2 learning through technology. Then, he mentions his after school L2 learning experiences, which plays an essential role in his L2 development. In addition, he evaluates his L2 learning from Chinese EFL curriculum as "not authentic at all", which may lead to his language difficulties in a study abroad context.

During the interview, I discover two major language difficulties in his lived experiences: one, a lack of non-academic vocabulary and, two, a lack of understanding in sociocultural differences. Louis also describes three strategies of informal L2 learning through technology from his personal experience, including using a mobile electronic dictionary to foster grammatical competence, using Siri to correct his L2 pronunciations, and playing Lifeline (mobile game) to improve both grammatical and sociolinguistic competences.

4.4 Participant III: Doris

Doris is a first-year Master student who studies in Ontario. We decided to conduct the interview in a cafeteria, where Doris felt most relaxed. Before meeting with her, I heard that she was quite confused about her academic development, which reminded me of my first year as an MA student. Thus, I decided to start our conversation with sharing my personal experience, which I hoped would offer her comfort. She seemed shy when I first saw her but once the interview began, she started to become more confident and outspoken. I realized that, similar to most of the Chinese international students I have met in Canada, Doris might be anxious about her academic achievement but was prepared to overcome any difficulties.

4.4.1 English learning experience in China

In Doris's personal narrative, she reported that her communicative competence in English "was always more outstanding compared to my peers". However, "it almost has nothing to do with my English class in school", she stressed.

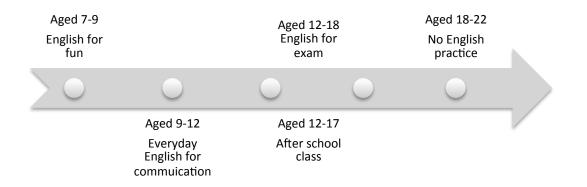


Figure 13: Doris's English learning process in China

When I told Doris in the follow-up interview, that, from her own narrative, she indicated that she has learnt L2 for more than fifteen years, she was overwhelmed: "I can not imagine I have spent fifteen years on learning one subject, while gaining such little reward from it." Then, she continually introduced the formal L2 instruction that she has received within a school context:

I love learning English, yet the traditional English education did not fit me well. I started to obtain formal English instruction from the grade three (nine-years-old). Nonetheless, I had already learnt English for two years before that. My mother took me to an after-class school that mainly focused on stimulating the interests in learning English. They designed multiple ways, such as rewarding, to engage students like me. If I did well in their class, they would offer me a star or a little flower as reward. Since everybody wants to gain that flower so enthusiastically, it exactly achieves teachers' goal. Admittedly, it might be worked well for me. Then, I learnt some basic daily English in primary school. At that time, written language and grammar were not required. We were only taught some simple vocabularies and sentences. Nonetheless, joyful time was gone when I graduated from primary school. During six-year study in middle school and high school, I received examination-oriented English education. Additionally, my grammatical and reading competence has been improved dramatically, while communicative competence was totally neglected. After all, English oral speaking would not be marked in College Entrance Examination.

Doris's formal L2 learning experience was similar to Kate's, my first participant. They both mentioned that, because of the examination-oriented curriculum in China, their BICS were neglected. Although both participants have declared that their lexical resources and grammar rapidly improved, those competences were still limited to CALP, which partly caused their language difficulties in a study abroad context. However, for Doris, the afterschool L2 learning classes that she participated weekly when she was in middle school accelerated the development of L2 communicative competence. In her words,

Fortunately, I had taken an after-school English class weekly since the first year of middle school. Held by native English speaker, the after-school class was English only, which aims at practicing our communicative skills. There were just three or four students in the class. Thus, each one has plenty of time for practice. During every class, the teacher would put forward various topics for us to talk about, such as 'describing your family' or 'telling me about your city'. Compared with the boring formal instruction, this after-school class was so interesting that motivated me to learn actively. However, I gave it up at the second year of high school, because I had to attend another after-school math class to prepare for College Entrance Examination.

Apparently, Doris gave more credit to the after school English class than formal English instruction in school on the development of her BICS. She suggested two reasons for the higher effectiveness of after school L2 learning. In the first place, it aims to foster students' communicative skills by only allowing English in class. As a result, this rule helps to develop an L2 communicative environment, in which students have to speak L2 to fulfill their communication needs. Meanwhile, without the pressure of examination, Doris confirmed her motivation of L2 learning in after school class. On the other hand, She further explained why the formal L2 instruction failed to enhance her L2 learning.

During my high school, we have more than sixty students in one classroom, and there are just three English classes in one week. Under the academic pressure, neither teachers nor students would spend plenty of time practicing communicative skills in class, especially when it was a subject that would not be valued in College Entrance Examination.

Doris mentioned that in her EFL class in high school, teachers did not arrange enough time for students to practice L2 skills. However, L2 proficiency is fostered most effectively when it could be applied in a real-life situation to fulfill communication needs important to the student (Chamot & O'Malley, 1996).

Researchers found other reasons for Chinese students to join afterschool English class. For example, Liu (2012) stated that, through afterschool learning, students are expected to learn appropriate strategies in self-directed learning. Different from traditional schools, afterschool class encourages students to become active learners by offering them more authorities in their learning process.

From Doris's narrative, she made it clear that the formal L2 instruction that she had received from school only assisted her academic grammatical development. However, the weekly afterschool L2 learning was more student-centered, which assisted her development of communicative competence. Meanwhile, similar to Louis's experience, Doris also insisted that afterschool learning assisted her experiencing and applying (Kalantzis & Cope, 2005) L2 knowledge she learnt, by offering sufficient opportunities to practice oral literacy.

4.4.2 Language difficulties in informal settings

At the beginning of interview, I asked Doris if she encountered any language difficulties in her lived experience. She responded me immediately in English, "Seriously, who did not?" Then, she paused and asked me if she could speak Chinese in this interview. I nodded. "Great! That would be much easier." She breathed a sigh of relief, and started to tell the first story that happened when she was shopping,

It happened within the first week I came to Canada. I went shopping in a clothing store. Indeed, the sales are always pretty enthusiastic. When I stepped in, someone came and greeted me, 'Hi there! How (are) you doing today?' I could understand the meaning of every single word, but was not sure how to answer this question. Hence, I just responded with a smile and headed to the clothes rack. After browsing, I was continually looking around with a couple of clothes that I wanted to try on my arm. At that time, the salesperson approached me again and asked whether I have already got a fitting room. I was not sure what she wanted to do but said, 'No, I do not.' Then, she just took the selected clothes from my arm and told me that I could find her if I was 'all set'. At that time, I did not know what she meant by 'all set'. However, I knew I would find her when I wanted to try those clothes. Thus, I attempted to look around to find her when I was ready. She came to me and asked, 'Are you ready to go?' I said, 'No, I haven't tried them. I need to try them first.' I was wondering why she asked me to leave. It was funny, isn't it? I did not realize her meaning until I have been there for several times. It was so different from what I have learnt in my Chinese EFL class. I bet I looked stupid in their eyes.

As Doris told, sometimes she could understand the meaning of every vocabulary in a sentence; however, she still could not figure out the meaning. This situation took place because of the unfamiliarity to context embedded phrases, which is aligned to sociolinguistic competence. Sociolinguistic competence mainly refers to the rules of use, including the appropriate use of certain vocabularies, terms, or mood in present context (Canale & Swain, 1980). We both laughed when Doris told me that story. I laughed because I went through the exactly same situation as she did. In Doris's case, the sales' greeting can be viewed as a small talk to break the ice with customers, rather than truly expecting to know the answer. Doris responded the greeting with a smile, in which she conveyed her message through gestures. Also, phrases used in certain communicative settings, such as "all set" or "ready to go", often carry certain meanings. Doris felt confused when encountering such phrases because she was unfamiliar with certain sociocultural conventions.

In the second story that Doris told me, I highlighted her strategic competence of presolving or avoiding the communication problem that would have emerged. The story that she described happened at a bank.

I brought some cash from China when I first arrived in Canada. After settling in, I wanted to go to a bank to deposit the cash. At that time, I felt extremely nervous and afraid whether the staff could understand my intention. However, I am a really organized and prepared person, thus I checked frequently utilized vocabularies one day before, and wrote them down in my notebook. Also, I wrote the questions I wanted to ask in case I forgot them if I was too nervous at the bank. It turned out to be very useful. When I talked to the staff, I asked them to make slow response. They were pretty nice, which gave me more confidence.

The bank is one of the most frequently visited service institutions by international students. The most common language difficulty international students may encounter at bank is, as Doris described, a lack of specialized vocabulary, such as "deposit", "overdraw", and "suspend". Second, the services offered by a bank are often related to money and rules, which may easily make people nervous. However, the strategies that Doris adopted included the achievement strategy (Færch and Kasper, 1984). She predicted situations that might happen when she had gone to the bank previously. To avoid those difficulties, she wrote down her needs on her notebook to use the written

language instead of oral language when it could better facilitate the effectiveness of communication.

4.4.3 Informal L2 learning through technology

Doris told me that, for the past eight months in Canada, she was working hard and trying to make most of her experience abroad. Informal L2 learning through technology is one of her favorite activities in leisure time. In her opinion, she did not view this learning as stressful as the formal learning; however, it has even contributed more to her informal L2 communicative competence development. In this interview, Doris shared three ways technology helped her informal L2 learning: watching talk shows, using Intsagram, and being active on YouTube.

4.4.3.1 Talk show

A talk show is a television-programming genre that discusses various topics put forth by a host (Naz, et al., 2014). *The Ellen Show* is Doris's favorite talk show so far. She told me that she has almost watched every episode. Through watching it, Doris not only fostered her listening skills, but also learnt some hot topics that facilitated her understanding of Western culture. In her words,

It is my favorite, because the presenter-Ellen is the person I have admired for years. Moreover, I could learn the resources of knowledge from this program. Speaking of the learning tool, isn't talk shows better than TV series? Personally speaking, a talk show is more like a real communication, which contains lots of uncertain and unpredictable elements. Every time I watch it, I will tell myself that I need to watch out how these people express their thoughts in English. I did learn something from the show. For example, when Chinese students want to deliver something, they tend to consider delivering their ideas by constructing a complete sentence that must include Subject Verb Object. Nonetheless, native speakers barely put grammar in the first place. Normally, they select some cool idioms or single phrases, such as 'awesome' 'super' or 'fantastic' instead of 'you are nice', to address their thoughts. Secondly, I want to focus on gaining more socio-cultural knowledge when watching *The Ellen Show*. Seriously, the content of *The Ellen Show* is so trendy that could help me to understand the current popular topics.

From Doris's description, I learnt two important things about her L2 learning strategy. In the first place, she employed it to practice listening skills as well as learning authentic conversations. As she said, compared to TV series that could facilitate learners' listening and oral speaking skills as well, the content of a talk show can be more authentic and spontaneous because it often involves spontaneous basic interpersonal conversations Doris offered an example of what she has learnt through watching The Ellen Show, which helped her bridge the linguistic disparity between how a Chinese L2 learner and a native speaker address their thoughts in interpersonal communications. Furthermore, due to the nature of a talk show, the topics that they mostly talk about are fresh news (see Figure 14), which would be great for international students to understand the western society and its culture.



Figure 14: A screen capture of The Ellen Show (Stephens, 2014)

From a perspective of multiliteracies, the message that is conveyed by a talk show is multimodal. For example, in Doris's case, she learnt skills for interpersonal communication that could be applied during interpersonal conversations from The Ellen Show. The messages that she received were delivered by written language (the subtitles),

oral language (speeches from the host and guests), visual representation (the images and videos), audio representation (music), gestures (from the host and guests), and maybe spatial representation (videos that are taken in different spaces) as well.

4.4.3.2 Instagram (mobile application)

According to Wikipedia, "Instagram is an online mobile photo-sharing, video-sharing, and social networking service that enables its users to take pictures and videos, and share them either publicly or privately on the app, as well as through a variety of other social networking platforms". The word "Instagram" is a portmanteau that represents "instant camera" and "telegram". When I asked Doris why she was obsessed with Instagram, she told me that she enjoyed addressing her thoughts through images. Then, she introduced her own way of learning L2 through Instagram.

As for me, Instagram is more like a social networking tool. I created my own profile, added my friends on it and shared my life with them through photos. When I firstly came here, my English was not as good as current level. On Instagram, however, you are not required to utilize texts and pictures. Basically, everybody expresses feelings through images and videos. It is easier than face-toface communication. In the meantime, I started to learn some idioms through hashtag on Instagram. Sometimes, the hashtag is a single term, or an unspaced phrase, with a "#" in the front. You merely need to type one single letter before the prompt of various hashtag listed in the system. Then you can choose whatever you want to tag your photos or videos. The good thing about it is that you can easily learn how to adopt a simple phrase to express yourself. Also, you can tap on the hashtag you are interested in to find whatever you want to check in accordance with that catalog. Moreover, it is an effective way to understand the contemporary culture. Oh! I recalled something nice: last month I was thinking about buying 美瞳 (cosmetic contact lenses), but I did not know how to say it in English. It was a coincidence that one day I saw a commercial of cosmetic contact lenses on Instagram. It came with a picture of cosmetic contact lenses, thus I captured the term quickly. I can always learn something from commercials. Admittedly, Instagram has already turned into a significant component of my daily life.

Instagram is popular among young people nowadays. As Doris stressed, it is also an effective tool for international students to improve their L2 communicative competence. The freshest point that Doris mentioned about Instagram is the hashtag. There are two main layers to understand the potentials of hashtag to assist informal L2 learning. Primarily, when it comes with images or videos, it would be easier for L2 learners to

absorb the appropriate way to use certain words or phrases. In that case, literacy is multimodal that combines written language with visual and audio representations. Secondly, the hashtag is also a theme that makes it easier for users to find messages within a specific catalog. For example, if I type "#everydayEnglish" in the search bar of Instagram, every resources with this hashtag will appear on my screen (see Figure 15).



Figure 15: A screenshot of Instagram

To summarize, Instagram assists Doris's L2 learning in two ways. First, it helps to foster her sociolinguistic competence by presenting appropriate ways of using various phrases and idioms through hashtags. These hashtags carry with them sociocultural conventions. Then, Instagram also offers authentic L2 learning materials to Doris. As Doris said, hashtags also provide convenience for her to seek for information that she intended to know. Meanwhile, the resources on Instagram are multimodal, including visual representations (images and videos), written literacy (post text and hashtags), and audio literacy (music). Obviously, Doris embraces the multimodality that Instagram offers to her informal L2 learning.

4.4.3.3 YouTube (website/mobile application)

Doris said to me, "YouTube is one of my most successful discoveries after studying abroad." YouTube is forbidden in Mainland China for some political reasons. Therefore, for most Chinese students, it is a great encounter after studying abroad. "It is a channel for me to see the world." Doris told me,

What's more, YouTube is more than a video-sharing website, and it almost features everything you could imagine. For most of time, I utilized it on my laptop, but I also have it on my cellphone. As a result, I could check the videos wherever I was. In terms of English learning, I used to find videos concerning English pronunciation on YouTube. In some of the searching results, people demonstrated how to pronounce certain words. In other videos, however, people even taught some tips of pronunciation. Both of them worked very well for me. If my time was sufficient, I would watch the tutorial videos. Otherwise, I just go for the howto videos. In short, it was simple and effective. Meanwhile, I usually watched open classes and lectures on YouTube from the channels I had subscribed, such as TED. Honestly speaking, it helped me to learn more vocabularies as well as topics in nearly every professional field. Additionally, I shared the videos on YouTube with my friends when I needed to explain anything complicated. For example, once my Canadian friend asked what was '凉拌木耳' (a famous Chinese cuisine). I felt so difficult to explain, thus I found a video about it and sent to my friend. This was really nice and easy. Beyond that, I learnt the way to explain a Chinese cuisine to people of other countries who did not know much about Chinese culture. Now, my friends have already nailed it. When I ask them something about western culture, they share videos with me rather than talking to me.

Doris laughed and said, "You know, now they barely talk to me because a video is a way better storyteller." In the beginning, Doris mentioned one fascinating advantage of YouTube – she could access to the same material both on laptop and cellphone, anytime, anywhere. She illustrated the main strengths of YouTube as a learning tool. The first strength is that it allows learners to revisit the video whenever they want to. This is also reported in Lo (2012)'s study of participants' experiences of adopting YouTube as L2 learning tool. He stated that the design of YouTube gives learners the time flexibility because they could pause the video at any point. Another advantage is that learners can switch devices (e.g. laptop, cellphone, tablet) to re-access the video, as long as they share the same personal account on those devices. The two strengths contribute to develop a flexible, learner-centered learning environment.

Moreover, the materials of videos on YouTube are informative. Doris mentioned her informal learning through TED videos, which enhanced her vocabulary acquisition. Furthermore, learning through YouTube is also multimodality. The resources on YouTube involve visual literacy (image and videos), audio literacy (music), written and oral literacy (speeches), and gestures (videos). As Teng et al. (2009) indicated, learners could learn better with multimodal resources that combined audio, textual, and graphical sources. Then, Doris also employs YouTube videos to communicate with her friends, in which YouTube is viewed as a multimodal message that could facilitate her understanding in different culture.

In addition, it is interesting that all three participants mentioned using the same tool on different devices to achieve flexibility of learning. However, in the Golonka et al. (2014)'s categories of effective technologies to facilitate L2 learning, this issue has not been considered.

4.4.4 Summary

In Doris's personal narrative, she indicated the importance of afterschool learning in her L2 development. In fact, it is a supplement of formal EFL curriculum, since afterschool class offers more opportunities for Doris to practice her oral literacy than the formal EFL class.

The language difficulties that Doris encountered in lived experiences include a lack of authentic opportunities to learn colloquial phrases and non-academic vernacular. This deficit made her lived experience more challenging. However, she adopted three technology tools to implement informal L2 learning in order to cope with those language difficulties. She watched talk shows to foster both grammatical and sociolinguistic competence. Meanwhile, she also learnt through the hashtags on instagram, which contributed to enhancing sociolinguistic competence and an easy access to authentic L2 learning materials. In addition, learning through YouTube situated herself in a flexible and learner-centered environment, which facilitated her understanding in sociocultural differences. Moreover, according to Golonka et al. (2014), all three technologies that Doris adopts can be classified into network-based social computing category.

4.5 Summary

In this chapter, I respectively illustrate Chinese international students' L2 learning experiences in China, their language difficulties in informal communicative settings in Canada, and their strategies for technology assisted informal L2 learning in three individual cases. Participants' L2 learning experiences are collected from their personal narratives and confirmed in follow-up interviews. Meanwhile, their experience of encountering language difficulties and technology assisted informal L2 learning is gathered through in-depth interviews and follow-up interviews. My reflective journals facilitate to understand the possible factors that lead to participants' experiences. Moreover, I analyze participants' language difficulties through Canale and Swain (1980)'s communicative competence framework, and discover their strategies to facilitate the effectiveness of communication through the theory of multiliteracies. To understand their informal L2 learning activities through technology, I adopt Golonka et al. (2014)'s categories of technology tools for language learning as a supplement. I present the results and discussions to research questions in the next chapter.

Chapter 5

5 Discussion and implication

5.1 Introduction

In this chapter, I discuss the findings regarding to my two main research questions: In their lived experiences, what language difficulties do newly arrived Chinese international students encounter? How do newly arrived Chinese international students use technology to facilitate informal L2 learning for enhancing lived experience?

Using a pedagogy of multiliteracies (Cope & Kalantzis, 2000; The New London Group, 1990), Cummins's (1981) BICS/CALP distinctions, and Canale and Swain's (1980) communicative competence framework, the study focuses on what happens in lived experiences in a study abroad context. The purposes of this study are twofold: to provide insights into Chinese international students' L2 language difficulties in informal communicative settings, and to describe how they facilitate informal L2 learning through technology. The results of this study provide implications for informal L2 learning in a study abroad context. Within this discussion, I address how findings relate to the literature in Chapter two. Then, I end this chapter with a statement regarding future directions for the research.

5.2 Discussion on Chinese international students' language difficulties in lived experiences

To respond to the first research question, in their lived experiences, what language difficulties do newly arrived Chinese international students encounter? I conduct an indepth individual interview and a follow-up interview for each participant. In addition, I analyze their responses with a supplement of their personal narratives that indicate their previous L2 learning backgrounds before studying abroad. I discuss the answer of this research question from three dimensions.

5.2.1 Informal communicative settings

First of all, I draw attention to those contexts or occasions that participants have encountered language difficulties in their lived experiences. From the in-depth interviews and follow-up interviews, I collect nine stories related to language difficulties in different informal communicative settings. I list those contexts and occasions that have been mentioned in their stories in Table 4.

Number	Contexts/Occasions	Purpose of communication	
1	Cellphone service store	Phone service	
2	Steakhouse	Ordering	
3	Grocery A	Information request (shopping)	
4	Athletic clothing store	Information request (shopping)	
5	Grocery B	Information request (shopping)	
6	Hospital	Symptoms description	
7	Party at home	Interpersonal communication	
8	Fashion clothing store	Shopping	
9	Bank	Depositing cash	

Table 4: Contexts/Occasions in which Chinese international students have encounteredlanguage difficulties and their communicative purposes

Interestingly, Table 4 indicates the informal communicative settings in which my participants encounter language difficulties most frequently. According to Kinginger (2009)'s categories of informal communicative settings, all language difficulties took place in the third category – service encounters and other informal contacts (p. 139). The communicative skills required in those informal settings are basically what Cummins (1981) named BICS, which includes greetings, information requests, descriptions, and expression of feelings. However, for Chinese international students like my participants,

those "real-life" communicative settings are simply unfamiliar according to their previous L2 learning experiences. All three of my participants report that they had never learnt interpersonal communicative skills that could be applied in those informal settings during their more than ten-years L2 learning experiences. According to three participants in this study, lack of opportunities to experience interpersonal communication in "real-life" situation greatly leads to their language difficulties in a study abroad context. Furthermore, another significant finding regarding my participants' language shock is that, they did not expect language difficulties in those informal communicative settings until they have personally experienced them. Kate told me that she was in a great shock when she found even buying clothes was challenging. These unpredictable language difficulties reduce participants' confidence in informal interpersonal communications, which makes them more stressful (Redmond, 2000; Yeh & Inose, 2003; Zeng, 2010). However, the reason that they were hugely shocked is that they seem to fail to recognize the fact that what they have learnt from Chinese EFL curriculum focuses too much on Cognitive Academic Language proficiency (CALP), which is distinct from the skills that they need to apply in interpersonal informal communications. Therefore, Table 4 is also a reminder to Chinese international students who are studying abroad that they may encounter similar language difficulties in those occasions and contexts.

5.2.2 Primary language difficulties

The finding of this study reveals three primary language difficulties, including lack of proficiency in non-academic vocabularies, lack of understanding in sociocultural differences, and unfamiliarity to the informal context embedded phrases.

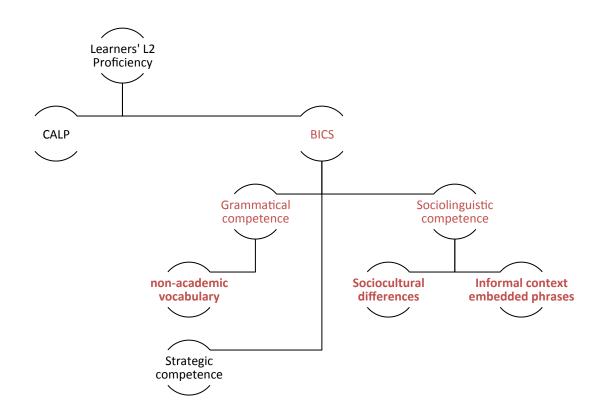


Figure 16: Chinese international students' language difficulties in lived experiences

As Figure 16 demonstrates, L2 proficiency could be divided into two domains – Cognitive Academic Language proficiency (CALP) and Basic Interpersonal Communicative Skills (BICS) (Cummins, 1981). In this study, I investigate L2 issues in informal communicative settings. Thus, all findings are affiliated with BICS. There are three major dimensions in Canale and Swain (1980)'s communicative competence framework, including grammatical competence, sociolinguistic competence, and strategic competence.

In the domain of grammatical competence, the most frequently reported language difficulty is lack of proficiency in vocabularies for basic interpersonal communications. This language difficulty manifests in three aspects. In the first aspect, the volume of non-academic vocabulary that Chinese students have mastered is insufficient. For example, in Kate's story, she went to a clothing store to buy a hoodie; however, she did not know the word for "hoodie", which decreased the effectiveness of communication. The reservoir of non-academic vocabulary is too limited for informal communication. It was stated that

Chinese students' vocabulary learning seems to only focus on their own academic field (Gao, 2003). Louis's story reveals that his lexical repertoire was insufficient for informal communications, such as reporting medical symptoms, or inquiring about kitchenware. Moreover, lack of vocabulary manifests in inadequate use of vocabulary. Although it is also related to sociolinguistic competence, the inadequateness that we are discussing here is mainly due to an insufficiency in volume. For example, Louis described his experience when buying the aluminum foil. When he tried to explain the item to the clerk, he used "cover" instead of "wrap" and "plate" instead of "tray", which led to the misapprehension.

In the domain of sociolinguistic competence, there are two main language difficulties that manifest in this study. The first one relates to lack of understanding in sociocultural differences in informal communicative settings. For instance, Kate argued that she could not adapt to the ordering style in Canadian restaurants initially because of the disparity between Chinese dinning culture and Canadian dinning culture. Louis also mentioned the sociocultural differences that he perceived in an intercultural communication with his local friends. The second difficulty is unfamiliarity to the informal context embedded phrases for basic interpersonal communications. In Doris's shopping experience, she was confused about the informal context embedded phrases that the sales person used, such as "all set" and "ready to go". Those phrases often carry certain meanings under certain circumstances. In addition, other participants also reported feeling perplexed when trying to respond in basic interpersonal communication situations, such as with greetings.

For strategic competence, Canale and Swain identified two aspects, including the strategic competence relates to grammatical competence and the one related to sociolinguistic competence (1980). I discover that Chinese international students in this study tend to perform better in strategies related to grammatical competence, rather than strategies related to sociolinguistic competence. Meanwhile, participants often do a better job when they are willing to inquire information or communicate deliberately, instead of responding to speeches that are unpredictable. For example, in Kate's case, she shifted oral literacy to image literacy to achieve the clerk's understanding in what she wanted to find immediately. In this case, Kate was prepared for the communication. In the meantime, Doris told me that she felt anxious when a sales woman approached her

because she could not expect what the conversation was about at that time. This phenomenon also incidentally confirms Cummins's (2000) claim that students often tend to perform better in familiar context embedded topics. Furthermore, in chapter two I review the eight modes of literacy that Cope and Kalantizs (2009b) proposed in a pedagogy of Multiliteracies. In their statement, meaning makers are diverse in that some "may be more comfortable in one mode than another" (Cope & Kalantizs, 2009b, p. 180). The findings of this study are in line with their statement. For example, I discover that Kate prefers using written literacy to facilitate the efficiency of communication when oral literacy does not work for her, while Louis is better at using gestures to better convey his messages.

5.2.3 Reflection on Chinese international students' language difficulties

Language difficulties in three of my participants' lived experiences reveal the tensions between the educational goals and outcomes of Chinese EFL curriculum. I discuss these tensions from the perspective of knowledge processes (Kalantzis & Cope, 2005).

The knowledge processes (Kalantzis & Cope, 2005) seem to be incomplete in Chinese EFL curriculum that my participants learnt. Four major pedagogical concepts have emerged from Multiliteracies research (New London Group, 1996), including situated practice, overt instruction, critical framing and transformed practice (Cope & Kalantzis, 2009b). Kalantzis and Cope (2005) reframed these ideas to a more "immediately recognizable pedagogical acts or 'knowledge processes' of experiencing, conceptualizing, analyzing and applying" (Cope & Kalantzis, 2009b, p. 184). When I invite participants to reflect on their own knowledge processes, they tell me that analyzing and applying processes seem to be the weakest parts of their L2 learning experiences.

The knowledge process of analyzing requires learners to be capable of examining a context, or the information that they have learnt. In analyzing process, learners reflect on what might impact their lives and consider its application in diverse situations (Yelland et al., 2008). Kate and Louis both mentioned that at their early stage of L2 learning, they were crammed with phrases and vocabulary without having the chance to analyze. Louis

also gave me an example of Chinese students' fixed greeting styles to indicate how learning without analyzing could negatively impact on students' communicative skills. However, analyzing is a crucial component of mastering L2 knowledge. Also, the applying process seems to be underestimated. All three of my participants mentioned that, in their perspectives, one of the reasons that contribute to their language difficulties is a lack of application opportunities. Chamot and O'Malley (1996) stated that L2 learning is most effective when a learner has plenty of opportunities to learn meaningful language that can be applied in real-life situation, fulfilling their communication needs. Indeed, as Littlewood (1981) pointed out, lack of similarity with real-life situations make it difficult for learners to apply the knowledge they have learnt in class. Therefore, teachers are supposed to construct a context that simulates to the "real world" for students to apply their knowledge creatively in class (Cope & Kalantzis, 2009b).

The findings refer to a passive teaching and learning situation in Chinese EFL curriculum. From this study, I discover several reasons that may contribute to this situation. First, in Louis's personal narratives, he points out the materials that teachers adopted in EFL class were not authentic. Kate also mentions that the textbook that she used was "compiled by a Chinese mind". In fact, the use of authentic materials serves as a primary aid for constructing an authentic communicative context in which students could develop basic communicative skills (Sreehari, 2012). Insufficient exposure to authentic oral input may influence Chinese students' BICS in developing unnatural communicative skills, inappropriate use of vocabulary and phrase, and misunderstanding the speech (Brown, 1990), which are exactly demonstrated in this study. Also, as Kate mentioned, the examination-oriented curriculum leaves no space for basic interpersonal communicative practice in class. In Kate's individual learning experiences, even listening and speaking practices were cut down because they were viewed less important compared to those subjects that would be tested in the Chinese College Entrance Examination.

5.3 Discussion on Chinese international students' informal L2 learning through technology

The second research question is how do newly arrived Chinese international students informally learn L2 through technology for enhancing lived experiences? It seeks to

describe how newly arrived Chinese international students use technology to enhance their L2 communication in lived experiences. Table 5 illustrates the findings regarding this question. To elaborate the topic, I discuss the answer in four aspects.

Technology Tools	Carriers	Contexts/Occasions	Contents/Functions	Improvement in participants' belief
Mobile electronic dictionary	Cellphone	Assisting mobile reading; Assisting communication	Lexical comprehensive; Vocabulary reviewing and learning	Grammatical competence
Siri	Cellphone	Correcting/improving pronunciation	Self-checking pronunciation	Grammatical competence
Instagram (Mobile application)	Cellphone	Browsing photos; socializing	Using hashtags to learn phrases and culture; searching for authentic L2 materials through hashtags; learning from commercials	Grammatical competence; Sociolinguistic competence;
YouTube (Website and mobile application)	Laptop; Cellphone	Normal learning; flexible time;	Authentic English videos; tutorial and how-to video for L2 learning	Grammatical competence; sociolinguistic competence; strategic competence
Speak Languages (Website)	Laptop; Cellphone	Normal learning; Prior to encounter with certain context	Authentic L2 materials (phrases, vocabulary)	Grammatical competence; sociolinguistic competence
TV series	Laptop; Tablet	Leisure time entertainment	Real-life TV series	Grammatical competence; sociolinguistic competence;

 Table 5: Chinese international students informal L2 learning through technologies

Talk Show	Laptop	Normal learning; entertainment	The Ellen Show	Grammatical competence; sociolinguistic competence
BBC News (Mobile application)	Cellphone	Waking up in bed; doing exercises	BBC Broadcast; News	Grammatical competence; sociocultural competence
Lifeline	Cellphone	Leisure time; waiting	Simulative text messages	Grammatical competence; sociolinguistic competence

5.3.1 The choices of technology tool

To understand Chinese international students' design thinking (Kim, 2013) in informal L2 learning, their choices of technology tools are important. In this study, nine technology tools are employed by three participants to facilitate their informal L2 learning (See Table 5). I summarize four major general characters from all technology tools that have been employed: (1) They are multimodal; (2) They offer easy accesses to authentic materials; (3) They are not exclusive for L2 learning; (4) They are flexible for using.

First, technology tools that participants mentioned are multimodal. As Cope and Kalantzis (2009) stated, meaning making in this changing social world is active and dynamic. Literacy forms are "increasingly multimodal, with linguistic, visual, audio, gestural and spatial modes of meaning becoming increasingly integrated in everyday media and cultural practices" (p. 166). The multimodality of those technology tools constructs simulative "real-life" situations in which L2 learners experience and learn from authentic communication experiences. For example, Doris mentions that through watching talk shows, she learns not only vocabularies in basic interpersonal communication, but also how native speakers address their feelings in different contexts. Kate also implicates that the TV shows that integrates images, audios, and gestures could effectively facilitate her learning. Literacy learning is not only about rules and accuracy;

it is also about understanding how the text works in order to participate in its meanings, and about actively and effectively communicating in an unfamiliar context (Kalantzis & Cope, 2008).

Second, those technology tools offer easy accesses to authentic materials. All participants in this study seek authentic L2 exposures that they barely experienced in previous learning experiences. In Kate's case, she stressed that she enjoys watching real-life TV series to improve her proficiency in vocabularies and phrases that could be frequently applied in basic interpersonal communication.

Third, the technology tools that Chinese international students in this study have selected are not designed exclusively for L2 learning. However, all participants seem to be more motivated when learning takes place in an entertaining way. Louis pointed out that he could play Lifeline all day because it is fascinating. Meanwhile, this also reveals Chinese international students' design thinking (Kim, 2013). Although those technology tools are not exclusively created for L2 learning, they can be viewed as available resources for L2 learners. As Cope and Kalantzis (2009b) indicated, when available designs are putting to use, learners are never simply replicate those found designs; what they create is a new design, using the codes and conventions they happen to have found in their own contexts and cultures. In this case, Chinese international students creatively use technology to learn in their personal ways.

Furthermore, all technology tools are flexible for using. The flexibility manifests not only in how many ways the technology tools could be used for learning. Mobile devices allow L2 learners to learn anytime, anywhere. Meanwhile, the flexibility is also demonstrated on that learning is conducted based on L2 learners' individual needs and habits. For example, Kate used the Speak Language website to learn context embedded phrases that would be possibly used to deposit before went to the bank. Louis also has experience in using Siri to check his pronunciation before saying the word. Those findings illustrate the requirement in flexibility when participants select their technology as their learning tool.

5.3.2 Multi-platform application

In this research, I adopt Golonka et al. (2014)'s categories to classify technology tools that Chinese international students in this study utilized to facilitate informal L2 learning. Golonka et al. (2014) reviewed over 350 relevant publications with empirical evidence, before classifying technology tools that have been proved effective in L2 learning into four major categories, including classroom-based technologies, individual study tools, network-based social computing, and mobile and portable devices (p.76).

However, when I use this Golonka et al. (2014)'s categories to guide my analysis, I find that all my participants actually embrace the flexibility of multi-platform application, which is not addressed in Golonka et al. (2014)'s categories. Multi-platform application refers to "an application that is developed for multiple operating systems or platforms" (Thaden, 2014, p. 4). To give an example, Doris told me that she employs YouTube as a learning tool. She prefers to access YouTube on her laptop when she is at home and on her cellphone when she is at the gym. Louis also reported that he plays Lifeline both on his cellphone and his tablet. Kate indicated that she often accesses the Speak Language website on her laptop for casual learning, while accesses the website on cellphone for immediate learning as a rehearsal for what she is about to experience. To sum up, it seems that Golonka et al. (2014)'s categories exclude the application of multi-platform tools. It is inaccurate to classify a technology tool into only one category because it is used in multiple ways.

5.3.3 The combinational use of technologies

In previous studies, researchers have tended to focus on individual technology instead of combining the potential of several technologies that could facilitate learners' L2 learning (Parker, 2008). However, in this study, the findings reveal that all participants in this study have experiences in learning with the combination of several technologies.

One of the assumptions for their combinational use is to achieve multimodality. For example, Kate shows how TV, internet, and mobile applications have facilitated her living and learning experiences. The most obvious distinction of TV series, comparing to other technologies, is its visual representation. For the other two technologies, their unique features are written literacy (Speak Language) and audio literacy (BBC News). The combinational use of those three technologies contributes to a multimodal experience in learning.

Another assumption of combinational use of technologies is that it allows access different learning materials, in order to facilitate communicative competence holistically. In Louis's case, he employs Siri to test if his pronunciation were accurate enough for Siri to identify, which facilitates his grammatical competence. He also learns vocabularies that used in certain context through playing mobile game, which fosters his sociolinguistic competence. In brief, Chinese international students design their informal L2 learning activities through varied combinational use of technologies, based on their understandings of what they need to improve through the informal L2 learning.

5.3.4 Reflection on Chinese international students' informal L2 learning through technology

Primarily, there is no evidence occurring in this study that shows Chinese international students' informal L2 learning through technology to accomplish collaborative L2 learning. Although existing research has revealed the potential of collaborative L2 learning that varied technology tools, especially web 2.0 technology tools; all three Chinese international students in this study seem to prefer individual learning through technology. Even through some of technology tools that have been proved to hold great potentials for collaborative learning are mentioned in this study, such as Podcast (Morgan, 2015) and YouTube (Chen, 2013), in this dimension, Chinese international students' use of technology for informal L2 learning remains in an initial level.

Moreover, the outcomes of Chinese students' informal L2 learning are not clear. Through interviews, I perceive participants' uncertainness in their learning goal and virtual learning outcomes. For example, when I asked Kate about her perspective of improvements through this learning activity, she answered, "I am not sure, but I believe it does help." When I asked the same question to Doris, her response was "making most of time". Although it is hard to measure development of L2 proficiency in BICS inherently, Chinese international students seem to lack an understanding of why these tools are effective.

5.4 Implications and recommendations

This study discusses some contemporary issues in a study abroad context. Echoing the existing findings, this study first reveals some of the most urgent L2 language difficulties in Chinese international students' lived experiences, including lack of proficiency in non-academic vocabulary, lack of understanding of sociocultural differences, and unfamiliarity with informal context embedded phrases. Then, three Chinese international students' informal L2 learning strategies for enhancing basic interpersonal communicative skills are demonstrated in findings of this study. From the discussion, I generate some implications and recommendations for Chinese international students and for future research.

First of all, this study highlights the importance of informal L2 learning in a study abroad context. As Rogers (2004) stressed, informal learning is the most essential part of learning that all of us do every day in our lives. For Chinese international students in this study, informal learning becomes not only the most essential part of learning, but also an indispensable part in their lived experiences. All participants in this study value the opportunities of L2 learning: they prefer to relax themselves and learn L2 through technologies simultaneously, which informal L2 learning activity takes place spontaneously. In this study, informal L2 learning through technology helps Chinese international students to foster their communicative competence; meanwhile, it also offers great respects to Chinese international students' diversity in their unique personalities and learning styles.

For Chinese international students who have decided to study abroad, or even have arrived in a foreign country recently, it is important to improve grammatical competence in basic interpersonal communicative settings. One of the most frequently reported L2 language difficulties is lack of spoken fluency in informal settings. I highlight the importance of improving grammatical competence in basic interpersonal communicative settings because I see how serious the problem would be if students could not conduct

effective communication in emergency situations. This study reveals a variety of informal communicative settings in which participants have encountered language difficulties. Meanwhile, to be better prepared for studying and living abroad, it is essential to understand the sociocultural disparities in the new country. Some of language difficulties are actually caused by unfamiliarity to certain sociocultural conventions, which is not inevitable. Students can facilitate their understanding in sociocultural disparities through authentic materials, such as watching TV shows, paying attention to local news, or learning from social media. Moreover, as a diverse learner, it is critical to foster design thinking (Kim, 2013) in both learning and living experiences. Study abroad is no doubt challenging for every newcomer. However, students can learn by Design to facilitate those difficulties. Design thinking can be applied in academic learning, as well as in problem solving for daily experiences. The knowledge processes (Cope & Kalantzis, 2009b, p. 184) – experiencing, conceptualizing, analyzing and applying – need to be applied in learning to maximum the learning outcomes.

This study also underscores the fact that learners are linguistically and culturally diverse, a concept which aligns with multiliteracies theory (Hall, 2008). Newly arrived Chinese EFL learners come with their own educational and cultural backgrounds, which contribute to their unique learning styles. Learning L2 through technology provides them with a buffer zone that enables them to foster their communicative competence before applying their knowledge in the real world. In this study, all participants have their own preferences and strategies to conduct informal L2 learning through technology, according to their own language needs. In that case, informal L2 learning is a learner-centered activity that calls for learners' design thinking (Kim, 2013).

This study indicates that, to overcome the language difficulties, informal learning through technology is a great way to improve L2 competences. Combinational use of different technology tools can assist L2 learning holistically. Practical uses of different technology tools are demonstrated as implications in this study; however, it is essential to fully understand the potential ways of using technology that could maximum the effectiveness of varied technology tools and learners' own style of learning, before conducting

appropriate strategy to facilitate L2 learning. Thus, I generate an implication for future research.

This study reveals that Chinese international students' using of technology to assist L2 learning remains in an initial level. One of the possible reasons is that they are not fully informed with the potential use and practical instructions on individual technology tool. Therefore, I suggest an investigation that holistically reveals the potentials of frequent used technology tools and practical instructions for informal L2 learning through technology, including the application of multi-platforms.

Meanwhile, one of the limitations of this study is the depth of research. L2 learning in a study abroad context is a holistic and dynamic process that integrates gargantuan volume of research aspects. However, given limited time and resources, I only focus on informal L2 learning activities through technology for enhancing communicative competence in interpersonal communications. Another limitation is the sample size, since only 3 cases are presented in this research. Although I have adopted "purposeful sampling" to ensure all three participants are knowledgeable in the issues that I researched, I do not mean to make generalized conclusions. However, I believe these cases open a window for the understanding in Chinese international students' L2 learning in Canada and contribute to further insights in research fields regarding informal learning, technology-assisted L2 learning, and study abroad.

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Appendices

Appendix A: Letter of information

Chinese International Students' Informal Second Language (L2) Learning Through Technology For Enhancing Lived Experiences

Mi Song Kim (Principal Investigator), Ph.D., Faculty of Education, Western University

Xuewei Zhou (Co-Investigator), MA student, Faculty of Education, Western University

Letter of Information

Hi, there. You are being invited to participate in this research study about Chinese international students' informal L2 learning through technology, with a purpose on enhancing their living experiences in Canada. You are being invited because We believe you have similar experience as most Chinese international students have, which is encountering language difficulties in your living experiences when you newly arrived in Canada and having experiences in learning L2 through technology. We believe your valuable experiences could facilitate a large number of newly arrived Chinese international students' lives if you participate in our study.

The purpose of this letter is to provide you with information required for you to make an informed decision regarding participation in this research.

There are growing numbers of Chinese international students coming to Canada every year to pursue the learning and living experiences that they expect to have. As one of those Chinese international students, I have encountered plenty of language shocks when I first arrived in Canada, especially in everyday life. During my literature review, I also found evidences that Chinese international students, who have received Chinese traditional English education for many years before studying abroad, tends to perform better in academic contexts than in their everyday communication. However, the language competence in basic interpersonal communication influences our living experiences, our attitudes, and our confidence so deeply. Therefore, to enhance our basic interpersonal communication competence and facilitate our lives, many Chinese international students conduct informal L2 learning activities through technology. They search authentic materials online, they listen to native speakers' podcast everyday, and they learn sociolinguistic manners from local TV series. The purpose of this study is to discover Chinese international students' language difficulties in lived experiences, and to describe their informal L2 learning activities through technology for enhancing living experiences.

Individuals who are qualified for the following criteria are eligible to participant in this study.

(1) Chinese international students who arrived in Canada within the past 2 years; (2) Have encountered language difficulties in lived experiences; And (3) have experiences in informal L2 learning through technology.

Individuals who are under 18 are not eligible to participate in this study.

If you agree to participate, you will be asked to join an individual interview and a followup individual interview with researcher (in Chinese or English), as well as being invited to write a 300-words personal narrative (in Chinese or English). The first interview is anticipated to last for 60 minutes, while the follow-up interview will take less than 30 minutes. They will be spaced about one or two weeks. The personal narrative will approximately take 20 minutes to finish. All interviews will be audio-recorded for further analysis. The interviews will be conducted in café or restaurant, wherever you feel secure to talk freely. There will be total of 4-6 participants in my study.

In this study, your personal information and experiences will be involved as data to be analyzed, such as your English educational background, your language difficulties in lived experiences, your learning styles and perspectives.

You may not directly benefit from participating in this study but information gathered may provide benefits to society as a whole. The results of this study will reveal some of the most urgent language issues that international students may encounter when they first arrive, which will provide helpful implications for students who are preparing to study abroad. Secondly, it will benefit international students who are still suffering from language difficulties by providing examples of how to conduct informal L2 learning through technology.

You will not be compensated for your participation in this research.

Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your future status. You do not waive any legal rights by participating in this research.

All data collected will remain confidential and accessible only to the investigators of this study. During the interview, your email address and audio recording will be collected, however, researchers will not use the participants' real names, school names, emails or anything that would reveal the identities of participants in any circumstances such as conference presentations, journal publications or reports to the public. Xuewei Zhou will only store the de-identified data on her encrypted and password protected mobile hard disk and access to study data will be limited to authorized personnel. According to the Office of Research Ethics, the study data will be retained for a minimum of five years. After the retention period, researchers will destroy the data according to Western University's Information Security guidelines. If you choose to withdraw from this study, your data will be removed and destroyed from our database immediately. Representatives of The University of Western Ontario Non-Medical Research Ethics Board may require access to your study- related records to monitor the conduct of the research.

If you require any further information regarding this research project or your participation in this study you may contact Mi Song Kim, Principal Investigator,

or Xuewei Zhou, Co-Investigator,

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics

If the results of the study were published, your name would not be used. If you would like to receive a copy of any potential study results, please contact Xuewei Zhou.

Written consent.

This letter is yours to keep for future reference.

Appendix B: Interview questions

Interview Questions

- 1. In their lived experiences, what language difficulties do newly arrived Chinese international students encounter?
 - In what contexts (or occasions) have you encountered language difficulties during communication in your lived experience in Canada?
 - In your opinion, what kind of language difficulties are they? (e.g. lack of vocabulary, poor in English listening, poor pronunciation)
 - At the time when you experience language difficulties in communication, how do you usually cope with them?
 - In your opinion, what are the possible reasons for experiencing language difficulties in life settings?
- 2. How do newly arrived Chinese international students informally learn L2 through technology for enhancing living experiences?
 - What digital tools (technology) do you usually employ to conduct L2 learning?
 - What is your time arrangement when learning through technology?
 - What program/application/project have you often employed to learn for enhancing living experience?
 - What is your goal for this learning activity? Or in what way do you think it would facilitate your living experiences?

Appendix C: Ethics Approval Notice

Western Research

Research Ethics

Western University Non-Medical Research Ethics Board NMREB Delegated Initial Approval Notice

Principal Investigator: Dr. Mi Song Kim Department & Institution: Education, Western University

NMREB File Number: 107636 Study Title: Chinese International Students' Informal Second Language (L2) Learning Through Technology For Enhancing Living Experiences

NMREB Initial Approval Date: March 01, 2016 NMREB Expiry Date: March 01, 2017

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Recruitment Items		2016/02/04
Letter of Information & Consent		2016/02/04
Western University Protocol	Received March 1, 2016	
Instruments	Interview Questions	2016/02/04

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

Ethics Officer, on behalf of Riley Hinson, NMREB Chair or delegated board member

Ethics Officer to Contact for Further Information: Erika Basile ___ Nicole Kaniki ___ Grace Kelly ___ Katelyn Harris 💟 Vikki Tran ___

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Post-secondary Education and Degrees:	Beijing Normal University Zhuhai, Guangdong, China 2008-2012 B.A.
	The University of Western Ontario London, Ontario, Canada 2014-2016 M.A.
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Related Work Experience	English Teaching Assistant Chengdu Experimental Primary School Chengdu, Sichuang, China 2013-2014
Publications:	

Wu & Zhou (2012). A Brief Discussion about the Calculation of Commercial Housing Price-to-Income Ratio. *Guide to Business.*