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Explore L2 Chinese Learners' Motivation through L2MSS: Selves, Mental Imagery, and Pedagogical Implications

Yao Liu
University of South Florida

Explore L2 Chinese Learners' Motivation through L2MSS: Selves, Mental Imagery, and Pedagogical Implications

by

Yao Liu

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University of South Florida

Co-Major Professor: Amy Thompson, Ph.D.
Co-Major Professor: Xizhen Qin, Ph.D.
Camilla Vásquez, Ph.D.
Wei Zhu, Ph.D.

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DEDICATION

I would like to dedicate this dissertation to my parents, Zhanshan Liu and Wen Shan. You have been, and I know will forever be, my firmest supporters and my role models. You have contributed all your love to me to make me who I am today.

I also would like to dedicate this dissertation to my beloved daughter, Alice. You are a heavenly gift to mom. Mom is sorry for the time that I spent on completing the dissertation instead of accompanying you. I hope you know how much I love you, and one day you could also agree that my journey of doing the doctoral study is a massive wealth for both of us.

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ABSTRACT

Motivation is understood as the original drive of a person to make specific choices, engage himself or herself to make efforts, and to be persistent for the pursuit of the goals. Over the decades, numerous studies have been dedicated to studying this complex and significant construct in both the fields of Second Language Acquisition and Social Psychology. Since the beginning of the last decade, the findings and theories of motivation research of the two areas mentioned above have been merged and integrated by Dörnyei (2005, 2009) to explain the second language learners' motivation. This vigorous Second Language Motivational Self System (L2MSS) views the L2 motivation as a mobile and dynamic system with the constructs of how people perceive themselves in learning the L2. The three constructs of the L2MSS are the ideal L2 self, the ought-to L2 self, and the L2 learning experience. Recently, mental imagery has been found as an important factor that is closely related to visions and the ideal L2 self (Al-Shehri, 2009; You & Chan 2015; You, Dörnyei & Csizér, 2016). On the other hand, Chinese is one of the critical non-Western foreign languages suggested by the National Security Education Program (retrieve from https://www.nsep.gov/content/critical-languages.). Chinese is very challenging to most learners whose first language (L1) is English, and it is crucial to understand L2 Chinese learners' motivation to facilitate their study. More empirical studies and pedagogical implications of the L2MSS are still needed for us to have a better understanding of the field of teaching Chinese as a foreign language (CFL).

The current study uses a parallel mixed-methods design to investigate three research questions which are related to Chinese L2 learners' motivation profile, the effects of mental imagery, and the pedagogical implications of the L2MSS in the CFL field. Multiple data collection instruments were used in this project including online six points Likert-scale questionnaires, semi-structured interviews with four focal student participants and one teacher participant, students' learning reflection journals, and the researcher's class observation. The data collection period lasted for five months. The quantitative data sets and qualitative data sets were firstly analyzed separately and then integrated, compared and synthesized to yield mega-inference results. The findings indicate that CFL learners' motivation profiles are multi-faceted and dynamic. Chinese learners' L2 motivation does not only contain the ideal L2 self and the ought-to L2 self proposed in the L2MSS, Interestingly, a newly proposed construct, the anti-ought-to L2 self (Thompson & Vásquez, 2015; Liu & Thompson, 2018) has also emerged from the interview data. Among the three self-related motivators, the ideal L2 self is still the strongest factor influencing the learners' Chinese motivation. Furthermore, the interaction and interchangeability between the ideal L2 self, the ought-to L2 self, and the anti-ought-to L2 self were also founded and discussed.

The second finding is that there is a significantly positive correlation between the use of mental imagery and the ideal L2 self. The same type of correlation is also found between students' self-reported efforts in learning Chinese and their use of mental imagery. Following the correlation tests, factorial ANOVA tests revealed that one aspect of mental imagery, the readiness of using mental imagery, has statistically significant impacts on both learners' motivation (the ideal L2 self) and their learning efforts in L2 study.

Basing on the findings, the researcher proposed pedagogical implications for the CFL educator by bridging the L2MSS framework and the performed culture pedagogy. The performed culture pedagogy provides many useful guidelines for designing authentic and imagined scenarios for creating effective class activities. These activities helped the students to enhance their skills of imaging the contexts of using Chinese, thus establish and nourish their ideal L2 selves (Dörnyei & Kubanyiova, 2014; Walker, 2010). These activities are also beneficial to help the Chinese L2 learners to have positive learning experiences (Dörnyei, 2019; Walker & Noda, 2010). The critical influence of using imagery and specific strategies of using different types of images are also discussed.

CHAPTER ONE:

INTRODUCTION

Background of the study

In the field of Second Language Acquisition (SLA), researchers have made great efforts to explore and understand language learners' motivation because this agent is critical and complex, serving as one of the most crucial factors in orienting and sustaining L2 learning (Dörnyei & Ryan, 2015). Motivation also strongly influences how successfully the students will learn a second or additional language (Ushioda, 2009). For the past decade, the field of L2 motivation research has experienced a vigorous transition from the static and fixed approach of looking at L2 motivation to a more dynamic perspective. Dörnyei (2005, 2009) proposed the "L2 Motivational Self System" (L2MSS) to conceptualize language learning motivation. This new approach of the L2 motivational system is a synthesis of the most recent studies of L2 motivation research (Gardner, 2001; Noels et al., 2003; Ushioda, 2001) and the field of social psychology (Markus & Nurius, 1986; Higgins, 1987, 1998). A large number of studies were conducted using various research methods to validate this framework across different linguistic and cultural contexts including Indonesia (Lamb, 2009), Japan (Ryan, 2009; Taguchi, Magid and Papi, 2009), China (Liu &Thompson, 2018; Magid 2012; Taguchi et al.,2009; You & Chan, 2014), Turkey (Thompson & Erdil-Moody, 2016), Iran (Taguchi et al., 2009) and Sweden (Thompson & Sylvén, 2015). The consistent findings indicate that the L2MSS is valid for general teaching and

learning environments of SLA, and not only in the context-specific concept in the Hungarian context.

The L2MSS consists of three constructs: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. Many recent studies confirmed that the ideal L2 self is always the salient and stronger motivator while the ought-to L2 self is comparatively weaker and does not always present consistent effects (Csizér & Dörnyei, 2005; Dörnyei & Ushioda, 2009; Ryan 2009; Henry 2011). Dörnyei and Kubanyiova (2014) suggested that L2 teachers consider motivating L2 learners by guiding them to construct their ideal L2 selves. A strategy is linking students' self-images with their valued social identities:

> We see the 'construction' of ideal language selves ultimately as the outcomes of the students rather than the teachers' efforts. The way teachers can help to facilitate the construction process is by orchestrating encounters for the learners with a variety of images of attractive possible selves and by supporting students in their pursuit of those self-images that are congruent with their own identities. In short, the teacher can listen and prompt, but the L2 vision must ultimately become the students' own. (Dörnyei & Kubanyiova, 2014, p.36)

Dörnyei and Kubanyiova (2014) also pointed out that if this process cannot be realized, learners' visions and self-related imageries will not be able to turn into powerful incentives. They proposed an appropriate direction for L2 teachers to develop specific motivational strategies. As soon as the L2MSS theoretical framework was initiated, some researchers explored the relationship between learners' visual learning styles, visual and sensory modalities, and learners' ability to establish their ideal L2 images (Al-Shehri, 2009; Chan, 2014; Dörnyei &

Chan, 2013; Kim, 2009; Kim & Kim, 2011). Other researchers made efforts to investigate the impact of visualization and mental imagery on learners' possible selves (Fukada et al., 2011; Magid, 2011; Magid & Chan, 2012; You & Chan, 2014). The findings indicate that there is a strong connection between learners' visualization/visual learning style and mental imagery and the possibility of increasing their motivation in terms of ideal L2 self. Some promising results have been found, but there is still a need for more empirical studies to further our understanding in this area.

In 2002, the Chinese language ranked seventh among the most often taught spoken foreign languages throughout U.S. higher education institutions (Welles, 2004). In more recent years, the growth of teaching and learning Chinese as a foreign language kept accelerating. According to the Asia Society and the College Board organization (2008), the number of higher education level CFL (Chinese as Foreign Language) students grew 52 percent over 2002, and overall Chinese programs dramatically jumped 200 percent since 2005. In the meeting with Chinese President Xi in 2005, former U.S. President Obama announced that by 2010, the number of the CFL students in the U.S. would be at least one million (Allen-Ebrahimian, 2015). The rapidly extending status of CFL in the U.S. does not indicate that it requires fewer efforts for the learners to achieve a desirable Chinese language level or to sustain learning this language long term. According to Jordan and Walton (1987), Chinese is a "true foreign language" for English speakers given its linguistic difference from Indo-European languages. In the field of foreign language learning in the U.S., the Foreign Service Institute (FSI) of the US Department of State classified all of the foreign languages taught at FSI into four categories according to the difficulties to English speakers (http://multilingualbooks.com/languagedifficulty.html). FSI estimated that it would take 88 weeks or 2200 class hours for learners to achieve general

professional proficiency (level 3) in speaking and reading, using the Interagency Language Roundtable (ILR) scale created by the U.S. Government (http://www.govtilr.org/skills/ILRscale1.htm). For speaking, learners at this level can speak with sufficient structural accuracy and appropriate vocabulary and effectively participate in most formal and informal situations (http://www.govtilr.org/Skills/ILRscale2.htm). For reading, learners at level 3 can read authentic prose materials in the target language at a standard range of time and obtain a complete comprehension of unfamiliar topics (http://www.govtilr.org/skills/ILRscale4.htm). Therefore, teachers must help Chinese learners, especially those whose L1s are Indo-European languages, to develop and enhance their motivation in sustaining learning this target language successfully. However, our knowledge and understanding of Chinese L2 motivation is still limited, so more research is needed (Cai & Zhu, 2012; Chan, 2010; Wen, 2011). This discrepancy raised an urgent need for more attention from scholars to carry out more empirical studies to investigate Chinese L2 learners' motivation and motivational strategies for pedagogical purposes. Given this situation, in the CFL field, it is worthwhile to investigate learners' motivation using the L2MSS framework. The newly proposed factor, anti-ought-to self, which is inspired by psychological reactance (Liu & Thompson (2018; Thompson & Vásquez, 2015), is complementary to the established L2MSS; thus further studies on this factor are also needed.

Definition of Key Terms

This part operationalizes the key concepts of this study.

L2: This study adopted the approach to consider "L2" (second language) as any language that people learn other than their L1s (first languages) . L2 is not used as its meaning from the

multilingualism perspective, which is the language learned after the first/native language but before another language (L3).

L2 Motivation: L2 Motivation is a language learner's internal drive to initiate and sustain L2 learning. It is a complicated factor in which many elements are integrated, such as L2 learning goals, initiates, guides, so on and so forth. In the current study, the researcher adopted the self-theory framework in the social psychology field to interpret L2 motivation. Two important self-related concepts in self-theory are *the current self* and *the possible selves*. Possible selves refer to the status that one person desires to be, while the current self is that person's current status. When the person sees the discrepancy between current status and the future images, he/she will be motivated to make efforts to narrow this gap. L2 motivation in this study of explaining L2 motivation that was initially proposed by Dörnyei (2005, 2009). Compared to the classic socio-educational model (Gardner & Lambert, 1975), this newly established model reconceptualizes language learning motivation as a dynamic "moving picture" (Dörnyei & Ryan, 2015, p.93), as opposed to a static factor. The L2MSS is comprised of three constructs: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self involves the L2 learner's ultimate goal of using the target language in *ideally* imagined situations. The ought-to L2 self refers to the L2 learner's goal of using the L2 due to their perceived obligations or responsibilities. The L2 learning experience involves all the factors (the teachers, the learning materials, the peer students, etc.) related to the L2 learner's learning environment. More details to explain the three constructs of the L2MSS are provided in Chapter Two, which is the literature review section.

Psychological reactance: Brehem and Brehem (1981) pointed out that people sometimes will have the motivation to resist or act counter to the social influence which forces or urges

them to do something. This reaction is known as *psychological reactance*. In this study, this reactance is operationalized as *the anti-ought-to L2 self* and is integrated into to fit in the L2MSS framework.

The anti-ought-to L2 self: This construct is the operationalization of the *psychological reactance* which was discussed above. Thompson and Vásquez (2015) found that the psychological reactance can also play an important role as an influential factor in motivation. In the L2MSS, *the ought-to L2 self* represents the obligations and environmental forces that are influential to human beings' behaviors. In some situations, people are motivated to do something because they want to avoid negative results or because they need to obey the social forces. By contrast, psychological reactance regulates humans' behaviors in the opposite way. As elaborated in the last key term, influenced by the *psychological reactance*, individuals may make decisions to do something because they feel other people are forcing them to avoid doing it. Therefore, Thompson and Vásquez (2015) conceptualize psychological reactance as "*the anti-ought-to L2 self*" to contrast with *the ought-to L2 self*. More details of this construct are presented in Chapter Two.

Future self-guides: The origins of human beings' actions are their goals or the states that people desire to achieve or reach. These future states are regarded as the *future self-guides* (Dörnyei, 2009). To fulfill these goals, humans need to regulate and orient their behaviors using the *goals* to guide themselves. *Future self-guides* are dynamic as opposed to static. In this study, future self-guides comprised of three constructs, the ideal L2 self, the ought-to L2 self, and the anti-ought-to L2 self.

Mental imagery: It refers to the mental representation of perception of the external world in the absence of that external experience (Hall & Leech, 1990). It includes people's perceptions of the world and imaginations. However, students cannot generate the ideal self out of nothing but can only from visions and images formed basing on "multiple aspirations, dreams, and desires" (Dörnyei, 2009, p. 33). Mental imagery is a broad topic, and the current study concentrated on two aspects to measure this concept: the vividness/elaborateness of imagery, and the readiness of using visions and imagery.

Self-reported learning efforts to learn Chinese: In literature, the factor of *the intended learning efforts* is a criterion measure which is used to investigate the influences of L2 motivation. It refers to students' perception of the efforts that they put in their L2 learning (Alqahtani, 2017). Basing on the concept of *the intended learning efforts*, in the present study, the researcher adopts a new concept of *self-reported learning effort.* Compared with the former factor, it does not only include the learners' intention but also includes any specific L2 learning actions or and behaviors (either intended or accomplished), which are triggered by L2 motivation. Students can make these efforts and actions both in class and out of class. In this study, this concept is operationalized as seven items in section B of the 6-point Likert scale questionnaire. A sample statement to describe self-reported learning efforts is "If my teacher wanted someone to do an extra Chinese assignment, I would certainly volunteer" or "I am working hard in learning Chinese."

Chinese as a foreign language (CFL): this term talks about the status of Chinese teaching and learning in the U.S. In the U.S., Chinese is not a predominately used language out of the classroom, such as in business, education or administration. Participants in this study are considered as CFL learners.

Performed culture pedagogy: It is a newly established CFL pedagogy. The approach of *performed culture* was proposed by Gala Walker (2000). From the perspective of performed culture pedagogy, teachers should use multiple measures to create authentic situations in which the use of the target language should be not only linguistically correct but, more importantly, culturally appropriate. Thus, L2 learners can perform how to use the target language in the imagined situations to achieve successful communication with the speakers of the target language. In this process, students establish their memories of the practiced situations, and these memories will be activated in the future when they encounter similar situations in their real-life. Walker called this process as "remembering the future." (p.46, 2010).

Statement of the problem

As soon as the L2MSS (Dörnyei, 2009) was proposed, it drew numerous attention from SLA scholars worldwide. A significant number of studies have been committed to validating this framework across different cultural contexts while other researchers have expanded the theory (e.g., *psychological reactance* by Thompson and Vázquez, 2014; Liu and Thompson, 2018) and influential factors (e.g., mental imagery by Dörnyei & Chan, 2013; You and Chan, 2014). Because the L2MSS is a recently established theoretical framework (Ryan, 2009), and given its nature is dynamic and open for change, more studies are needed to investigate these new developments further.

One significant and consistent finding in previous L2 motivation studies is that L2 motivation is a dynamic, multidimensional, and constantly changing system. L2 teachers need to gain an adequate understanding of the L2MSS to be aware of the dynamic nature of L2 learners' motivation; they also need to learn pedagogical methods to motivate L2 learners to promote L2

learning outcomes. Thus, more studies are needed to explore methods of applying the theoretical advantages of the L2MSS to teaching practice. Dörnyei and Kubanyiova (2014) proposed some motivational strategies that can be applied in language classes, but relatively few studies have been done on this topic. In the field of CFL, given the Chinese language's characteristics of being quite challenging for learners, the need to explore pedagogical applications of the L2MSS is urgent.

The third perceived gap is in the field of CFL motivation research. Many of the previous studies adopted an SE framework using the dichotomy of integrative motivation and instrumental motivation. Several studies have started to use the L2MSS perspective to examine Chinese L2 motivation as a dynamic system (Cai & Zhu 2012; Liu, 2014; Xie, 2014; Yu 2014); however, there is still a need for more scientific research to validate and describe the L2MSS in CFL field.

Purpose of the study

The purpose of the current study is twofold. First, the researcher seeks to delve into Chinese L2 learners' motivation and examine their motivation profiles using the framework of the L2 Motivational Self System (the L2MSS, proposed by Dörnyei, 2005, 2009), including the newly emerging factor of the *anti-ought-to self*. More importantly, as opposed to merely describing CFL students' motivational profiles, this study also conducted an in-depth investigation to explore the critical role that L2 motivation plays in CFL students' learning process by looking at the relationship between self-related motivators and learners' self-reported learning efforts triggered by their motivation. Meanwhile, the researcher also investigated how L2 motivation can impact learners' behavior by looking at the relationship between L2 Chinese students' three self-guides and their self-reported learning efforts. Examples of learners' self-

reported learning efforts are statements like “If my teacher wanted someone to do an extra Chinese assignment, I would certainly volunteer” or “I am working very hard in learning Chinese.” These efforts are predictable based on learners’ motivational profiles (Csizér and Dörnyei, 2005), and they have a critical role in predicting possible L2 learning achievements. In this study, to measure students’ learning efforts, the researcher used a questionnaire set to collect quantitative data. The concept of self-reported learning efforts was operationalized as seven specific statements in different contexts, including formal and informal learning environments. The second research interest in this study is to explore the pedagogical implications of the L2MSS by examining how class activities can guide the learners to form and enhance their ideal L2 selves. To achieve this goal, the researcher investigated how different types of class activities based on performed culture pedagogy can affect the learners’ mental imagery.

Research Questions

Intrigued by the two research interets mentioned above, the researcher asked three research questions (RQs). RQ1 and RQ2 were designed to seek the answers for the first goal of the current research, which is to illustrate CFL learners’ motivational profiles and to examine the relationship between learners’ L2 motivation (the self-related motivators) and L2 mental imagery, specifically investigating if L2 mental imagery has impacts on the ideal L2 self. The possible impacts of L2 imagery upon the ought-to L2 self and the anti-ought-to L2 self were also investigated. RQ3 corresponds to the second research purpose, which is to seek pedagogical applications of how to enhance and strengthen learners ideal L2 selves.

RQ1. What is the relationship between CFL learners' L2 motivation (ideal, ought-to, and anti-ought-to L2 selves), self-reported learning efforts to learn Chinese, mental imagery, and perceived usefulness of classroom activities?

RQ2. Is there any impact of CFL learners' mental imagery over their L2 motivation and self-reported efforts to learn Chinese?

RQ3. Are performed culture activities used in class helpful to establish and enhance the learners' ideal L2 self and mental imagery? If yes, in which ways does this pedagogy make the contribution?

Personal perspective

The researcher developed an academic interest in the field of L2 motivation because of both personal and professional experience. First, as an L2 English user, the researcher has experienced lots of failures and hardships in learning English through nearly twenty years. Motivation plays a crucial role for the researcher to overcome the difficulties and sustain a continuous study. Being aware of the importance of L2 motivation in the SLA process, the researcher made many efforts to enhance her students' English motivation while she worked as a college English teacher in China. However, motivation is a complicated psychological factor; thus, language teachers need both a thorough understanding of this feature and suggestions for pedagogical implication. It is L2 researchers' mission to continue investigating L2 motivation and exploring pedagogical applications of theoretical knowledge. The newly proposed L2MSS framework pointed out a new direction for the L2 motivation study, and the researcher of the

current research is passionate about using this new framework to expand our understanding of L2 motivation.

Although being a Chinese native speaker, the researcher still clearly knows how difficult this language is, especially for L1 English learners. Six years ago, when the researcher started to work as a Chinese teacher in the CFL program on the research site, she was impressed by the students' Chinese motivation and their success in using Chinese as native Chinese speakers in terms of language uses and behaviors in social interaction. Having continued working in the program in the past three years, the researcher sees the students in this CFL program are highly motivated and willing to make extraordinary efforts in learning Chinese. The researcher has fostered a deep interest in the performed culture pedagogy used in this CFL program and is eager to use the L2MSS framework to investigate and explain how this pedagogy is useful to trigger and enhance CFL students' motivation.

Significance of the study

The significance of the current study encompasses theoretical, methodological, and pedagogical aspects. First, this study has enriched our knowledge of the L2MSS by investigating and revealing new findings of psychological reactance, operationalized as the anti-ought-to L2 self, which is a new construct under the umbrella framework of the L2MSS.

Second, the researcher adopted a parallel mixed-method design (Teddlie & Tashakkori, 2008) which is a great design to be used for investigating the complex concept and capable of revealing the mega-inference – a conclusion made through the integration of results of both quantitative and qualitative data (Teddlie & Tashakkori, 2008). However, Dörnyei (2007) proposed his concerns regarding the application of mixed-method study designs in the L2

motivation study. He indicated that even though the mixed-methods design is used more widely than before, “Will people use it? Will established researchers change their monomethodological stance, and will young scholars embrace the challenges of methods mixing?” (p.174) The study is a formative response to these questions. Due to the complexity of L2 motivation, researchers who adopt a new socio-dynamic approach advocate that researchers should consider the contextual influences on L2 motivation and adopt a person-in-context view (Ushioda, 2009) to study L2 motivation. The current study used mixed-methods design to capture and analyze both the holistic Chinese L2 learners’ motivational profiles and also the social and cultural factors in individual L2 learners. The findings of the current study are scientific applications of the mixed-methods design to investigate L2 motivation at multiple levels at the same time.

At last, the rapid development of CFL learning and teaching in the U.S. calls for more research to investigate the features of CFL learners’ language learning process as well as pedagogical applications of the L2MSS. Many of the previous CFL motivation studies adopted the SE framework using the dichotomy of integrative motivation and instrumental motivation. The most noteworthy feature of the proposed study is the application of the L2MSS framework in CFL teaching because teachers need to be aware that their students’ motivation is multifaceted and dynamic rather than static or fixed. Much of the previous research in the field of CFL used the quantitative survey-based method to collect data. The current study adopted a mixed-method design to incorporate and capture multimodal types of data. The current study used various sources of data to capture the dynamic aspect of motivation. Analysis of the data and results will lead to suggestions of pedagogical applications for language teachers.

CHAPTER TWO:

THEORETICAL FRAMEWORKS AND LITERATURE REVIEW

Chapter Overview

This chapter explains the major theoretical framework of the current study: the L2 Motivational Self System (L2MSS). The Performed Culture Pedagogy, which is the second framework of this study was also elaborated. The researcher reviewed the previous related literature and indicated the gaps in the fields of L2 motivation and Chinese as a foreign language (CFL).

The whole chapter is organized into three major sections. The first section is devoted to providing the theoretical background and current developments of L2 motivation. It starts with an overview of the concept of L2 motivation, followed by the discussion of Gardner's (1985) classic Socio-Educational Model. Then, the researcher elaborated the L2MSS framework in great detail and presented the comparison between and the SE model and the dynamic L2MSS approach. In this section, the developments of the L2MSS also were outlined and synthesized. New findings and concepts revealed in recent research were also introduced, including mental imagery, which is a significant interest in the current study.

The second section reports an overview of the field of CFL motivation studies. Many featured studies were included in this section, and the perceived gap in the CFL motivation filed

was also pointed out. In the last section, the researcher explained the Performed Culture Pedagogy and presented the recent application of the approach. Pedagogical implications of the L2MSS, are also discussed.

Overview of L2 Motivation

Motivation is widely recognized as a variable of importance in the L2 learning process. However, motivation was defined in various ways. Gardner (1985), as one of the early researchers who started to investigate the L2 motivation, described this factor containing multiple aspects such as "a goal, effortful behavior, a desire to attain the goal and favorable attitudes toward the activity in question" (p.50). He and his colleague Lambert proposed two types of L2 motivation: *integrative motivation* and *instrumental motivation*. Their framework to illustrate L2 motivation is known as the Socio-Educational Model (S-E Model). In the S-E Model, motivation was influenced and shaped by three factors, attitudes to learning situation, imperativeness and instrumentality. The integrative ness is the strongest factor which represents the learner's desire to be accepted by the native speakers of the L2 and eventually integrated into the community of the target language. Instrumentality, or "the instrumental orientation" (Gardner, 2005, p8) refers to the motivation of the learners who wanted to learn the L2 for some practical reasons, such as for passing an exam or getting promotion in work. Meanwhile, the S-E Model also included other components such as ability, language achievement and language anxiety. These three factors are interrelated, while the variable *language achievement* is directly influenced by L2 motivation (Gardner, 2005).

The complexity and multi-dimensional feature of L2 motivation has also been recognized and acknowledged by other scholars. Some L2 researchers adopted Attribution Theory in SLA

research. Attribution Theory explained that the motivation interacts with emotions focusing on the relations between a person's performance and emotional consequences, and how this inter-relationship affects learners' motivation (Weiner, 2007). Saville-Troike and Barto (2017) summarized key components of L2 motivation including "significant goal or need, desire to attain the goal, perception that learning L2 is relevant to fulfilling the goal or meeting the need, belief in the likely success or failure of learning L2, and value of potential outcomes or rewards" (p.95).

The dynamic shifting between different types of motivation is the core interest of many SLA researchers in more recent studies. Dörnyei (2013) pointed out the most general and well-known distinction of different types of motivation is the dichotomy of intrinsic motivation and extrinsic motivation. A perspective based on this distinction to explain L2 motivation was proposed by Deci and Ryan (1985, 2000). They shifted the above-mentioned two motivation categories to a continuum manner instead of a rigid dichotomy. They argued that the extrinsic goals are on a continuum representing various levels of internal regulation or external control. When fully internalized with personal value and self-concept, the extrinsic goals/motivation may exit in the equal status with intrinsic motivation.

The most recent period of L2 motivation research is known as the social-dynamic stage. The core feature of this stage is to use a more socially grounded approach, consider L2 motivation as the notion of different selves, and include the social-contextual factors. It started with Dörnyei and Ottó's work (1998) to investigate L2 motivation using a process-oriented approach that divides the L2 motivation into three major phases: the pre-actional phase, the actional phase, and the post-actional phase. A decade later, for the first time in SLA, Dörnyei (2005, 2009) combined the findings and theories in both SLA and social psychology fields to

create the newest L2 motivation framework, which is known as the L2 Motivation Self System (L2MSS). The L2MSS is the fundamental theoretical framework of the current study, and the details of this theory are elaborated after a few pages.

A strong voice in the newest social-dynamic period is Ushioda's (2009) person-in-context view of L2 motivation. This approach explicitly emphasizes the complex characteristics of L2 learners as real persons who are located in specific cultural and historical contexts. Their motivation and view of themselves can shape and be shaped by these real situational contexts. In the following quotation, she not only summarized the key components of L2 motivation from different perspectives but also argued a new direction for future research direction, which highly regards the personal and contextual factors in SLA.

> I mean a focus on real persons, rather than on learners as theoretical abstractions; a focus on the agency of the individual person as a thinking feeling human being, with an identity, a personality, a unique history and background, a person with goals, motives, and intentions; a focus on the interaction between this self-reflective intentional agent, and the fluid and complex system of social relations, activities, experiences and multiple micro- and macro-contexts in which the person is embedded, moves and is inherently part of (Ushioda, 2009, p.220).

The Classic: Socio-Educational (SE) Model

From the late 1950s to the 1990s is known as *the Socio-Educational period* in the field of L2 motivation study. The foundation of this approach was based on Robert Gardner and Wallace Lamberts and a lot of their associates' work conducted in L2 French learners in Canadian bilingual (English and French) social context. In the year 1959, Gardner and Lambert started

their research with French L2 learners in Canada. They used a set of questionnaires containing various variables such as measures of linguistic aptitude, verbal intelligence, and various attitudinal and motivational characteristics. A decade later, Gardner and Lambert (1972) published their findings and introduced the two concepts of integrative and instrumental motivation. They indicated that "the successful learner of a second language must be psychologically prepared to adopt various aspects of behavior which characterize members of another linguistic-cultural group" (p. 3). Thus, L2 learning is not a socioculturally neutral process but is influenced by various psychological factors. Basing on these results, Gardner and Smythe (1975) proposed the Socio-Educational Model (SE), which did not elaborate on the L2 motivation constructs, but more focuses on outlining how individual differences, including integrative motivation, language attitudes and a number of other factors affect L2 achievements.

The SE Model consists of four components: the social milieu where the L2 learning happens, the individual differences (such as intelligence, language aptitudes, anxiety, and motivation), language-acquisition contexts, and linguistic and nonlinguistic achievements. In this model, the integrative motive is explained as the L2 learners' real interest in learning L2 in order to get close to the L2 language community and get accepted by the L2 native speakers (Gardner, 2001). In the context of Gardner's studies, the French L2 learners demonstrated the clear integrative motivation to study French in order to be able to communicate with the speakers of the French community. After the SE Model was proposed, revisions and modifications have been made. The factors of intelligence and aptitude were reformed to be *ability. Other factors* and *other supports* were reconceptualized as instrumentality and anxiety. Figure 1 is the newest version of the SE Model made by Gardner in 2005.

Despite multiple revisions, integrative motivation has always been the core construct in the SE Model. Integrativeness is the central variable of the motivation constructs. It is influenced by and influences L2 attitudes and instrumental motivation. As Gardner (2001) noted:

> The variable integrativeness reflects a genuine interest in learning the second language in order to come closer to the other language community. At one level, this implies an openness to and respect for other cultural groups and ways of life. In the extreme, this might involve complete identification with the community. (Gardner, 2001, p. 5)

The SE Model was used as the prevailing framework in L2 motivation research for four decades and received full acceptance in the language learning field. However, since the 1990s, this model started receiving more critiques from L2 researchers, who said that the dominant use of the SE Model in L2 motivation research limits the exploration of alternative models and frameworks of motivation (McIntyre, 2010). Gardner and his colleagues established the SE Model in Canadian's bilingual context of Francophone speakers. This sociocultural context is the critical condition for the SE Model, where the L2 learners have direct contact with the native L2 speakers, and the L2 communities have strong influence and attractions in the local settings. However, when the SE model was applied in other socio-cultural contexts where the target language is not learned as the "second language", the empirical findings were not always consistently able to explain Gardner's notion of L2 motivation (Irie, 2003; Lamb, 2004; Ushioda, 2006; Warden & Lin, 2000; Yashima, 2000). Dörnyei (2009) made a commentary on this issue that this inconsistency might be partial because there exists some ambiguity or vagueness in Gardner's original explanation of "integrativeness". Therefore, it is necessary to make efforts and conduct empirical studies to develop a newer framework in order to investigate a wider variety of L2 motivational variables.

Overview of the L2MSS

Dörnyei (2005, 2009) proposed the "L2 [second language] Motivational Self System" (L2MSS) to conceptualize second language learning motivation as dynamic, rather than static. This new approach of L2 motivation is a synthesis of the most recent studies of L2 motivation research (Gardner, 2001; Noels et al., 2003; Ushioda, 2001) and the field of social psychology (Markus & Nurius, 1986; Higgins, 1997, 1998). The L2MSS consists of three constructs: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self is the ideal person that an L2 learner would like to become to use the L2. This construct is promotion-based, which reflects a person's genuine hopes, wishes and desires in terms of learning and using an L2. For instance, the image as a person of using the L2 fluently to communicate with foreign friends can be a part of the learner's ideal L2 self. In some studies (Taguchi, Magid & Papi, 2009; Ryan, 2009), this construct was found to correlate with integrativeness but able to explain more variance in learners' desired effort to spend on L2 learning.

By contrast, the ought-to L2 self is the person that the L2 learner believes he/she should become due to the perceived obligations to the family or society. In Thompson and Liu's study (2018), a student's response to the questionnaire demonstrated an interesting example to illustrate this construct. The project was conducted in China to investigate Chinese students' English motivation. At that particular time, China and Japan were experiencing some political disagreements which caused tension for the citizens of both the two countries. Because of the perceived tension in political relations, the student participant expressed that he felt the obligation to learn Japanese because it would be necessary to learn the "rival's language." The motivation generated by the student is the "ought-to" L2 self because it rooted in the responsibility that the participant felt for his country.

The third component, the L2 learning experience, indicates the complex combination of a person's past and current L2 learning experiences and how these experiences influence the learner's learning process and results. This factor is also dynamic and immediately related with the L2 learner because it "can include interactions with instructors and the peers, curricular design, and experiences of successes or failures" (Thompson & Vásquez, 2015, p. 159). The learning experience has significant impact on learners' attitudes toward L2 learning, thus influences their L2 motivation. The three constructs are further explained in Table 1.

Table 1. The three constructs of the L2MSS (see Dörnyei, 2009)

Construct	**Explanation**
Ideal L2 self	This is the image that the L2 learner desires to be regarding using the L2. It is the strong internal motivator and represents the genuine dream rooted in the learner's heart. It is the type of promotional instrumentality which is very similar to the notion of traditional intrinsic/integrative motives. It works by triggering the generation of future imagery to enhance the learners' motivation in learning L2 to achieve the image of the future self.
Ought-to L2 self	It is the image that the L2 learner believes that he/she is supposed to be. It forms based on the duties or responsibilities of the external environment. This aspect is a type of preventional instrumentality is similar to the traditional notion of extrinsic/instrumental motives. It works by triggering the fear of becoming certain future self so that to prevent the realization of the image.
L2 Learning experience	It is the situated motives related to the learning environment and experience. This construct includes all of the failures or achievements which can either happen before or at the current moment. It is multifaceted and related to all the interactions between the L2 learner and people in the immediate environment.

The two self-related motivators included in the L2MSS are also regarded as the L2 "future self-guides" (Dörnyei, 2009, p.13). As opposed to merely future goals which are static and distant, these two types of possible selves are real, which can be seen and visualized in L2 learners' brain. These mental imageries can guide the learners and regulate their behaviors to

achieve the desired goals. Therefore, these self-guides are dynamic motivators that are constantly changing and are not a static combination of future goals. Among the three constructs, the ideal L2 self is found to be the most potent motivator (Thompson & Vásquez, 2015), and this can be thoroughly explained through self-discrepancy theory (Higgins, 1987) in the field of social psychology.

The concepts of possible selves and self-discrepancy theories. The constructs of the two selves in the L2MSS are adapted from the field of social psychology. In personality psychology studies, the notion of "self" has always been the most frequently and widely discussed concept, and the understanding and conceptualization of this concept are always dynamic and multifaceted (MacIntyre, Mackinnon & Clément, 2009). In 1986, Markus and Nurius proposed a new set of self-knowledge concepts: possible selves. Possible selevs include three components and respectively represent "individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming." (p. 954). This new and influential self-concept approach made the connection between self-cognition studies and motivation studies. Possible selves function as both promotional desires (desired selves) and preventional incentives (feared selves) for human's behaviors to achieve or avoid certain future statuses. However, there was still some ambiguity in the descriptions of the selves "might become" and "would like to become". Oyserman and James (2009) developed the definitions of possible selves. They explained these two concepts as:

> Possible selves are the future-oriented aspects of self-concepts, the positive and negative selves that on expects to become or hopes to avoid becoming. They are the desired and feared images of the ef already in a future state…Individuals possess multiple positive and negative possible selves. These possible selves are often linked with differing social

> roles and identities, so that possible selves are likely to develop in domains relevant to current life tasks such as being a student, a parent or a life partner (Oyserman & James, 2009, p.373).

At the same time of Markus and Nurius' proposal of the possible selves concepts, Higgins (1987) pointed out that there are three major domains of the "self" concept: the *actual* self (the attributes that a person believes that currently possesses), the *ideal* self (the attributes that oneself or someone else would like a person ideally to possess) and *ought* self (the attributes that oneself or someone else believes that a person is obliged to possess). The perceived discrepancy of a person's future self-guides (ideal/ought self) and the current status (actual self) triggers one's desires and motivations to regulate the behavior to reduce the distinction. Higgins (1987) proposed this notion as the "Self-Discrepancy Theory" and postulated that the motivational significance of the future self-guides is that "we are motivated to reach a condition where our self-concept matches our personally relevant self-guides." (p. 321). These two concepts form the crucial foundation of the L2MSS.

It should be noted that Higgins was not the first scholar who pointed out that this type of discrepancy-reducing desire induces the motivation of human behaviors. Duval and Wicklund (1972, 1982), in their theory of objective self-awareness, argued that when people are aware of the discrepancy between the actual self and personal standards, they will develop the motivation to reduce this gap. Similarly, Carver and Scheier (1978, 1981,1982) restated this perspective in their control-theory approach and particularly emphasized the importance of the behavior to meet the standards. The distinct difference between Higgins' self-discrepancy theory and other theories is that it emphasizes that "different types of chronic discrepancies between the self-concepts and different self-guides, as well as between different self-guides, are associated with

different motivational predispositions" (Carver & Scheier, 1982, p.322). In other words, Higgins pointed out that different self-guides are distinct but also intervene. People see different discrepancies between the actual self and different possible selves and these discrepancies will induce different motivations.

The Rationale of Using the L2MSS Framework: Differences Between the L2MSS and the SE Model

When we compare the SE model and the L2MSS, it is easy to see an apparent distinction between them: the SE model is more like a "schematic outline" (Dörnyei, 2009) illustrating the relations between *L2 motivation* and 1) L2 achievement and 2) other individual differences factors (attitude and anxiety). Because many variables are involved in this model, given motivation itself is already a complex and dynamic concept, it is hard for researchers to conceptualize L2 motivation. Additionally, it is not easy for researchers to direct target and concentrate on this topic in empirical studies. By contrast, the L2MSS narrows down the factors and concentrates on explaining the constructs of L2 motivation itself. The three components are well-formed and concrete on and reflect different dimensions of L2 motivation. It provides a clearer path for researchers to target at different dimensions of L2 motivation. It is also a more effective way to capture the dynamic features of this factor.

MacIntyre, Mackinnon, and Clement (2009, p. 51-52) concluded that the benefits of using the possible selves approach to reconceptualize the SE model are threefold:

1. It is an educator-friendly approach;
2. It addresses language contexts outside Canada;
3. It involves multiple motivations.

Because Dörnyei established the L2MSS framework using possible selves as the theoretical foundation, we can look at the distinction between L2MSS and the SE model through three aspects. First, Crookes and Schmidt (1991) pointed out that motivation studies in SLA were limited to linking motivation and attitudes, or other social psychological factors, but did not consider how L2 teachers apply this term in teaching and learning. They called for shifting the trend of L2 motivation research and provided "a more satisfactory connection to language-learning process and language pedagogy" (p. 502). The possible selves approach does not focus on the features that the L2 community possesses (fixed), but more on the attributes of the L2 learners themselves (dynamic and multifaceted) (MacIntyre et al., 2009). This is also the strength of using the L2MSS to conceptualize L2 motivation. It corresponds to the real context and activities in a language class where learners are regarded as the center of teaching and learning. The L2MSS suggests that teachers detect and interpret students' L2 motivation through the self-system which is more evident and easy to capture. In this way, teachers have more potential to enhance their students' motivation by helping them construct positive L2 possible selves.

Second, Gardner's SE Model was established within the unique bilingual social milieu in Canada. When it was applied to other cultural contexts, research findings have not always been consistent, but contradictory. Crookes and Schmidt (1991) suggested that the explanation of L2 motivation should be universal as opposed to being restricted to one particular language and cultural context. This argument is also the prominent criticism of the classic SE model. Take English as a Foreign language (EFL) or Second Language (ESL) as an example, Dörnyei (2009) pointed out that the rapid globalization and the status of English have significantly changed all over the world. "When ownership of English does not necessarily rest with a specific community of speakers" (Dörnyei & Ushioda, 2009, p. 2-3), the concept of "integrativeness" becomes more

problematic and confusing. Who belongs to the target language community if that language is used worldwide? To whom/what community should the L2 learners "integrate" or unify themselves? These questions, derived from the SE model, are very controversial and hard to answer. Using the concepts of possible selves, the L2MSS avoids such confusion and provides a new approach to focus on L2 learners' actual aspirations, obligations, and fears rather than to link the learners with specific linguistic or cultural groups.

The third benefit of adopting the possible selves approach is to research L2 motivation as a multidimensional complex phenomenon. A learner may simultaneously experience different motivations, such as promotional and preventional, automatic and compelled, in different hierarchical norms. Holistic motivation is formed through negotiation between different identities and nourishing or oppressing certain motives. Therefore, L2 motivation is always open-ended and constantly changing because it depends on "how people deal with multiple actions and goals, how they prioritize between them, and how the hierarchies of superordinate and subordinate goals are structured" (Dörnyei, 2005, p.87). The SE model does not reflect this complicated process.

However, SLA researchers should also keep in mind that the L2MSS is an inspiring complementary approach to the SE Model rather than the complete replacement. MacIntyre et al. (2009) used a metaphor to raise this caution to "avoid the temptation to throw out the baby with the bathwater" (p.58).

Development of Recent Research in the L2MSS Field

Since the L2MSS was initially proposed, SLA scholars have made efforts to validate and test the constructs in various linguistic and cultural contexts using different research methods.

Many studies use quantitative, survey-based methods. Taguchi et al. (2009) carried out a study using the L2MSS framework to compare English as a Foreign Language (EFL) learners' motivation across China, Japan, and Iran. The findings indicated that ideal L2 self has a high correlation with the L2 motivation, and replacement of integrativeness with ideal L2 self was justified. Ryan (2009) also found similar results in Japan EFL setting, and also pointed out that using the concept of the ideal L2 self provided a better interpretation about learners' different efforts of learning English. Qualitative methods were also used in many scientific inquiries of L2MSS. Lamb (2009) conducted a case study, and the interview data supported the notion that the ideal and ought-to selves of L2MSS can be powerful explanatory constructs to interpret L2 motivation. Rubrecht and Ishikawa (2012) also used a qualitative interview method to illustrate an adolescent Japanese-English bilingual and bicultural girl's motivation. They concluded that the L2MSS was very beneficial to understand bilingual learners' language learning motivation, and they also found it helped to explain the young girls' voice changes as reflected in the interview. Many studies also confirmed that the ideal L2 self is more powerful and salient when compared to the ought-to self (Csizér & Dörnyei, 2005; Dörnyei & Ushioda, 2009; Ryan 2009).

More recent studies have gone beyond the attempts to validate the L2MSS itself, and have entered a newer phase to explore more related factors. Magid (2012) used a mixed method design to explore the L2MSS of Chinese EFL learners. He particularly pointed out some unique cultural aspects should be considered in the study of the L2MSS, such as face and responsibility in the Chinese context. Liu and Thompson (2018) did a survey-based study in China and illustrated Chinese EFL learners' motivational profiles using the L2MSS framework through an explanatory factor analysis with 468 participants. Ideal self and ought-to self were found to be independent motivators, and more interesting, the psychological reactance (operationalized as *the*

anti-ought-to L2 self) also revealed itself as an independent motive factor. This result is consistent with the findings of another case study conducted by Thompson and Vásquez (2015), who proposed the notion of anti-ought-to self for the first time. Anxiety is another individual difference aspect studied with L2MSS. Papi (2010) found that ideal L2 self helps the students to make more efforts in L2 learning, while ought-to L2 self has negative effects causing a higher level of anxiety. In the recent SLA field, multilingualism has gained more and more attention. Researchers also found that L2MSS is very beneficial in investigating multilingualism. Thompson and Erdil-Moody (2016) found a significant difference in the L2MSS across Turkish bilingual and multilingual EFL learners. Thompson and Liu (under review) revealed that in Chinese EFL settings, students have different motivational profiles of the L2MSS toward different foreign languages. More recently, a new trend of development in L2MSS research is the exploration of visions and mental imageries. (Al-Shehri, 2009; Dörnyei and Chan, 2013, You and Chan, 2014; You, Dörnyei & Csizér, 2016). In these studies, mental imageries and visions are found to have strong relationship with ideal L2 self, which is the most salient construct in the L2MSS. Moreover, You et al (2016) pointed out that vividness of imagery has a strong influence on both ideal self and ought-to self. Since "the L2MSS is still in its theoretical infancy" (Ryan, 2009, p. 121), all these findings complement this dynamic framework.

Motivation Research in Chinese as a Foreign Language (CFL)

What we have known about CFL motivation. In 2002, not including American Sign Language, Chinese ranked seventh among the most often taught foreign languages throughout U.S. higher education institutions (Welles, 2004). In more recent years, this growth of teaching and learning Chinese as a foreign language kept accelerating. According to the Asia Society and

the College Board organization (2008), the number of higher education level CFL (Chinese as Foreign Language) students grew 52 percent over 2002, and overall, Chinese programs dramatically jumped 200 percent since 2005. For this newly emerged but rapidly growing field, many researchers have conduced empirical studies to investigate Chinese L2 learners' motivation.

An early study about CFL motivation was conducted by Wen (1997) in order to find out the reasons of the low retention rate of students learning less commonly taught languages (LCTL) at the tertiary level in the U.S. In this survey-based exploratory study, Wen (1997) examined two levels of motivation: the initial motivation and the motivation driving students to continue learning Chinese after the foreign language requirements were met. The explanatory factor analysis revealed four factors of motivation: *instrumentality, intrinsic motivation, expected learning strategies and efforts, and passivity toward requirements* (p. 238). Among the four factors, intrinsic motivation and passivity toward requirement comprised learners' initial motivation to start learning Chinese. On the other hand, *the expectation of learning efforts and strategies* was the most significant motivator to keep students continuing their Chinese study to the intermediate level. A very interesting suggestion of this study is that "appropriate and realistic expectations of the learning task and of one's own ability plan an important role in starting and continuing Chinese" (p.244). If we look at this result from the approach of possible selves, it can be interpreted that the clear and tangible future guides are very motivating for CFL students at different periods of learning.

More recent studies on CFL learners made efforts on researching some main topics. One major topic is the exploration of the integrative, instrumental, and intrinsic motivations (Lu and Li, 2008; Ruan, Duan & Du, 2015; Yu, 2009). Lu and Li (2008) conducted a comparative study

between heritage and non-heritage CFL learners. The findings indicated that for both of the subgroups, integrative motivation and instrumental motivations significantly impacted all students' self-confidence about their test grades. Yu (2009) conducted a quantitative survey-based study with Australian CFL learners using Gardner's Attitude and Motivation Test Battery (AMTB). Yu found that Chinese L2 students who have higher integrative motivation tended to spend more time and energy in learning Chinese. Ruan, Dua, and Du (2015) did a mixed-method study to survey CFL students' motivation toward task-based activities used in classroom learning. They found that the task-based activities were helpful to boost the learners' intrinsic motivation, but the lower-level students (beginners) were discouraged in class because of the challenges.

In addition to different perspectives used to operationalize L2 motivation, another focus of recent CFL motivation studies is on the learners' ethnic background. A big number of comparative studies were conducted to survey CFL motivation between heritage learners and non-heritage learners (Comanaru & Noels, 2009; Lu and Li, 2008; Yang 2003; Wang, 2010; and Wen, 2011). The findings on this topic are not always consistent, as some findings indicated that there was no significant difference between heritage and non-heritage learners (Comanaru & Noels, 2009; Lu & Li, 2008) in terms of the constructs of Chinese L2 motivation. By contrast, other studies revealed the distinction in motivational profiles between these two subgroups due to the great difference in cultural and ethnical characteristics (Yang 2003; Wang, 2010; Wen, 2011).

There are also a few other foci in the existing body of Chinese L2 motivation research, including the cultural perspective. Yu (2009) carried out a quantitative study to investigate the differences in L2 motivation across different cultural contexts. The participants were 151 Australian CFL students from three different universities in their country and 344 Chinese EFL students from three universities in China. Based on the analysis results, Chinese EFL students had

stronger instrumental motivation than their counterparts, Australian CFL students, in terms of their motivation profiles. By contrast, Australian students have stronger L2 integrative motivation compared to Chinese students toward learning the target language. Furthermore, Chinese EFL learners' instrumental motivation is significantly correlated with their achievement in English learning, and meanwhile, Australian students' Chinese achievement is significantly correlated with their integrative motivation in learning Chinese. The reason, as Yu discussed, might be related to the different learning environments in the two cultural contexts.

The existing Chinese L2 motivation research has provided some general findings in this field. First, most of the studies indicated that instrumental, integrative, and intrinsic motivations are all found as significant variables in CFL learners' motivation profile. Second, when students feel that learning Chinese had particular personal purposes, they will tend to be more engaged and motivated in learning. Third, many heritage Chinese L2 learners feel more obligations in learning the target language when compared to their peers who are non-heritage learners (Wen, 2011). However, these findings do not surface to present a thorough and comprehensive understanding of CFL motivation in the most recent *socio-dynamic* trend (Ushioda & Dörnyei, 2012) of L2 motivation research, which characterized by the framework of the L2MSS. More studies are needed, and the reasons are explained in the following section.

The perceived gaps in the current CFL motivation study. Based on the reviewed literature in the last section, there are three perceived gaps in the current Chinese L2 motivation field. First, the rapid development of CFL learning and teaching in the U.S. calls for more research to investigate the features of CFL learners' learning process, as well as the pedagogical applications. Given that motivation is a crucial factor that influences the learning outcomes and the study persistence for L2 learners, research on CFL learners' motivation will greatly benefit

this field. However, although the body of research on L2 motivation is well-developed and has entered a promising new phase of the social-dynamic period (Dörnyei, 2005), studies focusing on CFL motivation are comparatively limited (Wen, 2011; Cai & Zhu, 2012). Chen (2010) also argued that in spite of the rapid development of the body of research on CFL, the examinations on affect variables (attitude, identity, and motivation) still remained in small numbers.

Second, many of the studies used quantitative survey-based method to collect data (Lu and Li, 2008; Wen, 1997; Xie, 2014; Yang 2003; and Yu, 2009). As argued by many scholars, L2 motivation is a complex and dynamic concept. To understand it requires us to collect comprehensive and various data, which means different formats of data are necessary to reveal better findings. Moreover, since the new *socio-dynamic* approach emphasizes L2 learners' voices and experiences, qualitative data is a good complement as it provides resources of L2 constructs from another dimension. Wang (2010) conducted a multiple case study (nine participants) to investigate Chinese L2 motivation using in-depth interviews. Some researchers adopted the parallele mixed-methods design in order to capture richer data (Cai & Zhu, 2014; Liu, 2014; Ruan et al., 2015; Xie, 2014; and Wen, 2011). A mixed-methods design is a good suggestion for future research design to combine quantitative and qualitative data. Ushioda (2010) states that because of its complex nature, L2 motivation cannot be regarded as an easily measured variable but should be treated "in terms of what patterns of thinking and belief underlie such activity and shape students' engagement in the learning process" (p. 96). Liu (2014) pointed out that the mixed method study can extend the merits of the two paradigms of research methods (quantitative and qualitative) to the maximum. Future studies need to develop more effective and reliable methods to elicit different types of data on L2 learners' motivation.

Third, many of the previous CFL studies adopted the SE framework using the dichotomy of integrative motivation and instrumental motivation (Gardner, 1975; Lu and Li, 2008; Yang 2003, Yu, 2009, and Wang 2010). Studies used Deci and Ryan's (1985) Self-Determination Theory (SDT) also account for a large portion of the body of Chinese L2 motivation research (Comanaru & Noels, 2009; Ruan et al., 2015; Wen 1997). Very few studies used L2MSS as the theoretical framework to reconceptualize Chinese L2 learners' motivation. Xie (2011) is one of the first few researchers who adopted Dörnyei's L2MSS to conduct an empirical study to test the validity of using possible selves system to explain Chinese L2 learners' motivation profile. The data was collected through a questionnaire with responses from 197 college CFL learners. Xie (2014) found a significant correlation between integrative motivation and ideal L2 self. The ideal L2 self, ought-to self, and instrumental motivation were also significantly correlated. Xie also looked at the difference between heritage learners and non-heritage learners and found that heritage learners displayed stronger ought-to self due to the influence of their heritage culture, obligations to the family and internal posture. Cai and Zhu (2014) used the L2MSS approach as a guide of the study to investigate how the online learning community influence the students' motivation to learning Chinese. The results revealed a significant difference in both students' ideal self and ought-to self. Liu (2014) furthered this approach of research, and the findings of the quantitative data validated the significant correlation between integrativeness and ideal L2 self. The interview data presented the same trend and confirmed the quantitative findings. Additionally, the quantitative data revealed that the learners' promotional instrumentality was a stronger motivator than preventional instrumentality. Yu (2009) also found that the participants who could elaborate on the visions of their future self-images tended to have stronger ideal L2 selves, which served as a strong motivator. These studies started the new direction to examine

Chinese L2 motivation from a more dynamic and innovative approach, but there is still a need for more scientific research to validate and describe the L2MSS in the CFL field.

Performed Culture Pedagogy in CFL Teaching

Performed culture pedagogy: the basic ideas. The pedagogy of performed culture is proposed by Galal Walker (2000). Walker (2000) adopted the concept of performance used in stage drama and applied it in the field of foreign language teaching. He proposed that "Performed culture as an approach to language study, starts with meaning to treat the linguistic code (and with it the concept of the sentence) as a medium for accessing and thereby more fully participating in the meaning" (Walker, 2000, p.227). Students perform the dialogues and complete the communication tasks in specific contexts and scenarios which they will encounter in the target culture community. Through practicing performing different roles in different events of the social life in L2, students do not only learn the linguistic knowledge, more importantly, they will also learn the culturally appropriate behaviors accepted by the target language community. Walker (2010) argued that in class when language learners perform the dialogue, they need to also perform the culture which is being studied. It is important for L2 learners to gain knowledge of the L2 culture because it "provides the basis for participation in social interactions and transactions that lead to success or failure…In foreign language study, the goal is to inculcate the default behaviors in language and society that sustain culturally appropriate behaviors" (p. 36-37).

Basing on the notion of performed culture, Walker (2000) proposed several suggestions for L2 teachers as a guide for pedagogical design. Students need to construct the memory of the target culture in order to learn to perform that culture. This kind of memory provides the contexts

of communication in L2. The memory comprises of different sensory, including visions and hearings. Thus, how to help L2 learners to create and enhance this kind of memory in the target language and culture? An important strategy is to design and create pedagogical situations and let the students perform different roles in different situations. In this process, learning stories is an essential part for students to construct and compile cultural memories. On the other hand, these memories can facilitate students' participation in the target culture. Walker and Noda (2010) argued that learning a foreign language is like learning to play tennis; students who want "to function in a foreign culture must go through the process of being introduced to new concepts and then experience reconciling the concepts to physical movement." (p. 32). They also used the following figure to illustrate how this compilation process works.

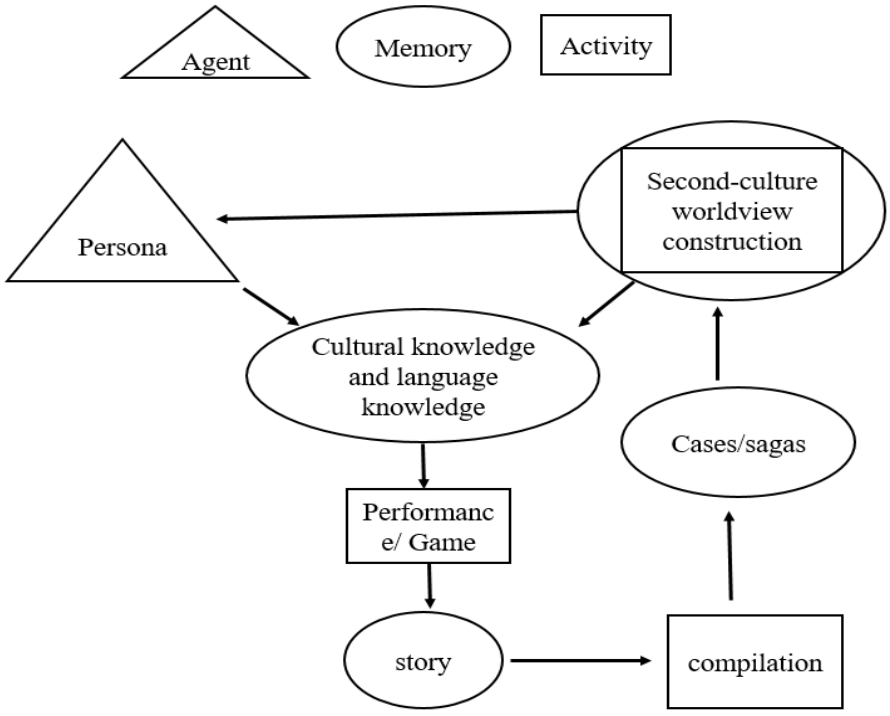


Figure 1. Circle of compilation (Walker & Noda, 2010, p.32)

Thus, the performed culture approach also focuses that teachers should provide learners with opportunities to use the target language in authentic communication contexts. In order to complete the tasks, students are required to perform different roles in particular contexts to communicate with their interlocutors. The feature in this process, which is also the interest of study, is that learners perform these communication tasks in specific "imagined events" (Walker, 2000). These events are tangible and fresh which will stand out in the learners' mind vividly based on the successful establishment of five complete components: place of occurrence, time of occurrence, appropriate scripts/program/rules, roles of participants and accepting and/or accepted audience (Walker, 2010, developed from Carlson, 1996).

As argued above, in performed culture pedagogy, students do not only learn the linguistic knowledge but also learn how to use it properly with different interlocutors and in different contexts. While doing the activities with their partners, students are encouraged to imagine they are at the "real" locations in China and communicating with "real" Chinese native speakers. Because Chinese culture and American culture are very distinct, students need to bear in mind to follow the particular rules of behavior culture in each event to avoid giving the imagined Chinese people negative impressions (Qin, 2013). The whole process of performing what students do in class is very similar to playing sports games or participating in other social activities (Jian & Shepherd, 2010). Students need to fulfill the communication goals by following the rules in the imaged situations. Walker (2001) argued that through this kind of rehearsal, students are "remembering the future" (p.46) and will be successful in real communication with real Chinese native speakers in the future.

Therefore, the students need not only to apply their Chinese language skills but more importantly, to behave culturally appropriate. The studied Chinese program applies a grading

system which evaluates the students both on their language skills and also their appropriateness of their behaviors according to the target culture.

The benefit of using performed culture pedagogy. Performed culture pedagogy is a relatively newly proposed notion and compared to other popular L2 pedagogy approaches (such as communicative teaching approaches/CLT), it has some benefits by reconceptualizing the concentration in L2 class. For class activities design, it does not only focus on the purpose of "communication" but more emphasizing creating culturally authentic social situations, and training L2 learners to image what they will encounter in these situations. Students perform dialogues and drills in different situations so they can rehearse these stories that can happen in real life. Thus, they will develop both L2 language competence and culture competence through the compilation of knowledge of different stories. Qin (in press) did an in-depth analysis of performed culture pedagogy and pointed out its five benefits: focusing on culture as oppose to focusing on language, focusing on performance as oppose to focusing on instruction, focusing on students as oppose to focusing on teachers, focusing on developing communication competence oppose to focusing on preparing for exams, and focusing on using multimedia materials as oppose to using traditional textbooks and exercise books.

From Theory to Practice: Implications of the L2MSS in Language Teaching Practice

Many previous studies also confirmed that the ideal L2 self is usually the most salient and stronger motivator while the ought-to self is comparatively weaker and does not always present the consistent effects (Csizér & Dörnyei, 2005; Dörnyei & Ushioda, 2009; Ryan 2009 and Henry 2011). Liu and Thompson (2018) did a linear regression test and proposed a model to predict L2 learners' language proficiency scores by using the values of the ideal, ought-to and

anti-ought-to (psychological reactance) selves. In this model, the unstandardized coefficiency B of ideal L2 self is .158. Ought-to L2 self has a negative effect (B= -.120) on the proficiency score and anti-ought-to L2 self has a smaller effect (B=.061) compared to the ideal self. This result simply means when one student's score of the ideal L2 self increases by one point, his/her L2 proficiency score will increase by .045. Considering that L2 proficiency is influenced by many various factors, the contribution of the ideal L2 self as a motivation construct is considerable. These findings suggest that L2 teachers should see the importance of motivating students' ideal L2 self and enhance their images of their ideal L2 selves, and thus use effective strategies to promote this aspect of motivation. On the other hand, the emerging factor *anti-ought-to self* has an unstandardized coefficient B value as .06, which weights one-third of the ideal L2 self's effect. Given that the ideal L2 self has a strong effect on learners' overall motivation, the factor of psychological reactance is also a significant motivator which should also draw more attention from L2 scholars.

$$Y=2.187 + (.158)*F1 + (-.012*F2) + (.061)*F3$$

Y: L2 proficiency; F1: ideal L2 self; F2: ought-to L2 self; F3: anti-ought-to self

Liu and Thompson (2018, p.45)

After confirming the important function of the ideal L2 self, the next question for us is how to promote it? The first step that Dörnyei (2009) pointed out was that the ideal L2 self cannot be created "out of nothing – the realistic process is more like to involve awareness-raising and guided selection from multiple aspirations, dreams, desires, etc. that the students have already entertained in the past" (p. 33). Therefore, the most practical intervention is to offer experiences through which they can form these hopes and passions for L2 learning, and in this way, in the future, the students can form self-guides based on these "input" experiences. As

stated in the first section of the literature review, a significant feature of future self-guides is that they are real, meaning that they are actual images existing in people's minds. Dörnyei (2009) proposed that L2 researchers and teachers should enhance the *mental imagery* to consider strengthening the visions of L2 self. In his book in 2014, Dörnyei further discussed about the concept of *mental imagery*, which represents the "internal images…[and] a significant amount of human thinking, problem-solving, creating, hoping, learning, planning, musing, and daydreaming happen in pictures that stimulate all our senses. [It] involves generating an imagined reality that we can see, hear, feel and taste" (p.14). Dörnyei (2014) then elaborated that L2 teachers should guide the students to link these mental imageries with their valued social identities. Otherwise, these imageries will not be able to turn into powerful incentives. This suggestion points out the applicable direction for L2 teachers to develop specific motivational strategies.

Responding to the aforementioned suggestion by Dörnyei (2009), many researchers explored the methods to promote learners' ability to visualize ideal L2 images through enhancing mental imagery. Al-Shehri (2009) carried out one of the first few studies on the relationship of ideal L2 self, capacity for mental imagery, and imagination. The results indicated a significant correlation between ideal L2 self, visual learning style, imagination, and motivated L2 behavior. Further studies provided evidence that not only visual but also auditory sensory were correlated with learners' future self guides (Dörnyei and Chan, 2013; Kim, 2009; Kim and Kim, 2011). Dörnyei and Chan (2013) also concluded that since there is a significant correlation between mental imagery and future self-guides, this result justifies the use of "vision" as the term referring to the imageries. Afterward, studies continued to explore this topic beyond the correlation between these variables but went further to investigate the possible impacts of mental

imagery enhancement on L2 motivation increase. Magid and Chan (2012) studied the effects of a motivation intervention program and found after the intervention training, both of the students' L2 motivation and L2 linguistic self-confidence significantly increased. In Sampson (2012), the involved students claimed that the activities directly targeting ideal L2 selves were considerably motivating. You and Chan (2014) conducted a mixed-method study to explore how the imagery changes impact L2 learners' future self-guides. They found that as the future self-guides, the visions and imagery in L2 learners' minds are also dynamic and constantly changing according to the status of different selves. Therefore, the visions do not only change the process of L2 learning but, more importantly, will be changed by the process, too. Chan (2014) concluded that imagery-enhancing and visualization activities are not only motivating but also interesting and enjoyable for L2 learners. These vigorous and novice findings in the body of this kind of research are very inspiring for L2 pedagogy development.

Summary

To sum up, as argued in the previous section, our knowledge and understanding about Chinese L2 motivation is still limited and more research is needed (Cai & Zhu, 2012; Chan, 2010; and Wen, 2011). Even fewer related studies were done under the tenant of the L2MSS (Cai and Zhu, 2012; Liu, 2014 and Xie, 2011, 2014). The lack of research in this field is contradictory to its acceleration in rapid development and extending. This contrast raised an urgent need for more attention of scholars to carry out more empirical studies to investigate Chinese L2 learners' motivation and motivational strategies according for pedagogical purpose. Duff, Anderson, Ilnyckyj, VanGaya, Wang and Yates (2013) also stated this problem as below:

> Few studies of CAL (Chinese as an additional language) have provided an in-depth and contextualized analysis of individual learners' motivations and goals for choosing to study Chinese, their experiences and milestones in Chinese language and literacy acquisition, the social, linguistic, cultural or affective characteristics of their development, the relationship between engaging in Chinese learning and their social, cultural and linguistic identities and selves, and their longer-term trajectories as Chinese learners and users. (p. 13)

Future research should make more efforts on investigating Chinese L2 learners' motivation adopting the L2MSS approach. The author proposes some possible research foci such as to validate the L2MSS in the context of learning Chinese as a foreign/Second language, to illustrate and describe CFL/CSL learners' motivation profile using the constructs of the L2MSS plus some emerging factors such as anti-ought-to self (psychological reactance), to investigate the impact of using mental imagery or visions to enhance Chinese L2 learners' future self-guides, and how these possible impacts are realized in teaching and learning. Studies on these topics will contribute to deeper and extended understanding of the body of knowledge about the L2MSS in a new context: learning Chinese as the target language rather than EFL/ESL. More importantly, as Wen (1997) pointed out in her study, students feel it is very challenging to pursue learning Chinese to intermediate level because, especially for English speakers, Chinese is one of the "truly foreign languages" (p. 237). As motivation is the most powerful drive for students to attain longer L2 learning, for CFL itself, the findings and insights in this kind of research will help to extend the Chinese program.

CHAPTER THREE:

RESEARCH METHODOLOGY

Chapter Overview

This chapter provides the methods used in this exploratory mixed-method study, including the research design, the setting where the study was carried out, the participants, the instruments used for data collection, the different types of data used in this study, and the data analysis procedures. The first goal of this study is to investigate the relationship and interactions between the factors of CFL students' motivation (three self-guides from the perspective of L2MSS), self-reported efforts, and L2 imagery. The second goal is to investigate if and how the class activities can facilitate students to establish and enhance their ideal L2 self through mental imagery. The researcher seeks to answer the following questions to fulfill the goal of the research interest in this study.

RQ1. What is the relationship between CFL learners' L2 motivation (ideal, ought-to, and anti-ought-to selves), self-reported learning efforts to learn Chinese, mental imagery, and perceived usefulness of classroom activities?

RQ2. Is there any impact of CFL learners' mental imagery over their L2 motivation and self-reported efforts to learn Chinese?

RQ3. Are performed culture activities used in class helpful to establish and enhance the learners' ideal L2 self and mental imagery? If yes, in which ways does this pedagogy make the contribution?

This chapter is comprised of three sections. The first section introduces and explains the strengths and principles of the mixed methods design of this study. As discussed in the previous chapter, L2 motivation is a complex and dynamic factor that contains multiple psychological and social aspects of L2 learners. Therefore, a mixed-methods approach is not only beneficial but also necessary for the current study. The first section describes the design details and the strategies used to collect and analyze both qualitative and quantitative data. In the second section, the researcher reports the settings of the research site, the participants, and the sampling method. The last part explains data collection methods, data collection procedures, and instruments intended for each question.

The Rationale for Adopting Mixed Methods Design

The current study adopts a mixed-methods design. As revealed in the literature review section, the data collection methods used in previous Chinese L2 motivation studies are limited. The data used in most studies were either only quantitative or only qualitative data. More mixed methods studies should be carried out to extract the maximum value of both quantitative and qualitative data in a specific context. Second, possible selves are dynamic and subject to change (Markus & Wurf, 1987), and so is L2 mental imagery (You & Chan, 2014). Given these two reasons, the researcher used a mixed-method study design to collect rich and vigorous forms of data. In the following section, the overall benefits of using a parallel mixed-method design in

research are presented. Then the specific merits of the design of the current study are also discussed.

Overall benefits of using a mixed-method approach. Campbell and Fiskes (1959) are two of the first scholars who started to advocate using multiple methods in research to ensure research validity. They described this strategy of researching as a convergent methodology or the multitrait/multimodal method. Their innovation was later regarded as "triangulation" (Webb, Eugene, Donald, Campbell, & Lee, 1966). This notion is considered as a milestone in terms of data validation in the social sciences because it combines the two paradigms, and because "qualitative and quantitative methods should be viewed as complementary rather than as rival camps" (Jick, 1979). Then after two decades, the purpose of using mixed methods by social science researchers was no longer for data triangulation but for integrating different and various types of data (Creswell, 2009; Johnson and Turner, 2003). This trend has grown stronger and stronger in recent years, and more and more researchers across different disciplines have accepted it and used it in their studies. Many SLA researchers have also adopted and advocated for this approach (Liu, 2014; Magnan, 2006; Ushioda, 2001; You & Chan, 2014).

First, using a mixed-methods study design, the researcher can gain the advantage to "invite multiple mental models into the same inquiry space" (Greene, 2007, p.13). Using both quantitative methods and qualitative methods can maximize the chance to collect different kinds of data. While quantitative methods can be used to collect large amounts of data to allow the researchers to gain a broader perspective, qualitative data provides the researcher with tools to do a more in-depth examination of the content of interest. Combining the data collection methods does not only result in more abundant data but also broader perspectives in the data analysis process (Greene, 2007).

Second, both qualitative and quantitative data collection methods have merits and limitations. Johnson and Turner (2003) made a thorough comparison of different qualitative and quantitative research instruments, and Table 2 displays the features of some commonly used types of data collection tools. Therefore, blending the two methods can help to reduce the weakness of each paradigm; the two methods also complement each other. In a study with a mixed-method design, both of the simplistic/deconceptualized data (from the questionnaire) and context-specific/lack of generalizability issues can be adequately discussed and covered (Dörnyei, 2007).

Last but not least, collecting high-quality data is the primary condition for reliable analysis and conclusion, which requires verification. Miles, Huberman, and Saldaña (2013) argued that "Without verification, you're just another researcher with a hunch." (p. 276). Concerning achieving good data, Creswell indicated that "qualitative and quantitative data can be merged into one large database or the results used side by side to reinforce each other" (2009, p.14). Through mixed data, researchers have the best chance to increase the overall reliability and validity of the whole data set because they have access to examine the subjects from different angles and stances. If different types of data triangulate and correspond with each other, it means that the researcher can be more confident to consider the data as trustworthy because of the internal consistency among various types of data. Table 2 presents a summary of the strengths and the weaknesses of different types of instruments targeted for different types of data. Basing on this summary, the research adopted different measures to collect both quantitative and qualitative data. The data collection instruments are introduced and described in the next section.

Table 2. Summary of strengths and weakness of selected different data collection methods

Questionnaire	
Strengths	Weakness
Good for measuring attitudes and eliciting other content from research participants Can administer to probability samples Quick turnaround Can be administered to groups Moderately high measurement validity for well-constructed and well-tested questionnaires Low dross rate for closed-ended questionnaires Perceived anonymous by the participants Ease of data analysis for closed-ended items Inexpensive	Need validation Must be kept short Might have missing data Nonresponse to selective items Open-ended items possibly result in vague answers Open-ended items possibly reflecting differences in verbal ability, obscuring the issues of interests Data-analysis possibly time-consuming for open-ended items
Interviews	
Strengths	Weakness
Good for measuring attitudes, and most other content of interest Can provide in-depth information Allow good interpretive validity Low dross rate for closed-ended interviews Moderately high measurement validity for well-constructed and well-tested interview protocol Relatively high response rated often attainable Useful for exploration and confirmation	In-person interview expensive and time-consuming Possible reactive and investigator effects Perceived anonymity by respondents possibly low Data analysis sometimes time-consuming for open-ended items Measures in need of validation
Observational Data	
Allow one to directly see what people do without having to rely on what they say what they do Allow relatively objective measurement of behavior Can be used with participants with weak verbal skills Good for description Can give access to contextual factors operating in natural social settings A moderate degree of realism (when done outside of the laboratory)	Reasons for behavior possibly unclear Possible reactive and investigator effects when respondents know they are being observed Possibility of the observer being biased (e.g., selective perceptions) Possibility of the observer "going native" (i.e., overidentifying with the group being studied) Interpretive validity possibly low Cannot observe some content of interest Dross rate possibly moderately high More expensive to conduct than questionnaires and tests Data analysis sometimes time-consuming

This table is created from the information from Johnson and Turner (2003)

The specific approach of research design used in the current study. As discussed above, for researchers who aim to investigate complex and dynamic agents, such as L2 motivation, the mixed methods design is an appropriate choice. The primary concept that the current study investigates is L2 motivation. Ushioda (2001) pointed out that because of its complex nature, L2 motivation cannot be regarded as an easily measured variable but should be treated "in terms of what patterns of thinking and belief underlie such activity and shape students' engagement in the learning process" (p. 96). Liu (2014) also used mixed methods design and argued that it brought out the best the two paradigms of research methods (quantitative and qualitative). Many L2 motivation scholars have suggested that future studies need to develop methods that are more effective and reliable than those used in previous studies in order to elicit different types of data on L2 learners' motivation. This current study responds to these advocating voices and adopts this method.

Creswell and Klassen (2011) pointed out that the decision to use what type of mixed methods design should be made according to the needs arising from the examination of the literature. Teddie and Tashakkori (2009) introduced that from broader perspective, there are two types of mixed methods designs. The first type is the one-strand designs or called "Monostrand Designs*"* (p. 149). This type of designs is also known as quasi-mixed methods design because only one type of the data (either qualitative or quantitative) data is analyzed. The other major type of mixed methods designs is Multistrand Designs, which is more complex and includes at least two strands in either or both data collection and data analysis steps. Compared to Monostrand design, Multistrand design is more suitable for investigating more complex phenomenon. Teddie and Tashakkori (2009) also described five families of multistrand mixed-method design: *parallel mixed method designs, sequential mixed designs, conversion mixed*

designs, *multilevel mixed designs,* and *fully integrated mixed designs*. Table 3 presents the comparison and description of each design.

As argued by Greene (2007), researcher's choice of mixed method design should be made accoding to the research questions and inquary purposes. A should be initiayed with well-describe and well-justifiled inquiry questions but never with the research design first. (Chelimsky, 2007). The gold of the current study is two-fold: 1) to explore the motivation profile of L2 Chinese learners using the widely tested L2MSS survey and 2) to reveal the dynamic features of their motivation and provide an in-depth understanding of the development of their ideal L2 selves. Therefore, the appropriate research design needs to be powerful to reveal the merits of both qualitative data set and quantitative data set to achieve the purposes of both triangulation and complementarity. Greene (2007) also pointed out, it is more common that researchers who conducted mixed methods studies chose to keep different types data collection methods concurrent but separately, rather than blending or merging the methods intentionally. In Table 3, it can be seen that the parallel design is a type of concurrent method mentioned by Greene. In this type of design, quantitative data and qualitative data were collected and initially analyzed separately. After the initial data analysis were done, the results from two data sets were treated in an in-depth dimension to seek the explanation for any consistency or discrepancy or even contradictions. An advantage of using parallel design is that by using this method, the researcher can plan the instruments and procedures in advance rather than designing instruments to collect data sequentially, thus to obtain richer data and more complete understanding of the investigated phenomenon (Bergman, 2008; Creswell and Plano Clark, 2007; Greene, 2007; Teddie and Tashakkori, 2009).

Table 3. Description of five families of mixed methods designs

Types of design	**Details of the design**
Parallel mixed designs	At least two parallel independent strands: one strand with quantitative (QUAN) questions, data collection and analysis, and another strand with qualitative (QUAL) questions, data collection, and analysis. Both QUAN and QUAL strands phases are related to the same research questions; mixing happens in a parallel manner.
Sequential mixed designs	At least two strands (QUAN and QUAL) happen chronically or sequentially. Questions and procedures of one strand depend on or emerge from another strand. Mixing occurs chronically with the study unfolds, and research questions may evolve in this process.
Conversion mixed designs	Mixing occurs as one type of data is transformed into another type (QUAN to QUAL or QUAL to QUAN) and then analyzed using both qualitative and quantitative methods. The data is collected and analyzed through one approach, then is transformed (quantized or qualified) and analyzed using another approach. Related aspects of the same research are answered through the mixing.
Multilevel mixed designs	This is a multi-strand design. One type of data (e.g., QUAN) is collected at one level (e.g., micro level like children), and another type of data (e.g., QUAL) is collected at another level (e.g., family). The collection of different types of data can occur either sequentially or parallelly. The data are analyzed and integrated to answer different aspects of the same questions. Multiple types of inferences is made to reach the final mega-inferences.
Fully integrated mixed design	This method can be either parallel or sequential. Mixing of QUAN and QUAL strands occurs at all levels of the study and multi-level of analysis. The two approaches are mixed in an interactive and independent manner. At each step, one strand influences the construction and development of the other strand.

This table is created from the information from Teddie and Tashakkori (pp. 151-159, 2009)

The research purpose if the most important factor that the research needs to consider when selecting a mixed methods design. However, Greene (2007) also argued that the nature of the data and the instruments should also be taken into account. In the current study, the quantitative data was collected through the L2MSS questionnniare. The items of the L2MSS

survey had been established before the data collection process, so the researcher did not need to generate new items through analyzing qualitative data. On the other hand, items use in qualitative data collection instruments, such as the interview questions, were generated based on other types of qualitative data including student participants' reflection journals and researcher's classroom observation notes. As a result, the two types of data (quantitative and qualitative) could be collected simultaneously but independent from each other, and so was the initial data analysis procedure. In the parallel mixed deign, the mixing happens after the two strands of data (qualitative and quantitative) are initially analyzed. The researcher needs to synthesize, merge, compare and integrate the results from each data set. At last, a meta-inference was achieved, and an in-depth conclusion is made.

Therefore, the researcher selected the parallel mixed design to collect and analyze the data for the whole study because it is appropriate to reveal a thorough understanding of the research questions.

Research Design

Overview of the Research context. As the researcher wrote at the beginning of this chapter, one impetus of the current study is to investigate in what ways Chinese L2 teachers can help students to generate and strengthen their ideal L2 self, thus enhancing their motivation in learning Chinese. Dörnyei and Kubanyiova (2014) proposed various strategies that L2 teachers can use to guide students to form the visions of using L2 as the result of constructing their ideal L2 selves. These techniques include promoting the importance of a role model, orchestrating experiences for the learners with the images of desired possible selves and creating a context for the images. Interestingly, similar teaching strategies have been applied in the Chinese program

where the current study is situated. The teachers in the investigated Chinese program have been applying a pedagogy known as *Performed Culture Pedagogy*. As discussed in Chapter Two, the core notion of the performed culture pedagogy is that teachers need to create "imagined" authentic situations for students to *perform* the linguistic knowledge that they have learned in the forms of communicative interactions. The principle that the teachers depend on to create the scenarios is that these imagined situations are all commonly encountered scenarios in Chinese social life. When *performing* the conversations and other interactive tasks, the students are not merely verbally reciting the contents like a simple role-play. Furthermore, they are creating an *imagined world* that they can "orchestrating" their *ideal Chinese selves*.

With constant practices in this way, while the students become competent in performing the communicative tasks, they will remember the "imagined" future thus will be able to function using the target language autonomously when they encounter similar situations in real life. The basics and techniques of this pedagogy are compatible with the suggestion of Dörnyei and Kubanyiova (2014) that language teachers should consider the teaching strategy of "remembering the past to imagine the future" (p.18).

Because the compatibility between Dörnyei and Kubanyiova's (2014) pioneering suggestions of enhancing L2 learners' visions and the approach of *performed culture pedagogy* (Walker, 2010), L2 Chinese learners who receive this type of pedagogical instructions can simultaneously receive training on enhancing the mental imageries of their ideal Chinese selves. The resonance between the two approaches is the impetus and rationale of the current study for selecting the current Chinese L2 program.

The research conducted the study at a large Southeast research university in the U.S. The Chinese program in this university has been established for more than ten years. It provides

various courses that meet the specific needs of the L2 Chinese learners of different proficiency levels. The core courses include Modern Chinese I-IV (elementary level to intermediate level); Chinese Conversation I-II (intermediate level to pre-advanced level); Introduction to Chinese Culture, Chinese Cinema, Intercultural Misunderstandings between Chinese and Americans, Networking in China and America, and Selected Topics with the pending topics including Chinese literature, translation and contemporary Chinese society. In the current study, data collection procedures were carried out in the semester of Spring 2017. Therefore, the sample of participants was selected among the students who took the courses offered in the semester of Spring 2017. Table 4 and Table 5 provide a brief description of the courses offered in the researched Chinese program by the time of the data collection was completed. After Spring 2017, the program begun to offer Chinese Major to its students, and some changes in the course setting have been applied. However, due to its irrelevance to the current study, the changes are not included in Table 4 and Table 5.

Table 4. The descriptions of the courses offered in the Chinese program of the research site

Course	**Descriptions**
Modern Chinese I	An integrated and intensive Chinese language course including four skills Offered in Fall for students with zero background in Chinese The course credits can be used to meet the foreign language requirements of the university.
Modern Chinese II	A continuation of Modern Chinese I. Prerequisite: Modern Chinese I or if the students can pass the placement test for this course. The course credits can be used to meet the foreign language requirements of the university.
Modern Chinese III	An intermediate-level course for students who want to obtain intermediate level proficiency
	It is not a part of the foreign language requirements of the university.
	Prerequisite: Modern Chinese II or if the students can pass the placement test for this course.
	Not a part of the foreign language requirements of the university.
	A part of the requirement for Chinese Minor and Major

Table 4 (Continued)

Modern Chinese IV	A continuation of Modern Chinese III Prerequisite: Modern Chinese III or if the students can pass the placement test for this course Not a part of the foreign language requirements of the university A part of the requirement for Chinese Minor and Major
Advanced Chinese Conversation I	A higher intermediate level course as a continuation of Modern Chinese IV Prerequisite: Modern Chinese IV or if the students can pass the placement test for this course. It is not a part of the foreign language requirements of the university A part of the requirement for Chinese Major
Advanced Chinese Conversation II	A low advanced level course as a continuation of Advanced Chinese Conversation I Prerequisite: Advanced Chinese Conversation I or if the students can pass the placement test for this course It is not a part of the foreign language requirements of the university A part of the requirement for Chinese Major
Introduction to Chinese Culture	Taught in English and is offered to all students regardless of Chines learning experience It is an introductory course offering an overview of Chinese history and culture No prerequisite Can be used to fulfill the requirement of obtaining Chinese Minor and Major
Cross-cultural Communication	Bilingual course (English & Chinese) and includes both Chinese L1 and L2 students Course if offered in the format of lecture and discussion Prerequisite for Chinese L2 students: Modern Chinese II or if the students can pass the placement test for Modern Chinese II. Can be used to fulfill the requirement of obtaining Chinese Minor and Major
Networking in China and America	Bilingual Course (English & Chinese) An intensive study of Chinese language and culture at the upper-division. Focus on the interaction skills necessary in business and professional settings. Prerequisite: Modern Chinese IV or if the students can pass the placement test for Modern Chinese IV Can be used to fulfill the requirement of obtaining Chinese Minor and Major
Selected Topics	The program also offers some courses which may include the topics of Chinese literature, translation, and contemporary Chinese society.

Table 5. Summary of the provided Chinese courses' structures

Courses	Number of class meetings per week	Length per class meeting	credits	Number of Students per class
Modern Chinese I-IV	4	50 mins	4	8-22
Chinese Conversation I & II	2	75 mins	4	8-22
Introduction to Chinese Culture	2	75 mins	3	8-22
Cross-cultural communication	2	75 mins	3	8-22
Networking in China and America	2	75 mins	3	8-22

In addition to formal credit-bearing courses described in Table 4 and Table 5, the Chinese program also offers additional resources, such as *Chinese Corner,* where students are welcome to join and seek assistance in Chinese study or to simply practice their language skills. The venue of the Chinese Corner is in the Chinese Culture Center located in the university (supported by Confucius Institute at that university) two days a week and one hour per session. The Chinese corner activity is organized and supervised by the director and the teachers of the Chinese program. All the teachers of the Chinese program take turns going to the Chinese Corner during the sessions to have some interactions with the students. However, the location is open every day for any person who has an interest in Chinese language and culture. Other recourses include special events activities, volunteer jobs, and performance opportunities in Chinese festivals celebrations. These resources were offered by Confucius Institute at the university.

Participants and methods for sampling and recruitment. To enroll the participants for the current study, the researcher used the "convenience/opportunity" sampling method, which is used by many SLA researchers. The main reason for this decision is because one of the research

questions is to examine if and how class activities designed based on the performed culture pedagogy facilitate the students to establish and develop CFL students' ideal L2 selves. The Chinese program introduced in this study applies the principles of the performed culture pedagogy in all the language-focused courses. All the teachers working in this Chinese program design their lesson plans and classroom activities using the approach of performed culture pedagogy.

Given the mixed-methods design of the current study, both quantitative and qualitative data were gathered. In terms of the quantitative data collection, an online questionnaire containing 57 items was used as the major instrument. The researcher obtained IRB approval at the beginning of the year 2017. The online questionnaire was sent to all the CFL students enrolled in the focal Chinese program at the beginning of the semester of Spring 2017.

At the same time, in terms of the qualitative data collection, the researcher started to recruit several students as the focal participants to actively participate in the qualitative data collection procedures such as semi-structured interviews, classroom observation (to be observed), and reflection journal writing. The focal participants were recruited according to three conditions. First, all the focal participants were selected from the students who were taking the course of Chinese II during Spring 2017. The rationale for this decision is explained in the next paragraph. Second, the focal participants were completely willing and voluntary to be included in the current research. Third, every participant was over 18 years old because the current study aims to examine the motivation of adult CL learners. There is no requirement in terms of gender or ethnicity background because these aspects are not the interest of the current study.

There are three reasons to select Chinese II students as the pool to recruit focal students. First, because this group of students had already completed Chinese I by the time of the study was carried out, they were familiar with the teaching methods and class activities designed based on the performed culture pedagogy. Therefore, they are able to provide their opinions and perceptions about this pedagogy. Second, in the current Chinese program, students who take Chinese II are in the process of completing their foreign language requirements. Many students need to meet the foreign language requirements to get their undergraduate degree according to the university policy. Their L2 motivation statuses are more diverse compared to students in Chinese IV or Advanced Chinese Conversation II. It is because students who take the latter two courses tend to share the similarity of having high motivation in learning Chinese given that these more advanced Chinese courses are not part of the university's requirements for their degree. Third, students of Chinese II will complete their foreign language requirements after they finish this course. They will be facing the choice of whether to continue learning Chinese or not. L2 motivation plays a critical role for them to make their final decision. It is interesting to investigate CFL students' L2 motivation during this unique period.

To enroll focal participants, the researcher firstly obtained permissions from the teachers to go to their class and talk to their students. During the talk, the author explained the study procedures to all the students who are enrolled in Chinese II and encouraged all of the students to participate in the study. The researcher planned to recruit no more than eight focal participants considering her capacity and schedule of conducting qualitative data collection, such as interviews and classroom observations. During the recruiting period, seven volunteers came to the author and agreed to be the focal participants, so the researcher involved all of them.

Eventually, four focal participants' qualitative data was selected to be used in this study. The details of selection procedures are provided in the next chapter.

On the other hand, the researcher taught in the program before and is still a practitioner of the pedagogy in another institution teaching Chinese. She also included one teacher participant who was one of the Chinese II course instructors in the Chinese program during the data collection period as an informant. There are two purposes of including a teacher participant. First, because the items of classroom activities were generated by the researcher through her observation notes, the researcher needed to make sure that she had captured all different kinds of class activities, which are part of the questionnaire. The teacher participant helped the researcher to confirm that no activities were neglected. Second, the teacher participant also provided the rationale of the classroom activities designs based on the performed culture pedagogy. The materials that this teacher participant used were also collected as supplement materials for better illustration of the class activities. The teacher participant had received performed culture pedagogy training, and she is an experienced teacher who had taught for more than five years in the investigated Chinese program. These two inclusion criteria aim to ensure that the teacher participant has a good understanding of the pedagogy the ability to apply it in class activities design.

Before this project was carried out, the researcher contacted the director of the Chinese program for approval to observe classes and talk to the students. The course instructors were informed, and the researcher explained the research purposes and the research design to them to get their permission to meet their students. At the beginning of the study, the researcher went to all the Chinese language classes offered in the Chinese program for Spring 2017 to explain the study design to all of the students and the teachers. The IRB approved research consent forms

were also distributed to the potential participants so the students and teachers who were willing to participate in the study could contact the researcher to return the signed consent form through the provided contact method (using email, cell phone, or meeting in person).

Instruments for Data Collection

Because the current study uses a mixed-methods design, multiple data collection methods were used to collect both quantitative and qualitative data. Different types of instruments were used to achieve this goal, including a set of six-point Likert scale questionnaire, two semi-structured interviews with students, one semi-structured interview with the teacher, six classroom observations with each focal student, and focal students' reflectional journals concerning their Chinese learning experience and their reflections on the class activities.

Pilot study. The following pages are dedicated to describing the pilot study conducted before the current study was carried out.

Classroom activities designed according to the performed culture pedagogy. To ensure the quality of the data collection instrument, the researcher piloted the instruments through several procedures. First and foremost, in order to generate the questionnaire items aiming for investigating students' attitudes and perceived effectiveness for the class activities, the researcher conducted classroom observation in a pilot study to categorize different types of activities. Therefore, due to this research interest, an explanatory design is selected for the procedure of generating and questionnaire items based on the qualitative observation notes. Six major types of class activities were captured. Table 6 provides the categories of major class activities and descriptions of each activity. The researcher consulted with the teacher participant during the data collection period to confirm all the activities that the teacher used in her class were

included. In the questionnaire, these activities were summarized to be short statements as the items used in Section D (see Appendix A and Appendix F).

Table 6. Classroom activities and descriptions in the investigated Chinese program

Activities	**Descriptions**
Performing dialogues	• The students study the core communicative conversations before coming to the class. In class, the teacher creates several *imagined* authentic scenarios/contexts to let every student *perform* the conversations in front of the whole class. • Students' performances are not only evaluated according to their linguistic skills but also based on the quality of their performing, such as the appropriateness of the behaviors.
Students write their own dialogues and perform the dialogues	• Every two units, the students work with their partner(s) to compose a short conversation (six sentences or more) using the vocabulary and structures from the two units. They have one week to prepare and then perform their dialogue together in front of the whole class. • Students' grades are given not only based on the quality of the conversations that they have created but also based on the quality of their performing, such as the appropriateness of the behaviors.
Tell stories from different people's perspectives in movie class	• In-class sessions, when the students watch Chinese movies ad learn, the teacher askes them to watch some clips and then orally narrate the story plots. The students need to do the narration from different perspectives by imaging themselves as different roles in the movie.
The teacher uses various contexts and asks Students to practice Chinese	• The students study the assigned core sentence structures and vocabulary before coming to the class. In class, the teacher will create different authentic contexts by using probes and pictures to help the students *imagine* the situations that they can use the vocabulary and structures. Students do practice in various imagined scenarios created by the teacher.
Students do oral drills according to the visual prompts (picture, etc.) provided by the teacher	• The teacher provides prompts to help student practice using new vocabulary and structures in practicing oral drills. Instead of showing the texts or structures to the students, the teacher uses visual prompts such as pictures or props. • The oral drills are in forms of different types of communicative conversations.
Interpretation activity	• Two teachers collaborate to help the students do this activity. One teacher plays a role as an English speaker, and the other teacher plays the role of a Chinese person. The context is that they need to do some formal oral communication (such as in a business meetings), but they do not speak each other's language at all. The students need to *imagine* that they are the interpreters and need to do two-way interpretation work to translate the conversation.

Table 6. (Continued)

Oral interview	• This activity serves as the mid-term exam for the class. Every student conducts a five-minute one-one oral interview with the teacher, and it is in total immersion style. Before the interview, the teacher provides a short paragraph of information, including the context (in China) of the conversation and their roles (such as a taxi driver or an intern in an international company) in the conversation. The student needs to imagine that he/she is in China and needs to fulfill are several communicative goals via talking to the teacher.

To pilot the instruments which were used to collect the research data, first, the researcher invited some previous students of the investigated CFL program as the informants to provide comments on the instruments used for collecting student data. They were all familiar with the performed culture pedagogy, but they were not recruited as the participants for the current study since they were no longer enrolled in the Chinese courses by the time when the study was conducted. The purpose of piloting the instruments is to make sure the questionnaire items, interview questions, and journal questions are understandable and in proper length. Thus, the informants were asked to fill out the six-point questionnaire, read through the interview questions, and the reflection journal questions. Also, the researcher asked the informants to time themselves when they fill the questionnaire to see how long it takes them to complete the questionnaire. In all, ten students were invited to do the pilot study, and eight students gave responses. Overall, all eight students thought the items included in the questionnaire are clear and easy to understand. The length of the questionnaire is proper, and it did not take them too long to fill out (mean = 9.38 minutes). The minimum time to complete was three minutes, and the longest time was eighteen minutes. The reason for this difference is due to the individual differences in reading speed. The student who only used three minutes considered himself as a fast reader. Therefore, the time to complete the questionnaire was acceptable for the participants.

In terms of the interview and journal questions, five students offered their suggestions on the wording. The researcher carefully examined these suggestions and revised the original questions. Eight of the eight informants had no problems or difficulties in understanding the questions. However, one student said she was felt the concept of "Idea Chinese self" was a bit weird because she never heard this concept before. The student said she could still understand it. The researcher explained it using the examples of concepts such as "ideal daughter self" & "ideal manager self" (the student's major is business). The student understood it with this assistance. Given that all of the informants could understand it, and the expression of "Ideal Chinese self" is closely related to the major construct of the L2MSS, the researcher decided to keep this express but is aware of being prepared to answer a potential question from the future participants. In the instructions for the reflection journals, the researcher also added some examples to explain the concept of "ideal self" generally and then help the participants to understand "ideal Chinese self". See Appendix E for the details. Table 6 presents the results of the pilot study with the student informants.

The researcher also interviewed one of the eight student informants to check if the first-round interview questions are effective to elicit the informants to provide proper information which can be used to answer the research questions. The whole interview lasted for 53 minutes, and it was regarded as appropriate because the normal length of a typical in-depth one-on-one, face-to-face interview is 60-90 minutes (Savin-Baden & Major, 2013). The responses from the student reflected that the interview questions are valid in generating the data that the researcher needs.

To pilot the interview questions aiming to collect data from the teacher participant, the researcher invited two teachers as the informants. At the time of the pilot study, they were both

teachers teaching in the investigated Chinese program. Both the two teachers said they could understand the questions without difficulties. The researcher did a group interview with the two teachers using the interview questions intended for teacher participants. The group interview lasted for 62 minutes, which is a proper time. The two teachers also joined the researcher for a discussion about how effectively the questions can generate the desired data. Table 7 provides a summary of the pilot study results.

Next, the researcher also piloted the class observation forms by using them to take notes in actual class observations. Two observations were conducted in two classes of the current Chinese program. After the observations, the researcher evaluated the observation forms and added some items which are helpful to capture data related to the interests of this study. For example, to capture more accurate and detailed data about students' learning efforts, descriptions of students' specific behaviors were added (see Appendix D). The added items include:

1) How well did the student perform the dialogue?

2) How well was the student able to use the new vocabulary?

3) How well was the student able to use the knowledge in variation practice?

4) When the teacher addressed any question to the whole class, did the student voluntarily give answers? If yes, how many times?

5) When other students failed to give answers, did the student volunteer to help? If yes, how many times?

6)Did the students raise questions? How many times?

7) Any distracted behaviors?

Table 7. Summary of pilot study results

Six-point Likert Questionnaire			
Time to complete the questionnaire			Questions for understanding the questions
Mean	Maximum	Minimum	
9.38 mins	18 mins	3 mins	None
Interview and Journal Questions			
Can fully understand the questions	Felt the questions a bit wired	Suggestions on the revision of the questions	
8	1*	<u>Interview questions</u> Q1. Original: *Why do you learn Chinese?* Revised: *Why are you learning Chinese?* Q5. Original: *Tell me your opinion of the contents you learned in Chinese classes.* Revised: *What is your opinion on the content you learn in Chinese class?* <u>Journal questions</u> Week 15 Q.1. Original: *In what kinds of situations, and what can this person do?* Revised: *What would you do with this ability? What type of situations would you use it for?* Week 15. Q3. Original: *Why didn't you give up?* Revised: *What makes you continue on?*	
Number of informants: 9			

* One student felt the concept of "ideal Chinese L2 self" a bit weird. The informant understood it after the researcher explained it.

Online Six-point Likert-scale Questionnaire and included items. The purpose of using the questionnaire (Appendix A) in this study is to investigate the profile of the CFL learners' motivation, using the L2MSS questionnaire items, including the psychological reactance which is operationalized as the *anti-ought-to L2 self*. The questionnaire was also used to examine other

aspects of the research interest – mental imagery, learners' self-reported learning efforts, and their perceived usefulness of the class activities. Table 8 presents the items, the intended research interest corresponding to each item, and the sources from where the items were adopted. The items were designed and selected based on several related studies (Al-Shehri, 2009; Dörnyei, 2009; Taguchi et al, 2009; Dörnyei & Chan, 2013; Liu & Thompson, 2018; Thompson & Heunsch, 2018; Targuchi, 2009; You & Chan, 2014; You, Dörnyei & Csizér, 2016). The following standards were taken into consideration for selecting and adapting the questionnaire items. Below the criteria, Table 9 provides a nutshell of the items used for each key concept. See Appendix F for the list of specific questionnaire items and their intended self-constructs.

1. The appropriateness of the statement for the CFL context in the U.S. Some items used in previous studies might not be proper to test the variables. For example, in previous studies done by Liu and Thompson (2018), Taguchi et al. (2009) and You et al. (2016), an item intended for ought-to self is "Studying English is important to me because an educated person is supposed to be able to speak English." This item was originally designed for EFL learners in China, Japan, and Iran, where the target language (English) is a compulsory subject through the education system. The current study will take place in the U.S., and the target language Chinese is one of the less commonly taught languages. Meanwhile, the participants of the current study also have different cultural and social backgrounds compared to the EFL learners from the aforementioned three Asian countries. As a result, this item is excluded from the questionnaire of this study.
2. The practical length of the questionnaires. Although there are various factors included in this study, I also consider the number of items used in the questionnaire because

long questionnaires make it hard for the participants to complete the survey. Including too many questions will also make the participants feel too exhausted and distracted to give valid responses.

Table 8. Summary of items in the 6-point Likert-scale questionnaire

Research interests	Breakdown variables	Item numbers	Sources
Section A. Self-related motivators from the L2MSS approach	the Ideal L2 self	2, 5, 8, 11, 13, 15, 23, 26, 30	Dörnyei and Taguchi (2011)
	the Ought-to L2 self	2, 4, 7, 10, 12, 14, 16, 25, 27	Dörnyei and Taguchi (2011)
	the Anti-ought-to L2 self	1, 3, 6, 9, 17, 20, 21, 22, 24, 28, 29	Liu and Thompson, under review; Thompson under review;
Section B. Self-reported learning efforts to learn Chinese	Students' Self-reported learning efforts	30-39	Al-Shehri, 2009
Section C. The use of mental imagery in L2 learning	The readiness of using mental imagery	41, 43, 45, 47, 49	You and Chan, 2014; You, Dörnyei and Csizér, 2016
	The vividness of using mental imagery	40, 42, 44, 46, 48,	You and Chan, 2014; You, Dörnyei and Csizér, 2016
Section D. Students' perceived usefulness of the class activities	Perceived usefulness of different class activities	50-56	Created based on the researcher's previous teaching experience and observation in the Chinese program. These questions will be updated if new patterns emerge from the classroom observation data.

3. The selection of the items concerning the newly emerged psychological reactance factor in L2 motivation. The original anti-ought-to self-statements were created based

on the interview data from Thompson and Vásquez's (2015) study and extra data collected by the researchers in focus group discussion. Based on this finding, Liu and Thompson (2018) initiated eleven items to fit into the L2MSS questionnaire structure. The results showed that seven of the items loaded in the exploratory factor analysis (Cronbach alpha =.769). In their study and in another study concerning this agent (Thompson, 2017), six items loaded in the EFA analysis with a high internal reliability (Cronbach alpha =.805). There are two possible reasons for the fact that different items loaded in EFA tests across different studies. First, it might be due to the different research contexts. Second, the anti-ought-to self is a newly emerging factor, and our understanding of the construct of this factor is still limited. Therefore, the researcher decided to include all of the eleven items in the current study.

4. In the last section of the questionnaire, there are several newly designed items to investigate students' perspectives about how useful different class activities for them to establish and develop their ideal L2 self. The researcher initially generated the items categorized in different types of class activities based on three years of teaching experience in the current Chinese program. These items will also be finalized and modified after the class observations and interviews with teachers if new patterns emerge from the classroom observation data.

Table 9. Sample items in 6-point Likert-scale questionnaire

Research interests	Breakdown variables	Sample items
Section A. Self-related motivators from the L2MSS approach	Ideal L2 self	2) I can imagine myself living abroad and having a discussion in Chinese. 5) I can imagine myself studying in a university where all my courses are taught in Chinese. 26)The things I want to do in the future require me to use Chinese.
	Ought-to self	4) My parents encourage me to study Chinese. 7) Learning English is necessary because people surrounding me expect me to do so. 12) If I fail to learn Chinese, I'll be letting other people down.
	Anti-ought-to self	1) I am studying Chinese because it is a challenge. 3) I want to prove others wrong by becoming good at Chinese that I am studying. 21) I am studying English even though most of my friends and family members don't value foreign language learning.
Section B. Self-reported learning efforts to learn Chinese		31) If my teacher wanted someone to do an extra Chinese assignment I would certainly volunteer. 35) If I could have access to Chinese-speaking TV station, I would try to watch them often. 38) In addition to the class assignments, I practice writing and reading Chinese as much as I can.
Section C. The use of mental imagery in L2 learning	Readiness of using imagery	41) Sometimes images of myself using Chinese successfully in the future come to me without the slightest effort. 45). It is easy for me to imagine how I could successfully use Chinese in the future. 49) I have always found it easy to visualize imagined situations.
	Vividness of imagery and visions	40) If I wish, I can imagine how I could successfully use Chinese in the future so vividly that the images and/or sounds hold my attention as a good movie or story does. 44) My dreams of myself using Chinese successfully in the future are sometimes so vivid I feel as though I experience the situations. 48). When I'm imagining myself using Chinese skillfully in the future, I can usually have specific mental pictures.
Section D. Students' perceived usefulness of the class activities	Perceived usefulness of different class activities	50) I found performed the dialogue is helpful for me to imagine communicating with Chinese native speakers. 51) I found making my own dialogues and performed it is helpful for me to imagine communicating with Chinese native speakers in real situations. 54) I found the use of visual aids (photos, pictures) in class it is helpful for me to imagine communicating with Chinese speakers

Semi-structured interviews. All of the student interviews were conducted by the author and audio recorded in the way of face-to-face conversations. As illustrated in Table 2, the instrument of the questionnaire has weaknesses in collecting highly valid data. Because it needs to be short, the questionnaire can only contain limited items that cannot reflect a full understanding of the issue. Interviews can provide in-depth information and are appropriate for eliciting the interviewees' opinions, experiences, and attitudes. Compared to highly structured interviews, semi-structured interviews are more productive to obtain an understanding of the interviewees' experience (Piantaniada & Garman, 2009). Maxwell (1996) proposed a model for designing good interview questions. The model includes five components: purposes, conceptual context, research questions, methods, and validities. The following factors were considered when composing the interview questions with the focal student participants (see Appendix B).

1. Briefly, the goal of this study is to explore the L2MSS (including the anti-ought-to self) and its pedagogical implications with CFL students. Within the L2MSS framework, the factor of the learning experience is multifaceted and closely related to learners' unique personal experiences and feel it does not have a well-stated structure. Secondly, as the learning experience reflects the learners' situated and immediate experience of the learning environment such as teachers, pedagogy used in the program, class activities, curriculum, and success and failure stories, questions concerning these aspects are generated.
2. Among the questions, mental imagery and vision are another key issues of inquiry. The questionnaire items investigate the readiness and vividness of the mental imagery, so in the second interview with the students, the researcher will also produce more questions

concerning L2 imagery based on the themes and patterns that emerged in the first interview, students' reflection journals, and classroom observations.

3. The current study uses a convergent mixed methods design. Creswell and Clark (2013) suggested that researchers using this type of design should "create parallel questions for the qualitative and quantitative data collection" (p.25). Therefore, the interview questions also target the same factors tested in the questionnaire used in this study to validate and expand upon the findings of quantitative data (Appendix A).
4. For each focal student participant, two interviews were administrated. The first interview aimed to get a general understanding of the researched factors. The questions listed in Appendix B are some tentative questions that will be used for the second interview. More questions will be generated based on any interesting findings and patterns that emerge from the preliminary analysis of the first interview responses, the participants' reflective learning journals, the questionnaire data, and the researcher's observation notes.
5. For the teacher participant, only one interview will be administrated toward the end of the semester. This decision was made because the purpose of interviewing the teacher is to gain an understanding of his/her rationale of the class activity design and the teacher's interpretation of the performed culture pedagogy and their reflection on applying this pedagogy. The researcher also double-checks if she has captured all different kinds of activities that the teacher used in the class.

Classroom observations. The researcher conducted five classroom observations with each of the eight focal students recruited from the course Chinese II. There are two reasons to include this type of data. First, the researcher can generate questions concerning the types of class activities designed by the teachers. During the observation, the researcher used classroom

observation form (Appendix D) to note down the focal students' reactions to different class activities. Second, the observation data can yield more realistic information about what really happens in the class. Through the observation, the researcher can examine whether the activities are actually useful in motivating the students. The researcher's reflections upon the motivating effects of the classroom activities were not analyzed as the core data. Instead, it was only used for the triangulation of the students' data collected in questionnaires and interviews, both of which only collect self-reported information. As discussed in the first section of this chapter (also see Table 2), the researcher needs to use other measures to triangulate the self-reported information to ensure validity.

Researchers' notes are the only sources of the observation data. No audio or video files were recorded. The form was adapted from Wajnry's (1992) book, which is a good resource of observation methods for language teachers and researchers. For the observation, the researcher only focused on the focal students and their performance. Using the student observation forms, the research took notes on the focal students' learning efforts and behaviors, such as how well each individual focal student prepared for the class and how attentive they were in the class. Appendix D includes the descriptions of specific efforts and behaviors corresponding to different observation foci. The researcher used these descriptions as the guidelines to capture the data.

Students' biweekly reflection journals on their Chinese study. Each focal student was requested to write one reflectional learning journal every two weeks from week 2 to week 15. These reflectional journals were composed on the platform of Google doc. Google doc is a free online application that allows users to create, share, and collaboratively edit the same document with others. The researcher created one private Google doc. file and shared with each foal student exclusively. Each document was only shared and seen by the researcher and the

particular focal participant. This document was forbidden to be viewed or edited by the public. In this way, the participants could access the document and write their journals at any time they wanted to add their reflections. The researcher was also able to add comments or ask questions on the journals where the researcher detected any interesting findings. With the immediate interactions with the focal participants, the researcher was able to capture as much data as possible because the students' memory about certain interesting entries became vague after a period of time. Instead of waiting to ask questions until the end of data collection session, the researcher interacted with the students as soon as possible. Thus the students were able to remember why they wrote these entries in their journals before their memory fade away. The purpose of including the reflectional journal is to capture the features of the students' ideal L2 self. It also serves to collect students' reflections on class activities. The instructions and prompts of the journals are listed in Appendix E. In the first and last journals, the participants were asked to write a brief description of the images of their ideal L2 self. The prompt used for this question was adopted from Sampson's (2012) action research done with Japanese EFL learners. The timeline of the study is described in Table 10. Figure 3 is the diagram which illustrated the model of the current study's design, the parallel mixed design. It presents the the data collection procedures and data analysis methods.

Data Analysis

Both quantitative and qualitative data are needed to answer each research question. The quantitative data collected from the questionnaire were entered into SPSS 25. The descriptive statistics were calculated, and the internal validity of items targeting the same variable was

checked by the Cronbach alpha value before further inferential tests. Different statistic test methods were performed to answer different research questions.

Table 10. The timeline of administrating the study

Week	Procedures
Before the semester	a. Contacted the director of the Chinese program for approval to observe the class and talk to the students. b. Informed the course instructors and explained the research purpose and design to them to get their permission to meet their students. c. Obtained IRB approval for the study.
1	a. Recruited the student participants. In each Chinese class, the researcher introduced herself and the whole study. The IRB research consent forms were distributed, and the students were instructed how to sign and return the forms if they were willing to participate in the study. b. Recruited the teacher participant. The researcher talked to all the instructors of Chinese II course in Spring 2017. The IRB consent forms were distributed and the research procedures regarding the teacher participant were explained. All instructors were informed of the way how to return the signed consent form if they agreed to be the participant.
2	a. The returned consent forms were collected. b. The online 6-point Likert-scale questionnaire set was distributed to all the students. c. The Google doc. reflectional journal files were sent to the focal student participants. Each student had their own unique file only shared with the researcher. From this week, they started writing the learning journals.
3	a. The learning logs of Week 2 were collected from the focal students, they were also reminded of writing the next journal which was for weeks 4-5. b. Done with the first semi-structured interviews with the focal participants c. The class observation started.
4-14 (one week is 2017 spring break)	a. The same procedures of data collection were administrated as in week 3. Meanwhile, class observations were conducted every two weeks. b. The interview with the teacher participant was done. c. The researcher consulted the teacher participant for detailed description of all the class activities. d. Materials used in class activities were also collected from the teacher participant.
15	a. The responses of the online questionnaire were collected. b. The last reflectional learning logs were collected. c. The second semi-structured interviews were administrated with all the focal participants.

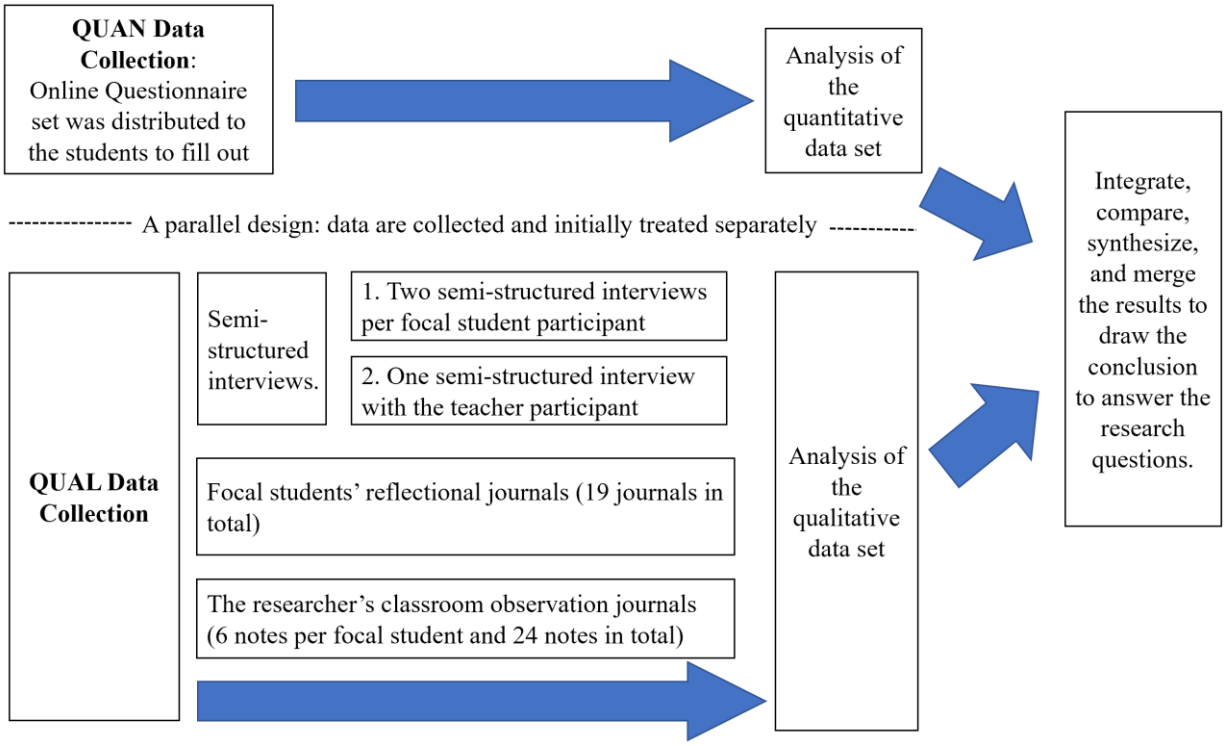


Figure 2. A diagram of the data collection and analysis procedures of the current parallel-mixed design study.

A variety of qualitative data were also used to answer each RQ. The data included the semi-structured interview with the focal students, students reflectional learning journals (four to six journals per student), and researcher's observation notes (five notes per student). As explained above, the data of the observation notes were mainly used to triangulate the other three types of data and to provide supplementary evidence to explain the findings of other data. The interview data collected with the teacher participant served as the same function.

In the analysis step, multiple coding cycles and analysis measures were administrated to extract findings from the major qualitative data collected from the resources of semi-structured interviews and reflectional journals. All the qualitative data were coded and analyzed in two

coding cycles. In the first cycle of coding, the researcher "mixed and matched" (Miles, Huberman, & Saldaña, 2014) two coding methods: structural coding method and descriptive coding method to code all the data. The structure coding method was used because it is particularly appropriate for analyzing different data forms that fall into specific categories (Saldaña, 2015). It also a proper coding method widely used to process data collected in mixed-methods research (Creswell, 2014; Tashakkori & Teddlie, 2010). The structural coding method was selected because the current study aims to look for the participants' self-related motivations and their mental imagery uses related to studying Chinese. These factors are the themes already formed before the data was collected. Saldaña (2016) commented that structure coding is a universally used coding method for all qualitative data but particularly appropriate for studies that employ "multiple participants, standardized or semi-structured-data gathering protocols…or exploratory investigations to gather topics lists or indexes of major categories or themes" (p.84). Through the structural coding method, data chunks containing the keywords related to the investigate factors were marked and highlighted. For example, information chunks containing "imagine" and "real-life feeling" are marked as the categories of *the ideal L2 self*. Expressions containing the keywords like "picture uses", "see in my mind", and "visualize" were labeled as *the use of mental imagery*.

On the other hand, to avoid missing any data which did not fall into the predefined categories, the descriptive coding method was also applied in the first coding cycle. Via using the descriptive coding method, the researcher assigned labels or keywords or short phrases to interesting pieces of data to summarize the topics of the data.

For the second round of coding and analysis, the pattern coding method was selected. Through this coding method, the researcher could generate exploratory or inferential codes to

detect the emergent themes and explanations. It is suitable and beneficial to achieve the goal of the current study, which aims to investigate the pedagogical methods to apply L2MSS to enhance L2 learners' motivation. Similarities of the segmental themes and clustered constructs marked out from the first coding cycles were grouped in this step to reveal the common themes and make inferences.

After the second coding cycle, multiple rounds of data analysis procedures were conducted to extract the meanings and findings from all types of qualitative data collected through different instruments. In the initial step, the two primary sources of the qualitative data – interview transcripts and the focal student participants' reflection journals – were analyzed separately. In this step, interview codes generated from both the first and the second coding cycles were treated in the cross-case analysis style. It means that the researcher compared the codes among the four focal students to seek the meaning and the commonly shared patterned themes. The same analysis procedures were also used to treat the reflection journals. The author examined the emerged themes and patterns about how the class activities facilitated the students' ideal L2 development. The researcher also compared each student's first week's and last week's journals to see if their ideal L2 self and the images of using Chinese had changed. The researcher also examined students' reflections and comments on the class activities, such as which activity was the most helpful and why they had that perception. Each student's reflections throughout the whole research period were carefully examined in depth.

In the second step, the researcher synthesized the findings in both interview data and reflection journal data. The researcher's observation notes were used as supplementary data to triangulate the data and findings from the two aforementioned primary data sources. All the meaningful units, patterns, and keywords related to the three self-related constructs, the use of

mental imagery, reported learning efforts, and the perception of the usefulness of different class activities were marked and heightened. Marginal notes and comments were also used to analyze the coded data. Salient codes, patterns, and meaningful units which did not fall into the coding scheme were also marked and highlighted to be included in the analysis. Table 11 is the summary of the types of data, data collection instruments, and the data analysis methods to answer each research question.

Table 11. Research questions, data collection instruments and data analysis methods

RQs	**Data Collection Instruments**	**Types of Data**	**Data Analysis Methods**
RQ1. What is the relationship between CFL learners' L2 motivation (ideal, ought-to, and anti-ought-to selves), self-reported learning efforts to learn Chinese, mental imagery, and perceived usefulness of classroom activities?	1) 6-point Likert questionnaire 2) Students' interviews 3) Students' reflectional journals 4) Classroom observation notes	QUAN &QUAL	a. All descriptive statistics were calculated through SPSS 25 b. Correlation tests on the quantitative data between all the factors of interests. The tests were performed using SPSS 25. c. Structure coding method was used for the first cycle of coding to analyze the students' interview and reflectional journals d. Pattern coding method was used for the second cycle of coding to analyze the students' interview transcripts and reflectional journals e. Obviation notes were used as triangulation and supplementary data
RQ2. Is there any impact of CFL learners' mental imagery over their L2 motivation and self-reported efforts to learn Chinese?	1) 6-point Likert questionnaire 2) Students' interviews 3) Students' reflectional journals 4) Classroom observation notes	QUAN &QUAL	a. Two 2X2 factorial ANOVA tests using mental imagery as the grouping factor and learners' motivation and self-reported efforts as the dependent factors b. Structure coding method was used in the first cycle of coding to analyze the students' interview and reflectional journals c. Pattern coding method was used in the second cycle of coding to analyze the students' interview and reflectional journals d. Obviation notes were used as triangulation and supplementary data

Table 11. (Continued)

RQ3. Are performed culture activities used in class helpful to establish and enhance the learners' ideal L2 self and mental imagery? If yes, in which ways does this pedagogy make the contribution?	1) 6-point Likert questionnaire 2) Students' interviews 3) Students' reflectional journals 4) Classroom observation notes	QUAN &QUAL	a. One-way ANOVA tests, using the perceived usefulness of the class activities as the grouping factor and learners' ideal L2 self and mental imagery as the dependent factors b. Structure coding method was used for the first cycle of coding to analyze the students' interview and reflectional journals c. Pattern coding method was used for the second cycle of coding to analyze the students' interview and reflectional journals d. Obviation notes were used as triangulation and get supplementary data

The Trustworthiness of The Qualitative Data Analysis

To ensure the inter-rater reliability, the researcher invited another coder to code selected parts of every type of the qualitative data, including the interview transcripts, the students' reflection journals, and the observation notes. The second coder has the experience of doing research with human participants and analyzing qualitative data collected from the participants. For each type of data, the researcher randomly selected 10% transcripts or texts for the second coder to conduct coding via the same coding methods. Before the coding process, the researcher had a training session with the second coder to demonstrate how to conduct the structural coding method (used in the first coding circle) and the pattern coding method (used in the second coding circle). The second coder confirmed that he was familiar with and had no difficulties in the coding procedures. Afterward, the researcher compared the coding work between the researcher herself and the second coder. The result is that 89% of the second coder's coding was consistent with the author's coding result. The inter-rater reliability of the qualitative data was achieved.

The participants' responses to the interview questions and their reflections are all self-reported data. To ensure the validity of the data, observation notes are used for triangulation to test the consistency of data from different resources. The observation notes were sorted according to the focal participants' pseudonyms. The technique of initial coding was also used for the first cycle analysis and focused coding for the second cycle analysis.

CHAPTER FOUR:

DATA ANALYSIS AND FINDINGS

Chapter Overview

This chapter is dedicated to explaining the analysis and findings of both quantitative data and qualitative data in the current study. First, an overview and general descriptions of the collected data is presented. Second, each of the three research questions will be addressed separately based on the findings of both quantitative data sets and qualitative data sets.

Research Questions Revisited

The current dissertation study aims to answer the following research questions which were presented in Chapter 3:

RQ1. What is the relationship between CFL learners' L2 motivation (ideal, ought-to, and anti-ought-to selves), self-reported learning efforts to learn Chinese, mental imagery, and perceived usefulness of classroom activities?

RQ2. Is there any impact of CFL learners' mental imagery over their L2 motivation and self-reported learning efforts to learn Chinese?

RQ3. Are performed culture activities used in class helpful to establish and enhance the learners' ideal L2 self and mental imagery? If yes, in which ways does this pedagogy make the contribution?

The analysis of quantitative data started at the end of the Spring semester in 2017. SPSS 24 was used to run statistical tests on the variables of the interests in this study. The preliminary analysis of the qualitative data began after the first interview was carried out. Interviews and students' reflection journals were used as two major sources of qualitative data. The researcher's classroom observation notes and the interview data with the teacher participant were used for two purposes, 1) to extract any supplementary data, and 2) to triangulate the reliability and trustworthiness of the data collected from primary sources. All recorded interviews were transcribed, and the researcher's focus of the transcripts was the content of the participants' answers. Per the purposes of the current study, the current study did not adopt the conversation analysis method to analyze the qualitative data. As a result, all the non-verbal features (e.g., pauses or silence), intonations, stresses, hesitation markers, and fillers were not included (Stuckey, 2014). When the analysis of each type of data was done, the researcher compared and synthesized the findings from two domains to address every research question.

The Overview of the Participants' Background Information

This section reports the participants' Chinese motivation profile by examining the background information of all participants. Firstly, descriptive statistics of all 37 participants will be presented, followed by the background information of the four local participants.

The background information of the participant pool was obtained through the first section of the online survey. At the end of the data collection period, 37 valid responses were received

for the online survey of the Chinese L2MSS from the students enrolled in the Chinese program on the research site. All the data collected through the questionnaire were organized and exported to SPSS 25 for further analysis. Table 12 presents the participants' answers for this section, including in which Chinese classes they were enrolled, the length of time they had been learning Chinese language, their gender, where they learned Chinese, hours of studying Chinese per week, through what measures they learned Chinese and their family connection to the Chinese language.

Table 12. Background Information on Chinese Learning

General Background Information of the Participants						**(N=37)**
Q.1. Please list the Chinese class(es) you are taking this semester.						
Courses	Chinese II	Chinese IV	Advanced Chinese Conversation II	Cross-Cultural Communication	Intermediate Reading Chinese	Traditional Chinese Literature in Translation
*Number of Participants	23	9	4	4	3	1
Q.2. How long have you been learning Chinese						
Years	One year or less	About two years	About three years	About four to five years	More than five years	
Number of Participants	20 (54.1%)	7 (18.9%)	5 (13.5%)	3 (8.1%)	2**(5.4%)	
Q.3. Your gender						
Female				Male		
20 (54.1%)				17 (45.9%)		
Q.4. Where have you been learning Chinese?						
In the current Chinese program	37					
Other Venues	7 (18.9%)	High school (4) Home (1) Study abroad in China (1) The software program(s) (1)				

Table 12. (Continued)

Q. 5. How many hours approximately you spend on studying Chinese per week?			
6- 10 hours	10-15 hours	16-20 hours	21-30 hours
16 (43.3%)	11 (29.7%)	8 (21.6%)	2 (5.4%)

Q.6. How have you learnt Chinese?				
Minimum required courses	Optional courses	After-school language school	At home on your own	friends or family members
31	23	14	17	7

Q.7. In your family, does anyone speak Chinese as his/her native language? If yes, please specify that person(s)'s relation to you, and how/if that person influences your Chinese learning.			
No	Missing	Yes	
28 (75.7%)	2 (5.4%)	7 (18.9%)	
		Parent(s)	5
		Previous roommate	1
		Grandparent(s)	1

*Because some students were enrolled in more than one classes offered by the Chinese program, the sum number of this question is more than 37.
** Two students indicated that they had been learning Chinese for more than 20 years because they are heritage learners.

In the survey, Question 1 to Question 7 are intended for collecting participants' background information which is related to their Chinese learning experience. There are some interesting findings in the background information results. Question 1 (Q.1) and Question 2 (Q.2) are both open-ended questions. For Q.1, students were asked to list all the Chinese-related classes they were enrolled in that semester. For Q.2, students were free to write any numbers of years or months to indicate the length of time (years and months) that they had been studying Chinese. In Table 12, the researcher organized the responses in different groups based on different courses and the length of time for Chinese study. Students' responses to Q.1 and Q.2 demonstrate that more than half of the participants were still in the early stage of learning

Chinese (less than one year). Moreover, the number of students decreases with the increase in the length of Chinese study. It means that there are fewer students enrolled in intermediate or advanced Chinese classes compared to the beginning class. There were two students who answered that they had studied Chinese for 20 years. According to their answers for Question 7, both of these two students were Chinese heritage learners.

In Table 12, it can be seen that in addition to regular Chinese language classes, eight students were enrolled in non-language classes (four students took Cross-culture Communication, three students took Intermediate Chinese Reading, and one took Traditional Chinese Literature in Translation). However, all the three courses have prerequisites; the students who want to take these courses must complete Chinese I and Chinese II or have intermediate Chinese language proficiency. It means that students who were enrolled in the upper-level courses mentioned above were not from the Chinese II class. Therefore, more than half (23 out of 37) of the participants who responded to the online survey were still novice Chinese learners.

As revealed in Question 3, (Q.3), in terms of gender, female students (54.1%) slightly outnumbered male students (45.9%). For Question 6 (Q.6), a few people (18.9%) answered that they had the experience of learning Chinese in other environments in addition to the current Chinese program. The most mentioned venue was high school, which was reported by four students. One student had the experience of doing study abroad in China, and one student mentioned he/she used technology-based measures to study Chinese, using some language-learning software.

Based on the results of Question 5 (Q.5), approximately half of the participants (43.3%) spent 6-10 hours studying Chinese, while one-third of students (11 out of 37) spent 10-15 hours,

and 21.6% people studied Chinese for almost 20 hours per week. Two students even reported that they spent more than 20 hours on Chinese every week. The results are awe-inspiring, given that students only have Chinese classes on four days every week, 50 minutes per class meeting. It indicates that students' independent study time is much longer than the time that they spend in class. Given that the length of study time can be considered as one kind of motivated behavior, it is an essential indicator of L2 motivation. Therefore, it can be seen that the participants are very motivated to learn Chinese.

Question 6 (Q.6) is a multiple-choice question that investigated the measures that the students used to learn Chinese. According to students' choices, taking formal Chinese language courses is still the most common way to study Chinese because 83.4% of students (31 of 37) selected this option. Students' second favorite method of studying Chinese is to take elective courses, 14 students (37.9%) also said that they took some after-school classes to study Chinese. Only seven students (18.9%) chose to study Chinese by seeking assistance from their family or friends. Thus, this result indicates that students still tend to rely on formal learning environments to study Chinese, such as classes taught by teachers. Informal learning environments, such as home-based independent study or learning from family/friends, are not the first choice for most Chinese learners.

Question 7 (Q.7) is an open-ended question to investigate if the students have any family members who speak Chinese at home. The data collected through Q.7 shows that for most of the participants (75.7%), Chinese is entirely a foreign language to them since they did not have the exposure to the Chinese language in their daily time except for Chinese classes. Two students did not respond to this question, and seven people (18.9%) indicated that either their family members such as their parent(s) or grandparent(s) speak or the people they lived with (roommates) spoke

Chinese. One student said, "… my parents met in Taiwan, and both lived in Qingdao for about 6 months each and Taiwan for about six months each. My mother mastered in Chinese, and my dad Majored in Chinese writing, I believe." More interestingly, another participant argued that though "nobody in my family [speaks Chinese], but my previous roommates were Chinese. We lived together for eight months and almost only communicated in Chinese and continue to help me when I have questions."

To conclude the findings based on quantitative data, most of the participants are non-heritage learners at the novice level. Female students slightly outnumbered male students. At least, the minimum amount of time they spent in learning Chinese is 10 hours every week, including both independent study and classroom learning. More than half of the students spent at least 15 hours in studying Chinese per week, and impressively, a few students study Chinese for 25 hours per week. Based on the time outside of class that the students spent studying, the conclusion can be drawn that the Chinese learners' motivation was high, and they were willing to take action and invest a good amount of time in learning Chinese.

Overview of The Qualitative Data

Before the recruitment for student participants was administrated, the researcher went to talk to all the instructors who taught the Chinese II course in the investigated program to find a volunteer to be the teacher participant in this study. One teacher agreed to be enrolled. That teacher had been teaching Chinese courses for more than five years by the time the data collection started. She received training in the performed culture pedagogy before she started working in the current Chinese program. Furthermore, the teacher participant was a teacher trainer who gave several training sessions in the performed culture pedagogy to other CFL

teachers. Therefore, she is very skilled and experienced in using this pedagogy in teaching Chinese courses. In this study, the pseudonym for this teacher participant is *Wang laoshi*, which is the Chinese expression meaning Teacher Wang.

At the end of the student participants' recruitment period, nine students came to the researcher to volunteer to be the focal participants for qualitative data collection. However, one student only did the first interview at the beginning of the semester but dropped out of the Chinese program in the fourth week. Therefore, the student was not considered to be a qualified participant for the current study, and her first interview data were excluded from the data sets. Among the other eight students who successfully completed the Chinese II course, six participants completed both two rounds of semi-structured interviews with the researcher. The other two students only completed the first interview but were not able to present for the second interview due to some personal reasons, so their data were not included for the final analysis. Only four out of the six students mentioned above had completed at least four biweekly reflection journals, while the other two participants only completed two or three journals. Therefore, finally, only the four participants' data were analyzed and discussed because they provided ample data to answer the research questions. The basic information of the four focal students is presented in Table 13.

All the names presented in Table 13 are pseudonyms created by the researcher to protect the participants' privacy. None of the participants are Chinese or heritage, Chinese learners. All the pseudonyms are Chinese names per the participants' requests. When the researcher gave the options to the participants to let them choose either Chinese or English names, they all said they preferred Chinese pseudonyms than English ones. They made this decision because they thought it would be "more interesting this way." (Su Mulin & Feng Tang). Moreover, all the participants

revealed that whenever they thought of Chinese or anything related to their Chinese learning experience, they wanted to make it as real as possible. As a result, they would rather be presented with Chinese pseudonyms. Three participants are between 20 to 25 years old, and one participant is between 30 to 35 years old. Among the four informants, only Feng Tang is a veteran who has the experience of serving in the army. None of the other three students had the same experience. At the time of data collection, He Xiao was a senior who graduated in Spring 2019. All the other three students were sophomores.

Table. 13. Information about the focal participants and the teacher participant

Name	Gender	Age range	Course enrolled	Reflection journals	Length of the interview recordings*	Classroom observation notes***
Su Mulin	Male	20-25	Chinese II	4	2 hour 12 mins	5
Feng Tang	Male	30-35	Chinese II	6	1 hour 52 mins	5
An Ruxin	Female	20-25	Chinese II	4	2 hours 26 mins	5
He Xiao	Female	20-25	Chinese II	5	1 hour 43 mins	5
Total	2 males 2 females	3 are 20-25 1 is 30-35	4 all in Chinese II	19	8 hours 13 mins	20 notes

At the aspect of the exposure and accessibility to Chinese, Feng Tang's parents traveled to China years ago and then stayed there for two years. They can speak some Chinese due to this experience. None of the other three students has any family members who can speak Chinese. He Xiao and Su Mulin both had some friends who are either Chinese native speakers or Chinese American young people who can speak Chinese. Therefore, they had the chance to practice the contents in class. However, An Ruxin is the only person who does not use any Chinese among her friends or family members.

As explained in the last chapter, all the focal students were recruited from the Chinese II course. None of them were enrolled in other classes offered in the Chinese program because they had not completed the prerequisites of those courses. In total, 19 reflection journals were written by the participants using Google doc. files. All the files were downloaded to the researcher's computer for further analysis. The researcher conducted two rounds of the interview with each focal student, and after the data collection was over, the total length of all participant interviews was six and a half hours and all the audio recordings were transcribed. Classroom observations were conducted with each student (six observations per student), and observation notes were taken by the researcher. In all, the researcher generated twenty-four classroom observation notes.

Qualitative Data Analysis.

In the following section, the three research questions are addressed, respectively. In order to maximize the merits of the mixed-method design of the current study, the researcher presented the results of both quantitative data analysis and qualitative data analysis to answer each question. The findings of two types of data were also merged and synthesized to seek the best answer to each question.

RQ1. What is the Relationship Between CFL Learners' L2 motivation (ideal, ought-to and anti-ought-to selves), Self-reported Learning Efforts, Mental imagery, and Perceived Usefulness of Classroom Activities?

Quantitative findings 1. The descriptive statistics and internal reliability of each investigated variable. The questionnaire contains four sections that target different investigated factors respectively. Before further tests were run, several reliability tests were conducted to

check the internal consistency of the items included in each section of the survey. Table 14 presents the Cronbach Alpha values and the descriptive statistics of each factor. Section A of the questionnaire has 30 items that were designed to measure students' CFL motivation regarding the three self-related motivators. Nine items were intended for the ideal L2 self, ten items were designed for the ought-to L2 self, and eleven items were used to capture the anti-ought-to L2 self (see Appendix A). The Cronbach's Alpha values for the three factors are .88 (ideal), .75 (ought-to) and .61 (the anti-ought-to L2 self). Wuensch (2006) pointed out that a number of published studies included variables with the Cronbach's Alpha values around .60. Plus, the number of the tested items also has an influence on the internal reliability test results. Generally, a factor which contains less than twelve items can yield lower Cronbach's Alpha values (Nunnally, 1978). Given these reflections from previous studies, the researcher considers the .61 is an acceptable reliability value and determined to include the variable of the anti-ought-to L2 self.

Among the three motivators, the ideal self is the strongest motivator among the three self-related factors (mean= 4.83). This result is consistent with previous studies, which showed that the ideal self is the most salient factor in L2MSS. The second strongest motivator is the anti-ought-to self (mean= 4.44). This ranking of three motivators is similar to the results of Liu and Thompson's study (2018) which also found the values of anti-ought-to self were smaller than ideal self but larger than ought-to-self. The ought-to self domain yielded the lowest score (mean = 3.10, range from 2.00 to 5.10), and this result is consistent trend reflected in many previous studies. Regarding the overall motivation, on a 6-point scale, the means of both ideal self and anti-ought-to self are more significant than the value of midpoint (3 points). This result indicates that these two self-related motivators have important influence on the students' overall Chinese

learning motivation. It means overall; the students are generally motivated to learn Chinese from these two aspects.

The question items included in Section B were intended for investigating students' self-reported efforts in learning Chinese. The descriptive statistics of this variable (mean= 5.02, range from 4.00 to 5.89 on a 6-point scale) revealed that all the students had done many endeavors in learning Chinese, and they also willing to make more efforts in learning Chinese. It reflects that the students in the current Chinese program had high commitments in Chinese study.

Table 14. The descriptive statistics and internal reliability of each variable

Variables	Cronbach Alpha	Mean	Min	Max	Standard Deviation
Section A Motivation					
Ideal self	.88	4.83	3.22	6.00	.77
Ought-to self	.75	3.10	2.00	5.10	.74
Anti-ought-to self	.61	4.44	3.27	5.82	.55
Section B					
Self-reported efforts for learning Chinese	.750	5.02	4.00	5.89	.28
Section C					
The readiness for using imagery	.873	4.69	2.20	6.00	.77
The vividness of mental imagery	.934	4.45	2.80	6.00	.86
Section D					
Perceived usefulness of class activities	.756	4.98	3.9	6.00	.71
	N=37				

Section C was designed to capture students' use of mental imagery in learning Chinese. It contains two aspects, the readiness of using imagery and the vividness of the mental imagery

related to the Chinese study. The internal reliability tests of each aspect were conducted, and the Cronbach Alpha values were .837 (readiness) and .934 (vividness). Based on the descriptive statistics, overall, the students already gained good readiness to use imagery (mean-readiness = 4.69 on a 6-point scale) if they need while learning Chinese. Moreover, when they needed to generate images in their minds, the images were very vivid rather than vague (mean-vividness= 4.45 out of 6 points). In conclusion, students in the current Chinese program were very skilled in involving and utilizing mental imagery ability as a strategy to facilitate their Chinese study.

The last part of the questionnaire is section D, which examined students' opinions on the usefulness of each type of activity that they did in daily Chinese class. The Cronbach Alpha value for this section is .756, which means the internal consistency of the question items used in this section is reliable. As displayed in table 13, Students' scores in this section ranged from 3.9 to 6.0, and the mean is 4.98. Therefore, not only the mean score but also the lowest score is larger than the midpoint on a 6-point scale. This result shows that all the students held positive points of view on the class activities in terms of usefulness for constructing images related to a Chinese study. They believed that these activities their teachers designed for them were very helpful for them to practice and enhance their mental imagery ability, which they could reply on while learning Chinese.

Among the listed seven different class activities, students found that the most useful strategy to help them to imagine the communication with Chinese people is "the use of visual aids (photos, pictures, ppts)" (mean=5.24 out of 6). The second most useful activity is "performing dialogues" (mean=5.23 out 6) followed by the activity of "oral interview" (mean=5.22 out of 6). In fact, the mean scores of these three items are very similar to the slight difference of only .01 points. As discussed above, overall, students reflected that all these

activities in class are very beneficial, even the last activity in the ranking (*making my own dialogues and performing it*) still yielded a high mean score, which is 4.73 out of 6. Table 15 presents the ranking of each specific class activities in terms of usefulness for imagining communication with Chinese native speakers or proficient users of Chinese.

Table 15. The mean scores of students' perceived usefulness of each class activity on helping them imagine communication with Chinese native speakers.

Ranking	Activity	Mean (out of 6)
1	Doing drills according to the visual prompts (photos, pictures, ppt)	5.24
2	Performing dialogues	5.23
3	Oral interview	5.22
4	Interpretation activity	5.16
5	The teacher uses various contexts and ask me to practice the sentence patterns and vocabulary	5.05
6	Tell stories from different people's perspectives in movie class	4.74
7	Make my own dialogues and perform them	4.73
	N=37	

In general, the findings in this section demonstrated that the participants in the current study had a favorable disposition of learning Chinese. It can be observed that overall, the participants had strong motivation based on the high mean scores of the ideal L2 self and the anti-ought-to self, along with an average mean score of the ought-to L2 self. They also had solid commitments and a positive attitude toward the tasks they did in Chinese classes. They were also ready to use mental imagery skills to produce very vivid imaged scenes of using Chinese. After displaying the descriptive statistics of the seven investigated factors, the next section will focus on discussing the inferential statistics of these factors to answer RQ 1. from the quantitative data.

Quantitative findings 2. the relationship between three self-related motivators and the other investigated factors: Pearson Correlation tests. Before the performance of further inferential statistical tests, the first step was to run normality tests to confirm the normal distribution of the data. The purpose to run the normality test is to make sure the data satisfied the assumptions to do the following parametric statistical tests (Pearson Correlation and Factorial ANOVA) which were used to answer the research questions in this study. Table 16 presents the results of normality tests for the data of all the seven factors included in the questionnaire. It shows the results of two goodness-of-fit tests, the Kolmogorov-Smirnov test, and the Shapiro-Wilk test. Based on the reported results, there is no p-value (the Sig. column) less than .50 value. Therefore, a conclusion can be drawn that the tested data were normally distributed. The assumption of data normality is satisfied.

Table 16. Normality Tests for all the seven factors

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
1. Ideal self	.110	37	.200*	.951	37	.105
2. Ought-to self	.128	37	.132	.918	37	.009
3. Anti-ought-to self	.105	37	.200*	.978	37	.659
4. Motivated behaviors & intended efforts	.109	37	.200*	.954	37	.128
5. Readiness for mental imagery	.082	37	.200*	.961	37	.223
6. Vividness of mental imagery	.094	37	.200*	.960	37	.199
7. Perceived Usefulness of Class Activities	.129	37	.122	.956	37	.145

*This is a lower bound of the true significance.
a. Lilliefors Significance Correction

In order to answer RQ1, multiple separate Pearson Correlation tests were performed between the seven factors. Table 17 presents the results yielded from all the correlation tests. In

addition to the values of the correlation coefficient (Pearson's *r*), the effect sizes (r^2) of each *r* were also calculated and reported in the table. It is important to consider effect size r^2 in correlation tests because it indicates how much variance is shared by the two correlated variables (Larson-Hall, 201). The magnitude of effect size shows the strength of the relationship between the two variables. This study applied the most commonly accepted standards by Cohen (1988) to define the magnitude of effect size. If r^2 falls between .1 and .3, it indicates the effect size of the correlation coefficient is small. If r^2 falls between .3 and .5, the effect size is medium. If r^2 is .5 or larger, the effect size is considered to be large.

First, the relationships between the three self-related motivators were carefully examined. The ought-to self was found to be positively correlated with the ideal self (r = .428, $p \leqslant .001$) with a small effect size (r^2 =.18). A positive correlation was also found between ought-to self and anti-ought-to self (r= .428, $p < .05$), and the effect size of this correlation is also small (r^2 =.26). This result indicates that the ought-to has positive linear relationships with both ideal self and anti-ought-to self. Interestingly, a significant correlation was not found between the ideal L2 self and anti-ought-to L2 self. This result is different from Liu and Thompson's (2018) study, which also investigated the relationship between these two motivators. Liu and Thompson (2018) found that for L1 Chinese English learners, their ideal self for learning English is positively correlated with their anti-ought- to self (r= .622, p< .001) with a small effect size (r^2 =.26). The discrepancy between the findings of the current study and Liu and Thompson's study is possibly due to the different social and cultural contexts where the two studies were carried out. The participants in the current studies grew up and were learning a foreign language (Chinese) in a westernized context. Compared to Eastern culture, which is considered to be collectivistic, western culture is more individualistic. Therefore, for students from Eastern culture, their anti-ought-to self might

need to rely on other psychological sources to establish, such as ideal-self other than the rebellion emotion for ought-to self. By contrast, learners from western culture might have a stronger and more independent anti-ought-to self. They rely on less psychological sources (such as ideal self) to construct their anti-ought-to self.

Table 17. Pearson correlation between the seven variables with reported Rs

Variables	2	3	4	5	6	7
1.Ideal self	.428**	.192	.582**	.448**	.390*	.313
2.Ought-to self	--	.518*	.318	.323	.375*	.365*
3.Anti-ought-to self		--	.248	.249	.243	.320
4. self-reported efforts in learning Chinese			--	.483*	.413*	.592**
5.Readiness for mental imagery				--	.856**	.543**
6.Vividness of mental imagery					--	.602**
7.Perceived Usefulness of Class Activities						--

N = 37

* $p < .05$
** $p \leqslant .001$

The reported efforts in learning Chinese are considered to be a criterion factor that can reflect how motivation might be transformed into actual learning efforts. To examine the relationship between learners' motivation and the self-reported efforts, three correlation tests were run between the three self-guides and this criterion factor. As reported in Table 16, a significant positive correlation was only found between two variables, the ideal L2 self and self-

reported efforts (r = .582, $p < .001$). The effect size of this correlation is medium (r^2 =.34). This result is consistent with Al-Shehri's study (2009), which investigated the relationship between the ideal L2 self and the motivated behaviors of Saudi English learners' motivation for learning English as a second language. Based on this finding, if learners' ideal Chinese selves get stronger, their efforts in learning tend to increase, too. No significant correlation was found between motivated behaviors and the other two self-related motivators, which are the ought-to self and the anti-ought-to self.

As regards the factor of mental imagery, significant positive correlations were also detected between the two aspects of mental imagery usage and the perceived usefulness of class activities ($r_{perceived\ usefulness,\ readiness}$ =. 543, $p < .001$; $r_{perceived\ usefulness,\ vividness}$ =. 602, $p < .001$). These two correlations both have medium effect size ($r^2_{perceived\ usefulness,\ readiness}$ = .29[1], $r^2_{perceived\ usefulness,\ readiness}$ = .36). Based on this result, a conclusion can be drawn that when students' have stronger belief in the usefulness of class activities, the vividness of their mental images in learning Chinese will increase, too. Meanwhile, they are also more prepared and skilled to use these mental images to facilitate their study.

In terms of the relationship between motivation and the use of mental imagery, a positive correlation was found between the ideal self and both of the two aspects of mental imagery. The correlation between the ideal self and readiness for using mental imagery has a medium effect size (r= .44, r^2 =.34, $p < .001$). The correlation between the ideal self and the vividness of the mental imagery has a small effect size (r= .390, r^2 =.15, $p < .05$). These results indicated that, in

[1] r^2 = .29 is in the small range of effect size (.1 to .3), but since it is very close .3 so this study still considered it as a medium effect size.

general, the ideal self is positively correlated with learners' use of mental imagery in learning Chinese. Meanwhile, a significant positive correlation was also found between the ought-to self and the vividness of mental imagery with a small effect size (r= .375, r^2 =.14, p< .05). In other words, the vividness of mental imagery was positively related to two self-related motivators (the ideal self and the ought-to self), while the readiness of mental imagery was only positively correlated with the ideal self. It indicates that students who have stronger ideal selves are like to be more prepared to use mental images to facilitate their Chinese learning. They also have better skills in generating clearer images that are related to a Chinese study. Students with stronger ought-to selves tend to be able to produce more vivid images due to the revealed positive correlation between these two variables. However, this group of students is unlikely to be ready to use this strategy. No significant correlation relationship was found between the third self-related motivator, the anti-ought-to self, and the use of L2 mental imagery. A possible explanation of this result can be that the anti-ought-to self probably does not rely on mental imagery.

When examining the relationship between non-motivation-related factors, several significant correlations were found through the statistical analysis. First, the factor self-reported efforts were found positively correlated with the readiness of using mental imagery (r= .483, p < .05) and vividness of mental imagery (r= .413, p< .05). The effect sizes for these two correlations are both small (r^2= .23; r^2= .17). This finding revealed that the participants perceived that there was a positive relationship between using mental imagery and making actual efforts in studying Chinese.

A positive correlation was found between the factor of perceived usefulness of class activities and self-reported efforts (r= .592, p < .001) and the effect size for the correlation is medium (r^2 = .35). It means that the students could see the connection between doing class activities and making actual efforts to study Chinese on their own. Students' perception of the class activities is also found to be positively correlated with the use of mental imagery for both of the two aspects, readiness of using mental imagery (r= .543, p ＜.001) and the vividness of mental imagery (r= .602, p ＜ .001) with medium effect sizes respectively (r^2= .30; r^2= .36)

Qualitative findings 1. The emerging ideal L2 self, ought-to L2 self, and anti-ought-to self of the focal participants. The findings of the quantitative data indicate that among the three self-related motivators, the ideal L2 self is the strongest construct (mean = 4.83) followed by anti-ought-to self (mean = 4.44). By contrast, the ought-to self is the weakest factor with a mean (mean = 3.10) much lower than the previously presented two selves. Another major finding is that, in general, participants had high motivation in learning Chinese. The qualitative data suggest a similar trend and results.

In the first coding cycle, by applying the structural coding method (Saldaña, 2015), the emerging themes and patterns were revealed through the coded vital words and meaningful units which were related to the factors of interest in this study. The results illustrate the characteristics of the participants' three self-related motivators, the efforts they made for learning Chinese, their use of mental imagery in Chinese classes, and their opinions of different kinds of class activities.

The Ideal L2 self of learning Chinese. In the first reflectional journal, question one was used to elicit the students to elaborate on their ideal Chinese selves (see Appendix E). To ensure

that they understand this concept and know how to write about it, the researcher also provided a step-by-step writing guide, including a writing sample under the question. In their responses, all four focal participants described their vivid and multifaceted ideal L2 selves via clear images and details. Their descriptions were only limited to general topics, but also include the specific tasks that they could do with using Chinese, such as "eating at restaurants, and getting to know anyone…" (He Xiao), or "touring a museum" (Su Mulin). There are two major types for these tasks, for personal interests and professional purposes. In terms of personal interests, every student said they could see that they would be able to use Chinese while traveling in China. One student even expressed that ideally, "I would be able to live in China without the assistance of anyone to communicate for me" (Feng Tang). He Xiao described in her second interview that she could imagine her ideal Chinese self as a person "eating at Chinese restaurants and talking to anyone" and "maybe could read the Chinese recipes and learn some cooking."

Regarding using Chinese at the professional base, as seen in the excerpts shown below, their intentions vary from some short-term goals such as obtaining Chinese Minor from the current Chinese program to long-run plans like doing business, politics, or international affairs.

Excerpt 1. (Su Mulin, reflectional journal 1)

> At the ideal level, I would also be able to engage in highly-nuanced situations like politics or business…I would like to reach out to the business owners who may not have been required to learn English and help them establish themselves on an international scale…

Excerpt 2. (An Ruxin, reflectional journal 1)

> In the ideal world, I would be able to communicate with proficient Chinese to native and non-native speakers. I hope to use this language in my future international career path… Additionally, I will have achieved my Chinese Minor requirements and will be continuing studying culture as well as language.

Excerpt 3. (An Ruixin, second interview, May 2017)

> I want to do, like, international stuff, so maybe, I don't know, for like the Department of Defense or CIA or something like that… they could take my psychology stuff and I so I could use it is like a good background for people in general... I could maybe be, like, work at their stations in China…

In addition to the theme of using Chinese in professional careers, interestingly, another strong and clear common theme across all four participants' journals is the "fluency" of using Chinese. To be fluent in Chinese is a crucial requirement to achieve their ideal Chinese selves. They expressed their wishes to "sound authentic" and use Chinese in communication "without Chinese speakers getting frustrated when I talk" (He Xiao). When they are in China, they "would be able to live there without the assistance of anyone to communicate" them (Feng Tang). This shared theme indicates that all the focal Chinese learners have high standards to define their ideal Chinese selves. Given that their Chinese proficiencies were all at novice level when data was collected, it is interesting to seek the possible sources that they drew from to construct the ideal Chinese selves. This issue will be elaborated and discussed in the discussion chapter.

Results from the interview data analysis also support the finding that students have clear and robust ideal Chinese selves. The ideal self is a significant motivator in their Chinese

motivation profile. More vivid details were provided to complete the images of the Chinese learners that they would like to be. “Food” is a strong common theme that emerged and stood out of all participants’ interviews. Two of them mentioned that food is a very important topic in their daily life. Su Mulin said he has many friends who are the 1.5- or second-generation kids of the immigrant families from China. He often talked to them and learned cooking from them. This experience was described in excerpt 4 disclosed below.

Excerpt 4. (Su Mulin, second interview, May 2017)

> Most of my Chinese friends cook, so I eat with them sometime. … We can talk about other things of course, but this is the first thing I can see myself using it every day ... This one is the one I will use a lot.

Similarly, He Xiao had a part-time job in a Chinese restaurant, so she had many colleagues who were native Chinese speakers. She said she practiced Chinese with them and made friends with them. Also, she has a lot of opportunities to eat Chinese food which she really likes. She said “the food is so good! … maybe I could read the Chinese recipes and learn some cooking…” (He Xiao, second interview, May 2017)

Reading and writing ability is another emerging theme that is crutial for students’ ideal Chinese selves. They all mention that their future Chinese-related jobs will require the mastery of reading and writing skills. Su Mulin argued that he would need to “write in that kind of job, like writing on sticky notes… or sign” (Su Mulin, second interview, May 2017). Although reading and writing Chinese characters are very tough, “you need to know that… because it’s not about hearing and saying, you have to read and write, the four aspects of communication” (Feng Tang, second interview, May 2017).

The ought-to L2 self of learning Chinese. As regards the ought-to self, students did not provide a good amount of reflections or descriptions. Three out of four participants (Feng Tang, He Xiao, and An Ruxin) provided some information related to the ought-to self-construct either in their reflectional journals or interview talks. In the data collected from Su Mulin, nothing was detected related to the ought-to self. However, compared to the data associated with the ideal L2 self, the domain of the revealed ought-to demonstrated more as dispersive paths rather than homogenous themes. These case-by-case differences are very interesting and significant to do further investigation.

In the reflectional journals, question 5 in reflectional journal 1 was designed to capture any responses related to the ought-to L2 self. The question is, "Do you feel any obligations to study Chinese? What kind of obligations? (e.g., pressure from family members, the influence of your friends, sense of responsibility to someone or society)." Feng Tang provided a very impressive response to this question.

Excerpt 5. (Feng Tang, reflectional journal 1.)

> I think our (US) society has become lost and is too self-consumed that they don't care about the rest of the world (for the most part). Learning Chinese will provide me a means to try and help US/Chinese relations in the future if I'm able to do so. China's rich history and traditions are something that fascinates me because it is something that has taught the world so much and has contributed to the evolution of technology, warfare, and self-improvement through discipline.

Because of his military experience, Feng Tang has strong sense of responsibilities for his country, his family, and even his class. The classroom observation data also revealed that Feng

Tang always helped with classroom management and discipline. As a result, his strong sense of responsibility is the source of his robust ought-to self in learning Chinese. In reflectional journal 2, he discussed this issue again and wrote the following comments:

Excerpt 6. (Feng Tang, reflectional journal 2)

> [This week,] I don't necessarily think any activity in class helped me imagine myself using Chinese in the future. I think the current affairs happening in the political arena reinforced my yearning to learn Chinese even more.

It is exciting to see that in this case, Feng Tang boosted his Chinese motivation not because of the class but due to the tense in the political relationship between the U.S. (his home country) and China (the country of the target language he is learning). This indicates that the ought-to self can play a significant role in influencing students' L2 learning when they do not have enough sources to draw to construct their ideal L2 self in their immediate learning environments.

Compared to Feng Tang, He Xiao's ought-to self is more related to her respect for the teachers. The following excerpts were selected from He Xiao's interview data. In excerpt 6, He Xiao talked about her respect to *Yang laoshi* (Teacher Yang), who was another instructor of Chinese II, which she took in that semester. Yang laoshi is a pseudonym used to protect the instructor's identity, who was not a teacher participant in the current study. She also said Yang laoshi was the reason why she had kept learning Chinese. In excerpt 6, she shared her happiness and excitement when she got any praise and approval from her teachers. She also talked about her desire to impress all her Chinese teachers and the concerns of disappointing them. *Wang*

laoshi (Teacher Wang) is the teacher participant in the current study. She is another instructor of the course Chinese II, who co-taught the class with Yang laoshi.

Excerpt 7. (He Xiao, first interview, February 2017)

> If it weren't for him (the instructor), I wouldn't be taking Chinese because …he made it like, so excited to learn. I think it would be a big difference if he weren't so charismatic…

Excerpt 8. (He Xiao, second interview, May 2017)

> In class, you want to do well, and you want to make your teacher proud of you… I really like it when they (the teachers) tell you a good job. It feels so good! Whenever he (Yang laoshi/Teacher Yang) says that it's really rewarding. It shows that he's proud of you. There was one time, only one time, when I practiced and practiced all night for my writing the characters, Wang laoshi (Teacher Wang) said it was *漂亮 (pretty)*. That was so nice because it shows my hard work paid off. That's why I'm motivated, like, to let them think we're smart…

It can be seen in the last two excerpts, He Xiao had a very vivid ought-to Chinese self, which she believes that a respected and charismatic teacher gave her power and enjoyment in learning this language. To get approval from her teachers is a powerful force for her to make efforts in studying Chinese. When the teacher gave her the approval for her efforts or achievement, she would be highly encouraged and motivated thus would be willing to spend more effort on learning Chinese.

The third student who talked about the ought-to-self-related topics was An Ruxin. As can be seen in excerpt 9, the first topic An Ruixin mentioned is the same as He Yan, which is the avoidance of disappointing her teachers.

Excerpt 9. (An Ruxin, reflectional journal 2)

> Feeling like I didn't do good enough or that I disappointed myself and my professors are one of the biggest challenges for me.

In addition to the pressure and anxiety of failing the professor she respected, in response to question 6 in reflectional journal 1, An Ruxin described that the initial reason that she chose to study Chinese was because of the influence form her family. She also mentioned another aspect of her ought-to self that she learned Chinese because it is part of the requirements for her to pursue her future career in international organizations.

Excerpt 10. (An Ruxin, reflectional journal 2)

> My family members pushed me into learning Chinese over Japanese because they insisted it would be a much more marketable language. I wanted to pursue a career in an international organization so I knew having a hard language would aid me in securing a position. At first, I was only interested in Japanese and was very adamant about learning Chinese. With added pressure, however, I decided to take up Chinese with Rosetta Stone. Personally, that platform only solidified my dislike for learning the language.

As directly pointed out in An Ruxin's description, the ought-to self might have some negative influence on the L2 study. Because she was forced by her parents to study Chinese instead of Japanese as her foreign language, she was not motivated to learn Chinese but even

disliked it. Negative experiences and failures with some technology-based learning methods even made her more demotivated. However, followed the selected excerpt displayed about, An Ruxin added a very interesting shift of her ought-to self that "when I enrolled in [this] Chinese program I grew to greatly enjoy learning the language."

The anti-ought-to L2 self in learning Chinese. Unlike the ought-to L2 self, which was discussed above, the anti-ought-to L2 self was revealed in a good amount of data. Every participant provided many details that revealed their anti-ought-to self in their Chinese learning process. The major theme across the qualitative data from all the participants is "challenge." To be more specific, there are two dimensions of students' perceptions about the challenge of learning Chinese. The first dimension is that in general, the participants realized the difficulties and challenges in learning Chinese. Moreover, they enjoy these challenges and also the sense of fulfillment in the learning process when achieving any success. The second dimension is the ambition to stand out from peers. The anti-ought-self concept also includes humans' initiative to be distinct and different. Multiple aspects of the participant's anti-ought-to selves revealed from these two dimensions.

In excerpts 11-14, the participants shared their experience of fighting to strive to learn Chinese as a major theme through their learning process.

Excerpt 11. (Su Mulin, second interview, May 2017)

> Chinese is an incredibly difficult language, and I don't think that there's ever a week where the thought of how much easier this semester would be without Chinese… It never makes me feel like giving up. I don't think the difficulty should be something that discourage you.

Excerpt 12. (Feng Tang, second interview, May 2017)

I think that, because it's challenging, and I enjoy it, I enjoy the challenge…

Excerpt 13. (An Ruxin, reflectional journal 2 and 3)

When I attend class feeling like I know more than I think I do and then leave realizing I didn't do as well as I hoped I often feel like giving up…This class is as equally difficult as it is rewarding. I'm striving for my minor and while I often feel like I should give up but I truly enjoy the language I'm learning!... Chinese takes a lot of devotion and effort and while it may be hard, I just have to keep up with it and make up for my mistakes in later classes.

Excerpt 14. (He Xiao, the second interview, May 2017)

I really like the class I do. It's a really hard class… Yeah. I love it (the class)! I wish everyone at this university could take it!

The excerpts above provided amazing features of the participants' anti-ought-to selves. All the people agreed, and repetitively mentioned some keywords like "challenging" or "difficult." On the one hand, all the participants were clearly aware of the hardship in learning Chinese because "Chinese takes a lot of devotion and effort" (An Ruxin). According to the qualitative data, nearly every participant mentioned that they really wanted to give up. On the other hand, the participants believed that "the difficulty shouldn't be something discourage you" (Su Mulin) They enjoyed the hardship and challenges, and more importantly, the sense of fulfillment when they had any success in learning this language. This enjoyment is the reason why they initially chose Chinese and the reason why they carried on despite the difficulties.

Therefore, no one ever considered giving up as an option for their Chinese learning. Excerpts 15 to 17 are the representative examples of this determination.

Excerpt 15. (Su Mulin, reflectional journal 2)

> It's genuinely frustrating not to be able to recreate the sound correctly, but I will never give up. Knowledge of the progress that I've made and understanding that fluency is a very long journey helps me to keep going.

Excerpt 16. (He Xiao, reflectional journal 4)

> The biggest challenge is learning the different measure words and grammar. Sometimes, I do not understand grammar. I keep on going because I do not want to quit that easy.

Excerpt 17. (Feng Tang, reflectional journal 4)

> For me, the toughest part is time management and memorizing the amount of content. But I don't think anything in this class would discourage me from continuing learning Chinese.

Another dimension of the anti-ought-to L2 self is that people want to be different and stand out from their peers. This dimension was also revealed from the qualitative data. In excerpts 18 and 19, Feng Tang expressed his ambition to be one of the few Americans who can master Chinese.

Excerpt 18. (Feng Tang, second interview, Many, 2017)

Maybe there's not a whole lot of people who do speak it in America. I mean there are a lot of people who probably speak it but not…maybe not enough actual white Americans don't speak, maybe not enough.

Excerpt 19. (Feng Tang, reflectional journal 3)

> I want to become proficient at Chinese because I think it is a critical skill to have as an American, seeing how very few Americans can speak Chinese or any other language for that matter.

Similarly, An Ruxin also mentioned this dimension of the motivation, which is the urge to be prominent in her environment. She described her family's reaction to her Chinese study. She said that she practiced speaking Chinese at home some time, and her family thought it very interesting. However, her parents could not speak Chinese and she ended up teaching them what they should say. She was proud of that. In excerpt 19, An Ruxin shared one story that her family tried to learn from her when she was practicing how to ask a friend what he/she wants to eat.

Excerpt 20. (An Ruxin, second interview, May 2017)

> They (her parents) think it's really cool (that she studies Chinese)... The only Chinese they could speak is *Xièxiè* (thanks). Sometimes I randomly speak Chinese at home…they tried to imitate but they could only say *Xièxiè Xièxiè* (thanks, thanks). And I was like, no, that's not what I was saying. You should say*: Nǐ xiǎng chī shénme?* (What do you what to eat?)

To sum up, the findings of qualitative data suggest that the participants have vivid and robust motivation in terms of ideal L2 self and anti-ought-to L2 self. The two motivators also emerged in different aspects and presented different dimensions. The construct of the ought-to L2 was also revealed from the qualitative data. However, it is nonetheless weaker and discursive compared to the other two self-related factors. These results presented a similar trend revealed from the quantitative data and confirmed the findings in quantitative data as well.

Qualitative findings 2. Intertwined and dynamic: the interactions between the three Chinese motivational selves. Basing on the findings in both quantitative statistical analysis and pattern analysis across all the focal participants' qualitative data, the three self-related motivators stood out to be concrete, strong and multidimensional constructs in the Chinese learners' motivation profiles. The referential statistical tests yielded the significant positive correlations between the ideal self and the ought-to-self, and between the ought-to self and the anti-ought-to self, respectively. In this section, the author further investigated the interaction among these factors by examining the qualitative data collected from the four focal students.

The interaction between the ideal L2 self and the anti-ought-to L2 self. In the last section of the findings of quantitative data, the significant correlation between the ideal L2 self and the anti-ought-to self was not found in the Pearson correlation test. Nonetheless, the interaction between these two motivators did emerge from qualitative data analysis. In both interview data and students' reflectional journals, the participants shared the motivation of their true desire to learn Chinese and their desire for taking challenges. In some excerpts, these two dimensions of motivation were found entwined as an important synthesized part of the participants' Chinese motivation system.

In the following pages, the focal participants described their experience closely related to different activities they did in the Chinese classes they took. To avoid confusion, it is necessary to revisit of the activities they mentioned. First, in class, one of the most important teaching practices conducted by the instructors of the current Chinese program is to *provide corrective feedback* on students' tones and pronunciation. In most cases, the instructor will point out the errors in students' speech, model the correct forms, and then let the students imitate and repeat for several times to make sure they can acquire the correct tones or pronunciations. Second, the format of the mid-term quiz in the current semester is a proficiency-based *oral interview*. In the oral interview, the instructor provides the pre-designed contexts and roles of several conversations and communications which take place in China. The students need to play one role in each scenario and respond to the instructor's questions according to the assigned role to fulfill different communicative tasks. It is a highly demanding activity for the students because all the learned contents were merged together.

Excerpt 21. (He Xiao, second interview, May 2017)

> She (the teacher) was good at correcting us. When I was trying to speak English, she just said*: Bùyào shuō yīngyǔ! (Don't speak English!)*. She got it so immediately! And whenever people got the pronunciation wrong, she would always correct it. Sometimes, she got really serious about emphasizing pronunciation. But I know it may be because a Chinese person wouldn't be able to understand it [if I pronounce it wrong] … I mean, sometimes I don't want to go to class. I guess I didn't like it that much, but it's necessary. I think we should be corrected. I like it.

He Xiao shared her experience of being corrected by her teacher when she was in Chinese I. It was her first semester of learning Chinese, and her teacher gave a good amount of correct feedback on her tones and pronunciations. He Xiao felt a lot of stress and even didn't "want to go to class sometimes." However, this hard feeling did not stop her from studying Chinese but finally triggered her courage and strong anti-ought-to-self to embrace the challenge when she said, "I think I should be corrected. I like it."

The reason that He Xiao could reconstruct the feeling of hardship into the motivation to willingly accept the corrections on her pronunciations is that she could understand the significance of the feedback. This understanding rooted in her expectation of the future scenarios of using Chinese in real contexts. In the last section, it could be seen that she was able to clearly describe her ideal Chinese self as a fluent Chinese learner traveling China, so she could also visualize the scenarios of communicating with Chinese speakers. She could imagine that if she had the wrong pronunciations or tones in her speech, "a Chinese person wouldn't be able to understand it." Therefore, she realized that "we should be corrected," and the instructor's feedback is helpful because "it's necessary."

He Xiao's experience revealed that the ideal L2 self could provide powerful mental support for the learners to generate or reconstruct it to anti-ought-to self, which will urge them to accept and overcome the difficulties they experience in L2 learning. In this way, when she encountered challenges in learning Chinese, her reaction to the difficult situations was transformed from negative recoil (not want to go to the class) to acceptance and positive learning behaviors (the correction is necessary, and she liked it).

The same trend also emerged in Su Mulin's reflections and interview data. The third question of the third reflectional journal is, "How do you feel about the oral interview? Are you satisfied with your performance? Why or why not? Do you feel it's real? How helpful is it for you to complete the image of your "ideal Chinese self"? Su Mulin responded to this question as below:

Excerpt 22. (Su Mulin, reflectional journal 3)

> I am completely appalled by my own performance: I was unable to do much in the first part of the interview… For me, being unable to perform in such a large portion of the interview is unacceptable, as those are the contexts that we will constantly be put into if I were to be in China on my own, where I have a need/objective and need to think fast and be articulate.

Obviously, it can be seen that Su Mulin demonstrated very strong both ideal L2 self (can image the situations that would happen when he uses Chinese) and the anti-ought-to L2 self (could not accept his unsatisfactory performance in a very challenging task). One possible reason why he could not accept his performance might be his awareness of the importance of the Chinese skills tested in the oral interview. His strong ideal Chinese self provided him the awareness that these skills are crucial for him to survive in China.

In the follow-up interview, the author sought to obtain more in-depth information and explanation about Su Mullin's response. In the following disclosed interview excerpts, Su Mulin shared more details about his Chinese motivation in doing the oral interview activity.

Excerpt 23. (Su Mulin, second interview, May 2017)

Interviewer (the researcher): You mentioned in your journal that the oral interview is very helpful, but also you felt it's very challenging. Can you give me more information about that?

Su Mulin: Absolutely. I think it's important to get scenarios [together] and being able to synthesize all kinds of, I mean, more than just one or two grammar. I want to do more! We have to just do more than just one or two scenarios. Because I felt that is one of my weaknesses and I really need to do something. In one context, we can talk about a couple of things. And when something else comes out, it's hard to change between the grammar… Practicing that is very important, and the oral interview is a good way to do it. I really like it. It's more than a test. It is like a real-life conversation.

In the interview disclosed above, Su Mulin provided more details about his experience of doing an oral interview, which is a very difficult task for the course. He kept monitoring his study and was aware of his weakness in synthesizing different expressions and grammar in complex contexts. Due to his strong anti-ought-to self, he was determined to tackle this problem by doing more harder practices such as the oral interview. Meanwhile, he had the motivation of not viewing the oral interview as a test which is a stressful event and only takes place in an artificial context. Instead, he viewed it as "a real-like conversation" because of his ability to imagine the real scenarios of using Chinese. This ability reflects his concrete and strong ideal L2 self. Su Mulin's shared experience of participating in the oral interview revealed the robust interaction between his ideal L2 self and the anti-ought-to self. The result of this interaction is

that he could generate the passion and positive attitude to do more challenging tasks in the future.

An Ruxin also shared her frustration and motivation in her experience of doing the oral interview in excerpt 24 as below.

Excerpt 24. (An Ruxin, reflectional journal 3)

> At the end of the interview, I felt really awful because…I was super nervous, and even though I thought I was well prepared, I still didn't perform up to my own standards. I feel like this interview technique is both helpful and hindering. Obviously, I realize the situation cannot be improved for those whose performance suffers under intense pressure…That said, the fact that it was a high-pressure interview would more accurately simulate a real-world situation, and this is helpful… I believe this is a challenge I have to work on to overcome if I wish ever to become my "ideal Chinese self."

This excerpt clearly revealed that An Ruxins motivation is a complex synthesis as the result of the dynamic interaction of her ideal Chinese self and the anti-ought-to Chinese self. First, she had high standards for her performance due to her strong anti-ought-to self, which urges her to behave well in difficult tasks. For her, the oral interview test "is both helpful and hindering." It is hindering because she experienced a lot of "intense pressure" and was "super nervous." However, still, she knew this task is very helpful because the oral interview can "accurately simulate a real-world situation," which she could encounter in the future when she uses Chinese to communicate with Chinese speakers. This expectation and imagination reflect her strong ideal L2 self. Thus she was determined to accept the challenge because it is necessary

for her to "become my (her) ideal Chinese self." At this dimension, An Ruxin's anti-ought-to Chinese self (positive attitude to the difficulties and stress) was generated and nourished by her ideal Chinese self. She wanted to overcome the challenges and obstacles she faced in the oral interview was because of her strong desire to achieve her ideal L2 self.

The interaction between the ideal L2 self and the ought-to L2 self. According to the Pearson correlation tests, the ideal L2 self was found to be positively correlated with the ought-to L2 self. This means these two motivators change in the same direction. Students who have a strong idea of L2 self will tend to demonstrate strong ought-to L2 self, and vise vice versa. In the qualitative data, the interaction between the ideal L2 self and the ought-to L2 self also emerged from the participants' comments and refelctions. A major theme is a considerable influence from their teacher Yang laoshi (Teacher Yang), who is an American English native speaker but achieved advanced Chinese proficiency. As presented in excerpt 7 and 8, He Xiao stated that the reason she took the Chinese courses was because of her respect for Yang laoshi. This strong respect urged her to make more efforts to study (such as "practiced and practiced all night for writing the characters") to get his approval. However, even this is He Xiao's initial motivation to study Chinese; she also developed the ability to imagine her ideal Chinese self through learning from her teacher. This motivation reconstruction process can be seen from the following excerpt.

Excerpt 25. (He Xiao, second interview, May 2017)

In the beginning, before a drill starts, he (Teacher Yang) will always, like, pull two chairs together and says *Hé xiāo, nǐ lái* (He Xiao, come here). Or he will pick others to model the drill with him. So, you know, like what's going on first. So, there's like the situation

that was set, and then I was like *Ó dǒngle dǒngle* (*Oh, I got it*). That helps, and I'm like, okay oh that's the situation, and I can see!

An Ruixin also shared this dimension of her Chinese motivation, which was a synthesis of the entwined ought-to L2 self and ideal L2 self. In excerpt 9, An Ruxin expressed her "biggest challenge" was to disappoint herself and her teachers. Therefore, she felt the obligation of learning Chinese because her respected people (her teachers) expected her to be successful in learning Chinese. As presented in the following excerpt (excerpt 26), An Ruxin considered her teacher (Teacher Yang) as her *role model* to learn Chinese because he can speak Chinese as a native speaker. The great achievement of the teacher gives her the ability to imagine her possible future self aa a superior Chinese learner just as her teacher. The power of the role model (Lockwood and Kunda, 1999) and An Ruxin's strong motivation in pursuing a high level in Chinese proficiency (I wanna be him!) come from the interaction between her ought-to L2 self and ideal L2 self.

Excerpt 26. (An Ruxin, second interview, May 2017)

I wanna be Yang laoshi (Teacher Yang). Not like a laoshi (teacher), but I want to be like him like he's very cool. He is my role model. He's cool, he's an American guy, and he speaks fluent Chinese like, if you didn't see him you'd think he's a Chinese person. He's so cool, and I wanna be him!

To conclude, based on the qualitative findings, the participants' ideal L2 self and their anti-ought-to self are entwined. This finding is a newly emerging theme that was not captured in the inferential statistical analysis of the quantitative data. In this aspect, this result is consistent with the quantitative result in Liu and Thompson's study (2018) that the ideal L2 self and the

anti-ought-to L2 self are positively correlated. Second, the interaction and correlation between the ought-to L2 self and the ideal L2 self were also found, and this confirms the result of the Pearson correlation test for these two motivators. However, although the quantitative findings indicate that there is a significant positive correlation between ought-to L2 self and anti-ought-to L2 self, the same result was not revealed from the qualitative data.

RQ2. Is There Any Impact of CFL Learners' Mental Imagery on Their L2 Motivation and Self-reported Efforts for Learning Chinese?

Findings in quantitative data: the results of factorial ANOVA tests. To answer this RQ, students' three self-related motivators and self-reported efforts to learn Chinese are used as two dependent variables, respectively. In the current study, students' mental imagery was operationalized as two dimensions, the readiness of using mental imagery and the vividness of using mental imagery. Therefore, the readiness and vividness were used as two dependent factors. One 2X2 factorial ANOVA test was performed to investigate the impact (if any) of the factor of "mental imagery" (readiness and vividness) upon each dependent factor (the ideal L2 self, the ought-to- L2 self, the anti-ought-to self and the self-reported efforts to learn).

Before the factorial ANOVA tests were performed, each independent variable (the vividness and the readiness) needed to be examined and divided into two levels (High Group and Low Group). First, the author ran a frequency test on readiness values to get the splitting point to create two balanced groups for this variable. For the same purpose, the same test was performed on the variable of vividness. Table 18 reported the results of the frequency check and the cumulative percentage of the vividness values and readiness values.

Table 18. The Frequency Check and Cumulative Percentage of Vividness and Readiness of Mental Imagery

Readiness				Vividness			
score	Frequency	Cumulative Percentage	Mean	score	Frequency	Cumulative Percentage	Mean
2.20	1	2.7	4.69	2.80	1	2.7	4.48
3.20	2	8.1		3.00	2	8.1	
3.40	1	10.8		3.20	2	13.5	
3.80	2	16.2		3.40	3	21.6	
4.00	2	21.6		3.60	1	24.3	
4.20	4	32.4		3.80	2	29.7	
4.40	2	37.8		4.20	4	40.5	
4.60	4	48.6		4.40	3	48.6	
4.80	4	59.5		4.60	3	56.8	
5.00	2	64.9		4.75	1	59.5	
5.20	3	73.0		4.80	3	67.6	
5.40	2	78.4		5.00	2	73.0	
5.60	4	89.2		5.20	2	78.4	
5.80	1	91.9		5.40	3	86.5	
6.00	3	100.0		5.60	1	89.2	
				6.00	4	100.0	
	N=37						

The result showed that the splitting point value of the readiness is 4.6. Up to this value, the accumulative percentage of the observations is 48.6%. The number of observations at this cutting point is 18. The mean of the readiness is 4.69, which is similar and consistent with the value of the splitting point to divide the participants into two balanced groups. Therefore, the value of 4.6 was selected to be the cutting point for grouping the data. The values lower than 4.6 were recorded into the “Low Readiness Group” (n = 18), while the values larger than 4.6 were placed in “High Readiness Group” (n = 19). After that, the same grouping method was applied to separate the data of the Vividness of Mental Imagery into two balanced groups: the “Low Vividness Group” (values lower than or equal to 4.4, n = 19) and the “High Vividness Group”

(values larger than 4.4, n = 18). All these results were reported in Table 19. The descriptive statistics of each dependent factors were reported in Table 20. First, the researcher discusses the results of the impact of using mental imagery on the learners' Chinese motivation. Second, the findings of the impact of using mental imagery on learners' self-reported efforts are reported.

Table 19. Groups of Readiness and Vividness

Factor	Mean	Splitting Value	Accumulative Percentage at this value	Number of observations
The readiness of Mental Imagery	4.69	4.6	48.6%	Low group: 18 High group: 19
The vividness of Mental Imagery	4.48	4.4	48.6%	Low group: 19 High Group: 18
	N=37			

Table 20. The Descriptive Statistics of the Independent Factors for Mental Imagery Groups.

	Ideal L2 self		Ought-to self		Anti-ought-to self		Self-reported efforts	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Low Readiness	4.49	.67	2.89	.48	4.33	.50	4.71	.39
High Readiness	5.15	.72	3.31	.88	4.54	.59	5.32	.47
Low Vividness	4.62	.81	2.95	.59	4.35	.48	4.78	.45
High Vividness	5.02	.71	3.25	.84	4.52	.61	5.25	.50
	N=37							

The impact of using mental imagery on the learners' L2 motivation.

To investigate the effect of imagery on the L2 motivation, first, a 2X2 factorial ANOVA test was performed using the ideal L2 self as the dependent variable and the mental imagery (readiness and vividness) as the grouping variables. Then another two similar 2x2 ANOVA tests were performed to investigate the impact of the mental imagery (the readiness and the vividness) on the other two self-guides (the ought-to L2 self and the anti-ought-to L2 self). The results of the four 2x2 two-way ANOVA tests were reported in table 21. As can be seen in table 21, the readiness has statistically significant main effect on the ideal L2 self (*F [1, 33] = 4.96, p = .03*) with a small effect size (η^2 = 1.3). It means that a significant difference in the ideal L2 self was found between High Readiness Group and Low Readiness Group. Therefore, this result indicates that the students who are readier and more prepared to use mental imagery have a stronger ideal L2 self (M_{ideal} =5.15, SD= .72) compared to their peers from the Low Readiness group (M_{ideal} =4.49, SD = .67). Given the ideal L2 self is always found to be the most salient and the stronger component in the L2MSS, we can also conclude that students who have higher readiness for using mental imagery tend to have stronger Chinese motivation. However, according to the results displayed in Table 21, no statistically significant main effect was found of the readiness upon neither the ought-to L2 self nor the anti-ought-to L2 self. Therefore, even some students are readier to use the mental imagery in learning Chinese while the others are not, no significant difference was detected in their ought-to Chinese self or their anti-ought-to Chinese self.

On the dimension of the vividness of using metal imagery, no significant main effect was found of this factor upon all the three self-related motivators (for ideal: *F [1, 33] = .10, p = .76;* for ought-to*: F [1, 33] = .18, p = .67;* for anti-ought-to*: F [1, 33] = .07, p = .792*). As well, no interaction effect of the readiness and the vividness was found significant for the L2 motivation.

This result indicates that the readiness of using mental imagery is an influential factor for students' ideal L2 self but not for neither their ought-to L2 self nor anti-ought-to self. By contrast, the vividness of mental imagery might not be a strong factor that has an influence or impact on students' L2 motivation.

The impact of using mental imagery on the learners' self-reported efforts. The main effect for the readiness of using mental imagery was also found to be statistically significant upon students' self-reported efforts (F (1, 33) = 8.24, p = .007). The effect size of this main effect is also small (η^2 = 2). The result indicates that the students who are more ready and prepared to use the mental imagery in their L2 learning ($M_{efforts}$ = 5.32, SD=.47) will make more efforts in the study when compared to their peers who are less skilled of applying this technique ($M_{efforts}$ = 4.71, SD=.39). On the other hand, no significant effect of the vividness of using mental imagery upon students' efforts spent to learn Chinese. It means that while the readiness of using mental imagery is an important, influential factor for students to spend more effort to study Chinese, their ability to generate vivid images has no crucial impact on their decisions to take actions in learning. Moreover, as reported in table 21, when the readiness and the vividness were considered together, no significant interaction effect was found upon students' self-reported efforts. It means that the vividness of using mental imagery might not be an influential factor in students' actions of making efforts in L2 learning.

In conclusion, students' mental imagery has significant influences on students' Chinese motivation and their decisions to make efforts to learn Chinese. Students who are more ready and more skilled in applying mental imagery related to Chinese study will generate stronger motivation (ideal self) and spend more effort on learning Chinese. However, interestingly,

students with different levels of the vividness of mental imagery have no significant difference in their motivation and actions in learning Chinese.

Table 21. Factorial ANOVA results for three self-related motivators and the intended efforts

Source	Dependent Variable	df	p	η2	F
Vividness	Ideal L2 self	1	.909	.000	.013
	Ought L2 self	1	.736	.003	.116
	anti-ought-to L2 self	1	.736	.004	.116
	Self-reported Efforts	1	.269	.037	1.262
Readiness	Ideal L2 self	1	.033	.131	4.961
	Ought L2 self	1	.232	.043	1.484
	anti-ought-to L2 self	1	.469	.016	.536
	Self-reported Efforts	1	.007	.200	8.241
Vividness * Readiness	Ideal L2 self	1	.756	.003	.098
	Ought L2 self	1	.673	.005	.181
	anti-ought-to L2 self	1	.792	.002	.070
	Self-reported Efforts	1	.229	.044	1.501
N=37					

a. R Squared = .192 (Adjusted R Squared = .118)

b. R Squared = .089 (Adjusted R Squared = .006)

c. R Squared = .042 (Adjusted R Squared = -.045)

d. R Squared = .390 (Adjusted R Squared = .334)

Qualitative findings: the teacher' use of images in the teaching practice can enhance L2 learners' mental imagery to imagine using Chinese in the future; thus, the ideal L2 self.

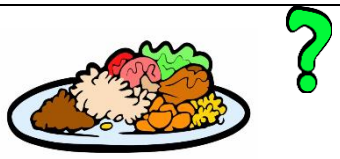
The ideal L2 self is conceptualized as the true desire of learning and using the L2. It is closely

related to L2 learners' ability to imagine using L2 in the future. Through the classroom observations, the author noted down the different methods in the participant teacher' teaching practice to help the students develop their ability to imagine the real scenarios of using Chinese someday. A primary strategy is that the teachers use a variety of images, such as pictures and symbols, in her teaching materials. The sample pictures that appeared in this section were produced based on the pictures used by the participant teacher in classes. These images play important roles in all kinds of class activities. Table 22 lists the descriptions of two major functions of the images used in the top two useful activities. Through using the images in different ways, the teacher could help the students to enhance their abilities to use their imagination. Since the primary use of the images was detected in these two kinds of activities, to answer the RQ.2, which investigates the impact of mental images on the learners' Chinese study, the author focused on discussing activity 1 and 2 instead of all types of class activities. The effectiveness of other types of activities will be discussed in the next section to address the RQ.3.

Table 22 also includes the sample images used by the teaches for each type of class activity. Due to the issue of the copyright, the images presented in Table 22 are not the original pictures used in the participant teacher' teaching materials. These sample images are either obtained from the online sources which provide copyright-free images (such as figure 3, 4 and 6) or reproduced by the author (Figure 5). Sources or the figures are provided under the images. As presented in Table 22, there are two major functions that the images were used by the teacher in class activities. In activity 1, the images were used as the prompts to elicit the students to give oral responses by using the target grammar and vocabulary. In activity 2, the teacher used images as the background environment about where and when the dialogue happened to set the contexts of the dialogues and communications. In the following part, the author will discuss the effects of

using images on students' mental imagery and ideal L2 self separately according to these two functions.

Table 22. Major types of class activities and sample visuals used as the prompts

Types of class activities	Sample questions or tasks	How the teacher used the visuals & probes	Sample visuals used as task prompts
Activity 1. Drills practice for sentence structures, vocabulary, and grammar.	Question: 你把饭吃完了吗? (*Nǐ bǎ fàn chī wánle ma? /Have you finished the meal?)* Answer: 我把饭吃完了。(*Wǒ bǎ fàn chī wán le./I have finished the meal.)* The students need to respond to the teacher's/peers' questions by using visual prompts provided by the teacher.	The teacher projected images containing the theme topic and target vocabulary to elicit the student to speak the target structure. The teacher randomly used one of two types of images: a picture of an empty bowl (Figure 4), or a tick which means affirmative answer (Figure 5).	 **Figue 3.** Sample Image 1. Source : https://www.vippng.com/preview/bmoTTo_svg-royalty-free-stock-dinner-plate-clipart-plate/  **Figure 4.** Sample Image 2. Source : http://www.freeimages.co.uk/galleries/home/diningroom/slides/breakfast_bowl.htm  **Figure 5.** Sample Image 3 Source: the author
Activity 2. Dialogue performance	The students need to perform the dialogue between a passenger and the taxi driver	The teacher placed two chairs in a line in front of the classroom and then project a picture of taxi on the screen	 **Figure 6**. Source: http://clipart-library.com/clipart/82469.htm

Function 1, images were used as the prompts in drills to elicit the students to produce the target grammar structures and vocabulary. When the teachers used drills to help students practice the target forms, they used images to provide the information of the contents to elicit students' production. The teachers used different types of images, either more realistic pictures of the real objects (see Figures 3 and 4) to trigger the use of imagery, or more straightforward images to give the information directly (see Figure 5 which implies "affirmative/yes"). For example, Figures 3, 4 and 5 displayed in table 22 were used to help the students to learn and practice a very common structure in Chinese, 把字句 (the Bǎ zìjù/ Bǎ sentence). This structure is very commonly used in native Chinese speakers' speech, but L1 English speakers always find it is very difficult to learn because the word order in this structure violates the regular word order of Chinese sentences. Therefore, many learners would avoid using this structure. A main purpose of the Chinese speakers to use this structure is to emphasizes the influence or the result of an action. In the class, the teacher participant used Figures 3, 4 and 5 to highlight the information of the context: the influence and result of the action "eating". In this way, the teacher guided the students' attention to use imagery skill to notice that the target form 把字句 (Bǎ zìjù/ the Bǎ sentence) is essential here. The target conversation of this practice is:

Question: 你把饭吃完了吗? (*Nǐ bǎ fàn chī wánliǎo ma?/Have you finished the meal?)*

Response: 我把饭吃完了。(*Wǒ bǎ fàn chī wánliǎo./ I have finished the meal.)*

First, the teacher projected Figure 3 (a plate of foods). to provide the information that the topic of the conversation was about eating a meal. A question mark was also included here because the teacher intended to test if the students know how to form the question containing 把字句 (Bǎ zìjù/ the Bǎ sentence). She randomly asked one student to say the question. Then the

teacher showed Figures 4 or 5 to provide the information that the meal was finished. After that, she called another student to form the answer question using 把字句 (Bǎ zìjù/ the Bǎ sentence).

It is interesting that the teachers used two types of images to elicit the response, either a realistic image of an empty bowl (Figure 4) or a more direct image as a checkmark (Figure 5), which means "affirmative." The teachers used these two different kinds of images, alternatively in different practices and classes. There came the question that which type of the images did the students find more helpful for them to use their imagery. However, most focal student participants did not mention any difference in the effects of seeing these pictures on their imagery of using Chinese language in their mind, but Feng Tang mentioned a very interesting opinion, which is presented in excerpt 27.

Excerpt 27. (Feng Tang, the second interview, May 2017)

> Sometimes it felt like I was very dependent on those pictures, you know, like, I remember it because of the picture, which is, I guess, is good in a way just because then it made it easier to learn it.

It is interesting because the teacher participant explained that the reason for using pictures as the prompts, instead of the texts, was to help the students avoid doing the L1 to L2 translation when they speak the L2 (Chinese). Based on Feng Tang's reflection, this goal was achieved. However, the situation pointed out by Feng Tang also revealed that teachers need to be aware that the use of this strategy might lead the students develop a bit of over-relying on the visual aids.

In the second interview, the researcher asked the students' preferences for the different types of images used in class activity 1. The following disclosed interview excerpts revealed that

the focal participants' preferences of the two types of images are not consistent. Su Mulin and He Xiao stated that they preferred the bowl better because it helps the students "subconsciously make association" (Su Mulin, second interview, May 2017) and "it's more real like you can see you have finished the meal" (He Xiao, second interview, May 2017). However, Feng Tang and An Ruixin said they would rather see the combination of the two types of pictures.

Excerpt 28. (An Ruxin, Second interview, May 2017)

> Honestly, I'd like to see them both, but I really like the resulting pictures (the bowl). It was just like that it's finished…I like both of them together will be ideal... You can see, like, yeah, I did that. That's my bowl. *我吃完了*(*I have finished my meal*). And you can repeat the question better with the picture… with the empty bowl, you will remember.

Excerpt. 29. (Feng Tang, second interview, May 2017)

> I like them both… the pictures (like the bowl) give association, and it triggered the sense. But sometimes it felt like I was very dependent on those pictures, you know, like, I only remember it because of the picture… when you take the picture away, I was like, "what was the sentence?" It's good! It's more challenging. It's comfortable for me to see the pictures, but it's more beneficial to me to learn the language.

A keyword that repeatedly appeared in all the four participants' data is "associate" or "association." It means that the learners have the awareness, readiness, and ability to use the mental imagery skills in using Chinese. However, their uses of mental imagery differ in the ways of how they use it. For students like An Ruxin and Feng Tang, they more rely on the images to produce the target linguistic structures. On the contrary, Sun Mulin and He Xiao just considered the images as the aids to help them visualize the contexts and enhance the sense of the reality of

the drills. Both two kinds of perceptions revealed that the ability and readiness of using mental imagery is a critical factor that can significantly influence the students' Chinese learning process.

For the purpose of using images as prompts to elicit students to produce responses in Chinese, the teachers also used some other images which are not displayed in this paper. The images include but are not limited to the pictures and symbols of:

1) Objects such as Coke Cola Cans with English texts OR Coke Cola Cans with Chinese texts,

2) People such as Chinse teachers OR American teachers,

3) Locations such as American banks/post offices, Chinese banks/post offices OR cartoon banks/post offices.

The focal participants' perceptions of these three styles of images are consistent. All the focal students said they prefer the images of the objects (such as Coke Cola cans) with Chinese texts on it. They have the same opinions on the images of the locations. However, no participant expressed their preferences on a particular type of images of people, such as Chinese teachers or American teachers. What they focus more on is the information related to the Chinese language, and anything can help them to imagine the contexts in China. On the other hand, they do not pay attention to other details in the images, such as the styles of the images (realistic pictures or cartoons) or the ethnicities or appearances of the people. Excerpts 30 to 32 are some sample extracts from their comments in the second interview.

Excerpt 30. (An Ruxin, the second interview, May 2017)

I like the Chinese Coca-Cola can. Yeah, that's a good one. I think it helps with the environment. It's like we're in China. Even it's in America like it's written in Chinese characters, so it's like OK, we are still in China. and then you can read it, which is really helpful!... But with people, I really don't mind. People are not so much for me, but like objects and stuff like that, I like it that way (in Chinese). In class, we used the picture of Yī píng lǜchá (*a bottle of green tea*). I was like, that's cool! That's how it looks like, and I can read [the character on the bottle].

Excerpt 31. (Feng Tang, the second interview, May 2017)

Interviewer (the researcher): The teacher pictures. Which one do you prefer?

Feng Tang: I don't have preferences. I know they are teachers. No difference.

Interviewer (the researcher): How about the banks?

Feng Tang: I like this one (the image of a Chinese bank with characters on it)

Interviewer (the researcher): Why do you prefer this image?

Feng Tang: Same reason, I can read it. I can read the characters to how to write. I like it because I can see it.

Excerpt 32. (Su Mulin, the second interview, May 2017)

Su Mulin: (about the images) I prefer anything in Chinese. You want a full emersion in Chinese.

Interviewer (the researcher): Do you have preferences of the images of people? Like American teachers or Chinese teachers?

Su Mulin: Not particularly. I think you can just use them both. I don't know… in terms of professors, that's like neutral. But the coke can is important because it has characters. You don't want it to be reading English in a Chinese class, right? But given it's in China, you will see foreign professors. I think that one is less important.

Function 2, images were used to create the physical environment to set the contexts of the dialogues and other types of communications. When the teachers used images for this function, these images included pictures such as Figure 6 (a taxi) in table 22. Figure 6 was used to set the context of a dialogue between the taxi drive and the passenger. In that unit, the students learned how to take a taxi or other transportation measures in China. At the beginning of a new unit, the first activity that the students would do in class was to perform the core dialogue of the unit. Based on the teacher participant's interview, the purpose of this activity is to help the students to build up the context of the whole unit and learn the key structures. It is crucial to perform the dialogue because the performing process can help the students to imagine the possible scenarios that may occur in the future. To help the students to have more realistic visualizations, the teacher projected Figure 6 while telling the students, "We are in China now. You are taking a taxi to the Spring Hotel (the destination in the dialogue)." Meanwhile, the teacher also used some probes in the classroom to simulate the scenarios. For example, in addition to projecting the taxi image on the screen, the teacher participant also put two chairs in a row, and let the students imagine that the chairs were the driver's seats and the passenger's seat in the taxi. Next, either the teacher randomly called students, or the students volunteered to perform the dialogue. Each student needed to come to the front of the class to complete this task

by acting both the roles. When they performed the dialogue, they sit in front of the projected taxi picture, imagining that the dialogue took place in the vehicle. When they finished the dialogue, they had to switch the roles and switch their seats, too. The image was kept on the screen till all the students finished the performing. Regarding the use of the images in this activity, all the focal students expressed that the images were very helpful for them to imagine and visualize the real scenarios that they would experience in the future if they need to use Chinese.

Excerpt 25 Revisit. (He Xiao, second interview, May 2017)

In the beginning, before a drill starts, he (Teacher) will always, like, pull two chairs together and says *Hé xiāo, nǐ lái.* (*He Xiao, come here*). Or he will pick others to model the drill with him. So you know, like what's going on first. So there's like the situation that was set, and then I was like *Ó, dǒngle dǒngle*. (*Oh, I got it*). That helps, and I'm like, okay, oh, that's the situation, and I can see!

Excerpt 33. (Su Mulin, the second interview, May 2017)

I like the image of the taxi used here…I personally really enjoy this kind of "real-life scenarios" imitated in the classroom. While each dialogue is presented in such a way, often countered situations like this, taking the taxi, provide a wealth of knowledge with respect to vocabulary, cultural mindset, and practical application. I could see myself visiting China and being able to fully use the taxi service.

Moreover, in excerpt 32, An Ruixin also shared her feelings about in which way she can benefit from the images used by the teachers.

Excerpt 34. (An Ruxin, the second interview, May 2017)

Interviewer (the author): You mentioned that the teachers use good strategies before starting the drills, such as talk to you or give you some pictures about what is happening now. Can you talk more about it?

An Ruixin: Yeah. Like they usually do it before the drill like they show the pictures and do the situations with someone. That's like, I'm like okay I'm ready for this situation of what's happening. Otherwise, if they just jumped right into the drill, it would be kind of confusing... There are so many different ways to answer a question; I need the context to know which way (I need to use). Sometimes, the teachers explained the situations, it's okay, but then that's kind of like less exciting. I like the pictures and the contexts.

In this excerpt, it can be seen that using images to set the background environment or the contexts of the class activities is very crucial for the students to use imagination in learning Chinese. Using proper images can engage the students and make the drill practice more exciting and meaningful. Thus, they can make the best of the contents of the drills to develop and strengthen their ideal Chinese selves.

To sum up, students are very ready to use the images and even eager to use mental imagery in learning Chinese, especially while doing class activities. This finding confirms the descriptive statistics that, overall, the participants have a high level of readiness in using mental imagery. Second, the readiness of using mental imagery is an important factor that has a great impact on students' imagination of using Chinese in the future (the dimension of the ideal L2 self). However, the vividness of using mental imagery is not as influential as the readiness, because according to students' qualitative data, they do not mind of specific details in the images

used in class. Vivid or not, it does not make a significant difference in students' imagination about the contexts of using Chinese. This conclusion is consistent with the yielded results in the factorial ANOVA tests in the last section.

RQ3. Are Performed Culture Activities Used in Class Helpful to Establish and Enhance the Learners' Ideal L2 Self and Mental Imagery? If Yes, in Which Ways Does This Pedagogy Make the Contribution?

Quantitative findings: the impact of class activities on learners' motivation and mental imagery. As discussed above, the ideal self is consistently found to be the strongest motivator compared to the other factors in the framework of the L2MSS. Moreover, many studies revealed that the ideal L2 self is highly correlated with the capacity of imagination and visions (Al-Sherhri, 2009; Dörnyei and Chan, 2013, You and Chan, 2014). Because of these two reasons, in this step, the author focused on the ideal L2 self, but not the other two motivators, as the construct of the learners' Chinese motivation. To answer RQ 3. through using the lense of collected quantitative data, a one-way ANOVA test was performed to investigate the possible effect of class activities (the perceived usefulness of classroom activities) on students' ideal L2 self (the L2 motivation) and the use of mental imagery (the readiness and the vividness).

First, the factor "perceived usefulness of classroom activities" was separated into High Group and Low Group. The same grouping method was used in this section as used in the last section. The grouping of this factor was based on the results of the frequency test to obtain two balanced groups. The grouping results are displayed in Table 23. According to the frequency check, the value 5.14 was used as the splitting point to separate the data into Low Group (values

not larger than 5.14, n=20) and the High Group (values larger than 5.14, n=17). The value for splitting the data (5.14) is also very close to the mean of this factor (4.98).

Table 23.

Factor	Mean	Splitting Value	Accumulative Percentage at this value	Number of observations
Perceived usefulness of the class activities	4.98 N=37	5.14	54.1%	Low group: 20 High Group: 17

After the data were recorded into the two balanced groups, a one-way ANOVA was performed using the ideal L2 self, the readiness, and the vividness as the dependent factors respectively and the students' perception of the usefulness of classroom activities as the dependent factor. Table 24 presents the results of this statistical test. The descriptive statistics of the three dependent factors in each group is reported in table 25. The significant effect of students' perceived usefulness of classroom activities was found on ideal-self (F (1, 35) = 6.55, p = .015) with a small effect size (η^2 =.16). This result indicates that if the students believe that the activities used by the teacher are useful, they will have stronger Chinese motivation regarding their ideal L2 self (M=5.16, SD=.64). By contrast, students who perceive the classroom activities less useful have weaker motivation in the form of ideal L2 self (M=4.55, SD=.78). In conclusion, classroom activities used by the teacher are crucially important for the students to develop stronger motivation.

Table 24. ANOVA results with the perceived usefulness of the class activities as the independent factor and the ideal L2 self and the mental imagery as the dependent factors.

	df	*F*	*p*	η^2
Ideal self	1,35	6.55	.015	.16
Readiness	1,35	13.99	.001	.29
Vividness	1,35	13.02	.001	.27

N=37

Table 25. The descriptive statistics of the independent factors for High and Low groups of the perceived usefulness of class activities.

	Ideal L2 self		Readiness		Vividness	
	Mean	SD	Mean	SD	Mean	SD
Low Group	4.55	.78	4.26	.91	4.04	.91
High Group	5.16	.64	5.19	.50	5.00	.66

N=37

Students' perception of the classroom activities also has significant influences on both of the two factors of mental imagery use: the readiness of using mental imagery (F [1, 35] = 6.55, p = .015) and the vividness of their mental imagery (F [1, 35] = 6.55, p = .015). Students who have a more positive attitude toward the class activities will be readier and more skilled in using the mental imagery in Chinese study. On the other hand, if the students do not think the class activities are useful, their ability to use mental imagery will be hindered to be low. A similar trend was also found for the factor of vividness. Compared to their peers who have a low perception of the class activities, the students who see the usefulness of the class activities can generate more vivid images by using mental imagery.

To conclude, the students' perception of the usefulness of the class activities is a critical factor that can significantly impact the learners' motivation in terms of the ideal L2 self, their readiness of using the mental imagery, and the vividness of the learners' imagination of using the L2. Therefore, the activities based on the performed culture pedagogy can be helpful in establishing and enhance Chinese L2 learners' ideal L2 self and mental imagery.

Qualitative findings 1: the activities that are most helpful to enhance students' ideal L2 self and mental imagery and voices from the students on this issue. At the beginning of this chapter, Table 15 reports the descriptive statistics of students' perceived usefulness of all the types of class activities. As can be seen in Table 15, the top four most useful activities are: 1. doing drills according to the visual prompts (photos, pictures, ppt) (M=5.24); 2. performing the dialogue (M=5.23); 3. oral interview (M=5.22) and 4. interpretation dactivity (M=5.16). The same trend also was revealed in students' interviews and reflectional journals. Although due to the nature of the qualitative data, the ranking of these four activities cannot be measured in this step, overall the participants agreed that all these four activities are beneficial to enhance their imaginations and visualization of their ideal Chinese selves and their ability to use mental imagery. In this part, the author will report the findings in qualitative data analysis to address RQ.3. Before the findings, Table 6 is presented below. It is useful to revisit Table 6 because it provides the details and descriptions of each type of class activity.

In excerpt 23, Su Mulin already shared his comments on the oral interview. He said this activity was very helpful and important because it required that he synthesized all the grammar and vocabulary he had learned. In his opinion, he should do more of this activity because it "is a good way to do it (getting different scenarios together)…[and] it's more than a test; it is like a

real-life conversation." (Su Mulin, the second interview, May 2017). An Ruxin and Feng Tang also express similar opinions to the particular activities in excerpts 35 and 36 disclosed below.

Table 6. Classroom activities and descriptions in the investigated Chinese program

Activities	**Descriptions**
Performing dialogues	• The students study the core communicative conversations before coming to the class. In class, the teacher creates several *imagined* authentic scenarios/contexts to let every student *perform* the conversations in front of the whole class. • Students' performances are not only evaluated according to their linguistic skills but also based on the quality of their performing, such as the appropriateness of the behaviors.
Students write their own dialogues and perform the dialogues	• Every two units, the students work with their partner(s) to compose a short conversation (six sentences or more) using the vocabulary and structures from the two units. They have one week to prepare and then perform their dialogue together in front of the whole class. • Students' grades are given not only based on the quality of the conversations that they have created but also based on the quality of their performing, such as the appropriateness of the behaviors.
Tell stories from different people's perspectives in movie class	• In-class sessions, when the students watch Chinese movies ad learn, the teacher asks them to watch some clips and then orally narrate the story plots. The students need to do the narration from different perspectives by imaging themselves as different roles in the movie.
The teacher uses various contexts and asks Students to practice Chinese	• The students study the assigned core sentence structures and vocabulary before coming to the class. In class, the teacher will create different authentic contexts by using probes and pictures to help the students *imagine* the situations that they can use the vocabulary and structures. Students do practice in various imagined scenarios created by the teacher.
Students do oral drills according to the visual prompts (picture, etc.) provided by the teacher	• The teacher provides prompts to help student practice using new vocabulary and structures in practicing oral drills. Instead of showing the texts or structures to the students, the teacher uses visual prompts such as pictures or props. • The oral drills are in forms of different types of communicative conversations.
Interpretation activity	• Two teachers collaborate to help the students do this activity. One teacher plays a role as an English speaker, and the other teacher plays the role of a Chinese person. The context is that they need to do some formal oral communication (such as in a business meeting), but they do not speak each other's language at all. The students need to *imagine* that they are the interpreters and need to do two-way interpretation work to translate the conversation.

Table 6. Continued

Oral interview	• This activity serves as the mid-term exam for the class. Every student conducts a five-minute one-one oral interview with the teacher, and it is in total immersion style. Before the interview, the teacher provides a short paragraph of information, including the context (in China) of the conversation and their roles (such as a taxi driver or an intern in an international company) in the conversation. The student needs to imagine that he/she is in China and needs to fulfill are several communicative goals via talking to the teacher.

Excerpt 35. (An Ruxin, reflectional journal 3)

I feel the oral interview best helped me imagine myself using Chinese in the future. I hope to be in a situation where I will need to communicate where I need to go because that would mean I would be studying abroad in China. Additionally, I learned a lot from the interview that I hope I can improve upon. I now realize my listening comprehension is lacking and I hope to improve upon that as well.

Excerpt 36. (Feng Tang, reflectional journal 3)

Despite my intense fear over the interview, I do feel that it helps more than it hurts. The interview is the best thing to help envision the ideal Chinese self. It set in a very realistic situation where one must speak with a person of higher status on the phone, then speak with a cab driver in order to give directions and arrive at the workplace for the interview.

All of the students stated that the oral interview is very useful because it set a very realistic situation, which is helpful for them to enhance and establish their imagination of using Chinese in the future. Even every student said they were very nervous or even not feared; they still think it is hugely helpful because "is the best thing to help envision the ideal Chinese self."

Considering no visuals or images were used during the oral interview, compared to other class activities such as performing the dialogues or doing drills using the visual prompts, it is more demanding for the students to use the mental imagery. Despite this demanding challenge, students can still use their mental imagery to complete this task. It means that the students can see the importance of using mental imagery, and they are also ready to do it.

For the class activity of doing drills using the visual aids, the four focal participants mentioned different particular drills that focus on different learning contents. Feng Tang talked about the drill that he practiced in class during that semester. The grammar of the drill is how to say large numbers in Chinese. This is a very challenging content due to the difference in how to divide digits in Chinese and English. Because the situations of using large numbers are restricted than topics such as ordering food or talking about hobbies. Students might need stronger mental imagery skills to visualize the situations of using large numbers. However, in the following excerpt, Feng Tang demonstrated strong motivation for learning this content.

Excerpt 37. (Feng Tang, reflectional journal 4)

Interviewer (the researcher): You mentioned a very interesting experience of learning large numbers…

Feng Tang: Yeah, that was a rough day! The numbers between the East and the West are so different. I mean, it’s not so different, but I’m not good at math. that I'm not going to be there.

Interviewer (the researcher): Do you see learning the large number useful?

Feng Tang: Oh, absolutely! As much as I hate it, I didn't deny they're important, you know. They are so important, and especially nowadays with um, businesses happening, you know, and stem degrees, sciences, and technologies, engineering, and math all require these numbers. And with the increased amount of globalization that's going on in the multiculturalism. That means you have to know.

It can be seen that the imagination of situations in real-life when he can use the large numbers largely helped Feng Tang to keep strong motivation in studying this challenging content. He developed this understanding and ability of imagination because of the practice he did in class. Based on the observation notes, the teacher used the following image (Figure 7, reproduced by the author) as the eliciting tool to help students practice saying large numbers. The image is a sample population census data reporting the population of the most populated cities in both China and the U.S. In the interview, the teacher participant explained the rationale that she chose this image as the prompt for helping the students to practice saying large numbers in Chinese. One of the reasons that the students found large numbers were very challenging is that the students couldn't visualize the scenarios and contexts when they need to talk about it. Lack the authentic reasons of learning the challenging content would make the student even more demotivated to focus on using it. Therefore, it is very important that the teacher can provide some elements of the authentic contexts to let the students realize that it is a common and natural topic they may encounter in wither everyday life or professional environments when they communicate with Chinese speakers. When the students can use their imagery skills to imagine and visualize these contexts, they will see the solid purpose of practicing and using large numbers in Chinese. In class, the teacher firstly projected an image of an office to set the place of the conversation and the roles of the students. Then she randomly called one student and ask:

“ …的人口是多少?(…de rénkǒu shì duōshǎo/What is the population of the city…?) The student needed to: 1) understand the teacher’s question; 2) investigate the data table (Figure 7) and get the corresponding number; 3) answer the teacher’s question by reading the number in Chinese. In this way, students learn to say the large numbers in Chinese within a real and authentic context. They did not only learn and practice saying large numbers, but also obtained some demographic information of some major cities in China. Therefore, the learners’ initial ability of imaging using large numbers in real life has been guided and nourished through this drill.

In addition to the activities included in the survey, Su Mulin shared his experience in learning reading and writing activities. While some learners might find writing and reading characters very difficult and time-consuming, Su Mulin enjoyed it because of his concrete imagination of the context when he needs to read and write. Therefore, the meaning and the blueprint of the character study have been established; thus, he has motivation in making efforts to learn reading and writing.

Excerpt 38. (Su Mulin, the second interview, May 2017)

Interviewer (the researcher): It’s interesting that you spent a lot of time practicing Chinese characters because some people say that writing is not that important anymore as we just type or text or chat online, you know, so don't need to write that much now.

Su Mulin: That’s not right. If you ever want to convey something to someone seriously, I'd I still think and no matter what language you're using, and you need to personally write the letters. Because it's a different level of intimacy that if I sent you an email

versus if I wrote you a letter or email it to you or something… If you're in any kind of job, you write. People could just write on sticky notes… or sign!

美、中人口总数前20名的城市对比* The Comparison of the Top 10 Most Populated Cities in the US and China**						
名次 Ranking	城市 City	所在州 State	人口 Population	名次 Ranking	城市 City	人口 Population
1	纽约 New York City	纽约 New York State	8,175,133	1	上海 Shanghai	22,265,426
2	洛杉矶 Los Angeles	加利福尼亚 California	3,792,621	2	北京 Beijing	19,295,000
3	芝加哥 Chicago	伊利诺伊 Illinois	2,695,598	3	天津 Tianjin	11,090,044
4	休斯顿 Houston	得克萨斯 Texas	2,099,451	4	广州 Guangzhou	11,070,654
5	费城 Philadelphia	宾夕法尼亚 Pennsylvania	1,526,006	5	深圳 Shenzhen	10,357,938
6	凤凰城 Phoenix	亚利桑那 Arizona	1,445,632	6	东莞 Dongguan	8,220,937
7	圣安东尼奥 San Antonio	德克萨斯 Texas	1,327,407	7	成都 Chengdu	7,123,697
8	圣迭戈 San Diego	加利福尼亚 California	1,307,402	8	香港 Hong Kong	7,055,071
9	达拉斯 Dallas	德克萨斯 Texas	1,197,816	9	南京 Nanjing	6,852,984
10	圣何塞 San Jose	加利福尼亚 California	945,942	10	武汉 Wuhan	6,434,373

Figure 7. The image used for the drill to practice reading large numbers in Chinese

*This figure was reproduced by the author for the consideration of copy-right.

** In the original picture used by the Chinese instructor, there was no English translation.

Qualitative findings 2: the increased students' Chinese motivation (the ideal L2 self) and the ability to use mental imagery. A vivid theme emerged from the data collected in the second interview is that all the four focal participants' Chinese motivation increased in the sense of more concrete and stronger ideal L2 selves. The uphill change was also found in the focal students' mental imagery skills. The last question in the second round interview is, "Through the

semester, how do you feel about your ability of imaging using Chinese? Can you give some sample scenarios that you are using Chinese in China?". To answer this question, the participants shared many stories and images on their minds. Excerpts 39 to 42 come interesting findings in their responses.

Excerpt 39. (An Ruxin, the second interview, May 2017)

> I don't have many Chinese friends, so I was thinking, how am I supposed to be speaking Chinese? But now it's different because I've learned more. I do like, actually hold a conversation a little bit. So, I can speak a sort of and hold like a sort of conversation, so I can use that, and now I'm like every time I build upon my language ability, I'm like okay I can use it in the future.

An Ruixin just experienced great increases in both her ideal Chinese self images and her mental imagery skills to generate her image in the future. She could feel this amazing change and she was happy and proud. Furtherly, she also shared even more exciting feelings as below.

Excerpt 40. (An Ruxin, the second interview, May 2017)

> When I first imagined studying abroad, I was like… I couldn't imagine. This isn't really like I'm not going to go study abroad in China…As it's coming up and as I'm learning more Chinese, I was like, wow like I'm going to go study abroad in China, and I'm probably going to like say something wrong, and I'm probably be overwhelmed like that. I would be OK. The more Chinese I learn, the more l feel, I know things. I can speak and talk and exchange conversations…I hope I would get lost in China. I can ask someone like a really nice family. *请问，我在哪儿，华联超市怎么走*？(*Excuse me. Where am I now. How can I get to Hualian Grocery Store?*)

From lacking the confidence to speak in Chinese and never thought she could use Chinese, to be planning to go to study abroad in China and even "getting lost" in China, it is a massive leap for both of her ideal L2 self and her ability in using imagination. Furthermore, she mentioned that the reason why this transformation happened. It is because she has learned a lot about Chinese and did practice in class. The learned language knowledge is like the bricks which she could use to construct her future mansion of Chinese.

This theme was also found in another focal participants' responses to the last question of the interview. Excerpts 41 was extracted from the data collected from He Xiao.

Excerpt 41. (He Xiao, the second interview, May 2017)

> We have learned a lot of scenarios using Chinese, like someone visiting us from China and translating for them we have reason to take a Taxi, riding the train and someone will talk to you offering the old lady your seat, visiting a host house and what it's like to eat with the host or being the host offering or ordering for everybody and going to the market and asked me how much something is. So, I think I can imagine what it's like because we have all those, a lot of scenarios. That was good. I didn't realize that we had all those we can survive.! Like going to the library, the bookstore can go buy some groceries and detergent ice cream…

From the excerpt above, He Xiao had described a great number of situations that she could use Chinese to fulfill some communicative tasks. If we compare these descriptions with the short and simple description of her "ideal Chinese self" that she provided at the beginning of the semester, apparently there are a lot of improvements not in her motivation and imagination. In the beginning, her imagination of using Chinese was very limited and could only generate a

few possibilities, such as eating food and traveling in China. Through the whole semester of learning in the Chinese II class, He Xiao had expanded the horizons of her imagination. Similar to An Ruxin's experience, the element that bridges yesterday and day was the contents that they had learned in the Chinese class. Feng Tang (the second interview) also described what he could do in Chinese, including ordering dishes in a restaurant, talking about directions when he had trouble with and could play golf with some Chinese friends, or even talking about cars he liked.

Chapter Summary

This section summarizes and synthesizes the findings yielded from both quantitative and qualitative data sets. The synthesized results will be presented to address every research question. In each part, the results of quantitative data analysis will be reported first, followed by the findings from qualitative data. The goal of the integration step is to investigate if the analysis results of the interview data and the reflectional journals can confirm the statistical results on the questionnaire data.

Overview report of the quantitative data. The descriptive statistics of the quantitative data indicate that the Chinese learners who were involved in the current study have strong ideal L2 self, and the anti-ought-to L2 self with the mean of each motivator exceeded four points out of six. By contrast, the mean score of ought-to self is at the average level, which is consistent with previous findings in L2MSS studies. They are also very ready to use mental imagery in learning Chinese when necessary, and they can also generate and produce vivid images related to the Chinese study in their minds. Most of them spent a lot of time studying Chinese. Nearly half (43%) of all the students who responded to the questionnaire spent six to ten hours per week to

study Chinese, and this is the minimum length in the scale. Considering Chinese is a less taught foreign language in the U.S., this amount of time of commitment to learning is considerable.

Research question 1. The Pearson correlation results indicate a significant positive correlation was found between the ideal L2 self and the ought-to L2 self (r = .428, p ＜.001) with a small effect size (r^2 =.18). Through the interview data and focal participants' reflectional journals, this relation was also extracted. The strongest factor to bridge these two types of motivation is students' high respect for one of their teachers (Teacher Yang) of the Chinese courses. Two students' shared experience reflects that because of they considered the teacher as either the reason of learning Chinese or a role model, this emotion of admiration helped them to developed more vivid and concrete visualizations of using Chinese in the future. Meanwhile, the ought-to L2 self is also found to be positively correlated with the anti-ought-to L2 self (r= .428, p＜.05) also with a small effective size (r^2 =.26). However, even these two factors were statistically correlated; this relationship was not revealed from the qualitative data set.

Concerning the relationship between the ideal L2 self and the anti-ought-to L2 self, no statistically significant correlation was detected in the current study. Nonetheless, the dynamic interaction between these two motivators emerged from the qualitative analysis results. All the focal participants presented real and strong ideal L2 selves and anti-ought-to L2 selves. These two types of selves, at certain points, were tangled and interacted with each other. The participants all present strong desires and passions to learn and use Chinese in their future life, which form their strong ideal L2 selves. These strong emotions transformed into strong strength and courage to take challenges and difficulties that they encounter in learning.

A significantly positive correlation was also found between the ideal L2 self and the use of mental imagery. In the current study, the use of mental imagery is conceptualized into two dimensions, learners' readiness to use mental imagery and the vividness of the mental imagery. The qualitative data analysis results also resonate with this trend. More details of the results will be reported in the following pages, which are devoted to the discussion on the impact of mental imagery on the ideal L2 self.

The self-reported efforts to learn Chinese were also found significantly correlated with the ideal L2 self. This correlation is positive and to some extent, expected. Strong motivation can trigger and result in stronger commitment and more motivated learning behaviors.

Research question 2. The two 2x2 factorial ANOVA test results indicated students' readiness to use mental imagery has an impact on their self-reported efforts to learn Chinese (F [1, 33] = 8.24, p = .007). The significant main effect of the readiness of using mental imagery was also found upon the ideal L2 self (*F [1, 33] = 4.96, p = .03*). Interestingly, the factor of the readiness has not been found statistically influential to the other two self-related motivators, the ought-to L2 self, and the anti-ought-to L2 self. Overall, no main effect of the vividness of the mental imagery was found for neither students' self-reported efforts nor their L2 motivation. No interaction of effect of the vividness and the readiness was found in this study.

The qualitative data revealed that when learners can benefit from the images used in class activities to enhance their ideal L2 self. Teachers' use of images can help the students practice and get used to using mental imagery skills to make associations between the images and the language they learn. They are very ready and intentionally use the images they see in class to facilitate their Chinese learning. This finding confirms the results of the factorial ANOVA test

that readiness of using mental imagery can positively influence students' L2 motivation in terms of the ideal L2 self. On the other hand, all the focal students said they do not care about some details in the images because these details are not related to their understanding of the situations or the contexts.

Research question 3. According to the quantitative data analysis, the factor the perceived usefulness of class activities is found to have a significant impact on students' ideal L2 motivation at the dimension of the ideal L2 self. This indicates the importance of class activities because students who strongly agree that class actives are useful will have the higher motivation (the ideal L2 self). This factor also has a statistically significant impact on both of the dimensions of mental imagery. These results indicate that the more useful the students think of the class activities, the higher the L2 motivation they will have. They will also be more ready to use the imagery in learning and can generate more vivid and clear images of using the L2.

With the merits of the mixed-method design, the current study also obtained a different perspective to explore the three research questions from the students' voices in the qualitative data. The findings from the qualitative data analysis confirmed the findings reported above. Moreover, the focal participants expressed their opinions about the usefulness of the different types of activities, which can help them to improve their ability to use imagination in learning. The most mentioned activity is the one that the teachers let them do drills. The key point is that the teachers used a good amount of images. These images are either used as the prompts for eliciting the answers from the students or to set the information of the contexts. Students found both of the types of using images are very helpful. The first type of image can help them get the answers faster while the second way of using the image can help them understand the contexts better.

Overall, the analysis results from the qualitative data set resonate and confirm the results of the quantitative data analysis. Furthermore, some themes that emerged from the qualitative data revealed some findings which were not captured by the statistical tests on the questionnaire data.

CHAPTER FIVE:

DISCUSSION AND PEDAGOGICAL IMPLICATIONS

Chapter Overview

The current study aims to illustrate and discuss CFL learners' motivational profiles using the framework of the L2MSS, including the newly emerging factor of anti-ought-to self. It also investigated the effects of mental imagery on L2 Chinese learners' motivation at the dimension of the ideal L2 self.

This chapter consists of three sections. In the first section, the author reported and discussed the findings across both quantitative and qualitative data sets. The conclusion of the whole study was also drawn in section 1. It starts with the discussion on the CFL learners' motivational profiles, followed by the dynamic and complex relationship between mental imagery and the ideal L2 self. In the second section, based on the findings from both qualitative and quantitative data, the researcher proposes pedagogical implications for not only CFL teachers but also for instructors who teach other foreign languages. The most interesting and most novel finding in the current study is that teachers who adopt the Performed Culture pedagogy can help L2 learners grow their self-related motivators through class activities. Therefore, the researcher made the suggestion of pedagogical implications from the perspectives of two frameworks: the L2MSS and the performed culture pedagogy. A major theme of the implications is emphasizing the significance of using mental imagery to enhance the Chinese L2

learners' motivation through helping them build, nourish, and strengthen their ideal L2 selves. At the end of the chapter, the limitations, and delimitation strategies of the current study are outlined. Suggestions for future research are also discussed.

The Three Research Questions: What Do We Know?

As presented in the last chapter, the analysis and findings of quantitative and qualitative data were delineated in a merged fashion. Even though in the last chapter, each research question of the study was addressed through the integration of the findings of both quantitative and qualitative data sets, this chapter seeks to explore the hidden themes from a holistic perspective. In this step, the relation, the interaction, the confirmation, and the mutual explication of the findings extracted from both data sets. The discussion of the results will also regard the findings in the related previous studies.

RQ.1. CFL learners' motivation profile as a complex and dynamic synthesis. Several themes have been found in the results chapter. In the following pages, each theme is respectively summarized and discussed.

Interacted and integrated ideal, ought-to, and anti-ought-to L2 selves. Basing on the findings of both qualitative and quantitative data, it can be concluded that the CFL learners in the current study are overall highly motivated. They demonstrated clear, strong, and concrete ideal L2 self and anti-ought-to L2 self. By contrast, the ought-to L2 self was not only weaker in the sense of the quantitative mean value but also appeared less often in the qualitative data set. These findings are consistent with the previous studies done using the L2MSS framework that the ideal L2 self is always a salient and the stronger motivator in the framework (Csizér & Dörnyei, 2005; Dörnyei & Ushioda, 2009; Henry, 2011; Liu and Thompson, 2018; Ryan 2009).

The anti-ought-to L2 self, as a newly proposed motivator for the L2MSS framework, was also found as the second powerful construct (as reported in table 12, $M_{ideal} = 4.83$, $M_{ought\text{-}to} = 3.10$, $M_{anti\text{-}ought\text{-}to} = 4.44$). This result resonates with the findings in previous studies that tested this construct using the quantitative statistical method (Liu and Thompson, 2018; Thompson and Liu, 2018). Furthermore, the anti-ought-to self also vividly emerged from the interview data of the focal participants' interview and reflectional journals, which also mirrored with Thompson and Vásquez's (2015) study, which proposed this construct for the first time. Thompson and Vásquez (2015) revealed in their study that the participants ignited substantial psychological reactance when they encountered challenges such as the feeling of loneliness in an immersion program or others' doubts about their abilities of the target languages. Similarly, the focal participants expressed the same trends in the current study. Moreover, Liu and Thompson (2018) also found that Chinese English L2 learners have strong anti-ought-self as an independent motivator in their English motivation profiles. Given the previous Thompson and Vásquez's study (2015) and the current study used data collected from various L2 learning context, the similar findings indicate that the psychological reactance is a commonly existing motivator for L2 learners with various background. Anti-ought-to L2 self can be another salient construct in the L2MSS framework.

Another apparent feature across the analysis of the complete motivation profile is that although the three self-guides are unique motivators, they are not entirely independent. Instead, they dynamically interact with each other in many senses. For example, while a statistically significant correlation was found between the ideal L2 self and the ought-to L2 self, the qualitative data also revealed these two factors in an interacted and integrated fashion. In class, the students could see that Yang laoshi (Teacher Yang), as an English L1 speaker, could achieve

such a high level of Chinese proficiency. Yang laoshi became their "role-model." One student, He Xiao, said, "*I wanna be him. I wanna be Yang laoshi,*" even though she did not want to be a teacher. Many previous studies in the social psychology field explored the effects of role models or outstanding others on boosting motivation. Role models can illustrate the plausible images of people's desired selves, and also provide people the guide and means by which to achieve the goals (Collins, 1996; Taylor, Wayment, and Carillo, 1996; Thompson & Vásquez's, 2015; Wood, 1989). In the case of the current study, Yang laoshi's achievement in L2 learning illustrated a model as a superior level L2 Chinese learner. His story and learning experience made the students capable of imaging their own "ideal Chinese selves." This is a significant source of the "ideal L2 self." Moreover, Lockwood and Kunda (1999) argued that "The boosting of aspirations is a key function of role models" (p.215). Yang laoshi, as a role model in the participants' hearts, inspires and stimulates their enthusiasm in learning Chinese as well as strong admiration and respect toward the teacher.

Revealed in the qualitative data, one dominant type of the ought-to L2 self shared by all the focal participants was their strong urge to get their teachers' approval or make their teachers proud of them. Pushed by the strong urge, the students were willing and determined to make more efforts to advance their Chinese skills and obtain better scores. Their sense of obligation was rooted in their respect and admiration for the teachers, but not because of their teachers' specific demands. In a previous study, You and Chan's study (2014) found that the participants mentioned the shifts from the ought-to self (a sense of social obligation) to the ideal L2 self (a personalized future vision) (p.408). By contrast, revealed in the current study, the interaction between these two motivators is the shift from the ideal L2 self to the ought-to L2 self. From the "ideal L2 self" came strong respect and admiration. From respect and the admiration, came the

strong “ought-to L2 self,” which pushed the students voluntarily and gladly to do extra work to fulfill their teachers’ expectations and get their teachers’ approval and praise.

On the other hand, another featured component of the ought-to L2 self shared by every participant was the anxiety or fear of failing the respected teacher. In many previous studies, the ought-to L2 self was found to have negative influences on students’ holistic L2 motivation or L2 achievements (Liu and Thompson, 2018; Magid, 2012; Papi, 2010). However, interestingly, the current study found the positive effects of this factor on students’ Chinese motivation as well as their reported learning efforts. Because of strong ought-to L2 self, students were willing to form habitual learning behaviors in Chinese study. For example, all four focal participants expressed that they did not want to fail the teachers but wanted to fulfill the teachers’ expectations. when their performance was below the standards, they felt embarrassed not because they felt losing face, but because of disappointing the teachers.

Furthermore, regarding the two stronger self-related motivators, the ideal L2 self, and the anti-ought-to L2 self, even though the statistical test did not detect the significant correlation between these two factors, the qualitative data sets revealed that they are entwined and mutually transformable under some circumstances. When encountered challenges in L2 learning, L2 Chinese learners’ strong ideal L2 self would trigger and originate anti-ought-to L2 self, which helped them embrace the challenges positively to avoid the result of quitting or getting frustrated.

For example, in this study, the oral interview test is a big challenge for all of the focal participants, and all of them mentioned this challenge in either the second interview or the learning journals. Not even one participant was satisfied with their performance or the grades of

this activity. They used strong words such as “appalled,” “super-nervous,” “unacceptable,” “really tough,” and “awful” to describe their experience of taking the oral interview test. However, surprisingly, no one said that he or she hated this test or wanted to give up despite the tense anxiety and low scores. Instead, all of the participants expressed that they wanted to do more of this test because “*It’s real.*” (Au Ruxin) and “*It’s more than a test. It’s like a real-life conversation.*” (Su Mulin). Because the students have vigorous and concrete ideal L2 self, they are able to expect and imagine what they will do or encounter when they are using Chinese in the future in real life. Therefore, they have the capacity to understand the purpose and importance of doing that practice, which can be a rehearsal of their future communication, as “remembering the future” (Walker, 2010, p.46). This awareness and clear imagination give them the strength and impetus to use “anti-ought-to L2 self” to overcome the difficulties and failures they have experienced and then keep working. In this way, their strong anti-ought-to L2 self will also keep the learners to have the chance to nourish and complete the images of the ideal L2 self. This psychological alternation of perceptions can be seen in An Ruxin’s comments on her “awful” performance of the oral interview as “It’s a challenge that I have to work on to overcome if I wish to ever become my “ideal Chinese self.”

L2 motivation is constructed by multiple dynamic possible selves. Basing on the results presented in the last chapter and the discussion above, the CFL learners in the current study demonstrated complex and dynamic motivation profiles. All the motivators in this synthesis are never static or in a separated manner. The L2MSS framework is rooted in the self-discrepancy theory (Higgins, 1987) with the critical constructs of ideal L2 self and ought-to L2 self as two kinds of possible future selves (Markus and Nurius, 1986). However, either current selves or possible selves, as *personalized representations* (Markus and Nurius, 1986), these selves are no

way to be “single and uniform concept[s] but are diverse and multifaceted” (Cho, 2015, p.1101). Because the *future selves* are the results of the interactions between the evaluation of the current selves and the future goals, these selves fluctuate and can be re-shaped at any time due to personal experiences in different situations (Markus and Kunda, 1986). Thus, it led to more studies exploring this dynamic rather than the static status of L2 motivation (Dörnyei and Komos, 2000; Holy and Sherrill, 2006).

The current study confirms and extends the findings in previous research. Due to the fluctuating and vibrant nature of the self-representations, the researcher proposed to view the three selves (the ideal L2 self, the ought-to L2 self, and the anti-ought-to L2 self) as interrelated motivators which have the potential to transform, initiate, or strengthen each other. Each of these three motivators can be consequential and activated by the other two selves as a result of unexpected factors and conditions in learners’ learning experience. L2 motivation is dynamic not only in the sense of the whole L2MSS system but also at the microlevel of each motivator.

In response to the RQ1, the results in the current study indicate that L2 motivation is a complex and dynamic system rather than a static, frozen snapshot as one simple variable of individual differences. The findings are in line with the development of the knowledge of L2 motivation. As pointed out by Dörnyei, MacIntyre, and Henry (2014) that for the past two decades, the interests in L2 motivation research has shifted to the notion that the L2 motivation is situated and full of considerably shifts and fluctuations. The results of the current study also confirm the dynamic and complex characteristics of the L2 motivation as the three scholars argued:

> We believed that the topic of the L2 motivation was an ideal content area for such an endeavor, partly because motivation, with its ebbs and flows, was an SLA phenomenon that seemed to lend itself to the application of dynamically informed research designs, and partly because the currently most established constructs in the field – the various L2 self-guides – are by nature inherently dynamic and would, therefore, be well-suited targets for investigation using dynamic approaches (p. 5).

RQ. 2 The impact of using mental imagery on L2 learning. Both quantitative and qualitative findings of the current study indicate that the use of mental imagery has significant influences on L2 learners in different aspects.

Impacts of using mental imagery on L2 motivation and learning efforts. The investigation regarding the use of mental imagery yielded several impressive results. Overall, according to the quantitative data analysis, students have high-level readiness of using visualized imageries in learning Chinese (Mean $_{readiness}$ = 4.69 out of 6). They are also capable of generating vivid images concerning the situations of using Chinese (Mean $_{vividness}$ = 4.45 out of 6). The statistically significant correlations were also found between using mental imagery and students' L2 motivation in terms of the ideal L2 self ($r_{readiness,\ the\ ideal\ L2\ self}$ =. 448, $p < .001$; $r_{vividness,\ the\ ideal\ L2\ self}$ =. 390, $p < .001$). Again, this result resonates with many of the previous studies, which indicated the close relationship between the use of mental imagery (visions) and the ideal L2 self. However, only one aspect of the mental imagery – the vividness of using the mental image – was found significantly correlated with the ought-to L2 self ($r_{readiness,\ the\ ought\text{-}to\ L2\ self}$ =. 375, $p < .001$).

The factorial ANOVA results indicated that only the readiness of using mental imagery has a significant main effect on the ideal L2 self ($F\ [1, 33] = 4.96, p = .03$). The learners who are more ready to produce visions of using the L2 (Chinese) will generate a stronger ideal L2 self. Thus, developed skills in using the visualization/mental imagery can help the students to boost their L2 motivation. The explanation of this result emerged from the students' interviews and reflectional journals. In classroom practice activities, the teachers used many techniques, such as detailed descriptions of specific scenarios, and use visual aids and videos in different ways to help the students to establish the imagined scenarios of using Chinese in future life. Because the students had a large amount of exposure to the resources for the imageries, their capabilities of creating the visions of the imagined situations of using Chinese have been enhanced. Moreover, the content, the topics, and the illustrated scenarios of the practice gradually formed the significant components of the students' ideal Chinese self. For example, as presented in the last chapter, multiple focal students revealed their experiences of how they formed their ideal L2 selves and how the mental images of their ideal L2 selves gradually grew stronger through the study and practice in class.

In except 1, Su Mulin shared that "At the ideal level I would also be able to engage in highly-nuanced situations like politics or business…I would like to reach out to the business owners who may not have been required to learn English." An Ruxin said in an ideal world, "I would be able to communicate with proficient Chinese to native and non-native speakers. I hope to use this language in my future international career path" (excerpt 2). By contrast, some participants like He Xiao described her ideal Chinese self as a person who can use Chinese to do some everyday tasks such as "eating at Chinese restaurants and talking to anyone [in Chinese]" and "could the Chinese recipes and learning some cooking." (the second interview).

In these excerpts, the students mentioned different communicative tasks that they would like to do using Chinese, and impressively, all the topics were included in the class contents. The teachers designed various authentic contexts in classroom activities, such as ordering foods in local Chinese restaurants, working as an interpreter to facilitate the communication between Chinese people and English speakers, meeting people from different social and professional circles, so on and so forth. It can be seen that these imagined scenarios are the sources for the students to develop concrete and personalized ideal Chinese selves.

Additionally, the readiness of using mental imagery also has a statistically significant main impact on learners' self-reported efforts ($F\ [1, 33] = 8.24$, $p = .007$). Students who are more comfortable to use the imagination in learning Chinese will make more effort and take more actions to improve their L2. As can be seen from the discussion above, when the L2 learner can easily use their mental imagery skills, they would have stronger and more explicit ideal L2 selves. Consequently, they will develop more realistic and specific learning goals, either short-term or long-term. Since these goals become plausible, the learners will be more willing to make plans to achieve their goals step by step.

The impacts as mentioned earlier of the mental imagery on both learners' motivation and reported learning efforts confirmed the similar theme revealed in the previous study by You and Chan (2014), which was elaborated as:

> When a change in visualization functions and the initiator of the imagery – motivation interaction – that is to say when someone becomes better at, or gain practice in, visualization skills – this can bring about an increased level of motivation and, consequently, increased effort in language learning behavior. (p.414)

Other related literature (Cameron 1999; Leondari *et al*., 1998) also indicated that imagination is potent, which can be beneficial for the generalization and visualization of possible future selves. Moreover, Al-Shehri (2009) found that learners who had stronger imaginative capacity would be more likely to generate a more potent ideal L2 self. The current study made further contributions to the understanding of the close relationship between developing mental imagery skills and enhancing L2 learners' motivation in terms of the ideal L2 self.

However, the multifaceted impacts of different dimensions of the metal imagery were still less studied. You and Chan (2014) also pointed out this issue and argued that "imagery is more dynamic than has perhaps previously been perceived." (p.416). The present study is an effort to bridge the gap in the literature by investigating the different impacts of the different dimensions of the mental imagery, per se, the readiness to use mental imagery, and the vividness of the imagination, on the ideal L2 self.

The results of both quantitative data sets and qualitative data sets indicate that the readiness of using mental imagery has stronger effects on learners' learning efforts and motivation. Interestingly, on the contrary, the vividness of the mental imagery has no statistically effects on either the ideal L2 self or their reported efforts in learning. The reason behind such a result might be that compared to the vividness, the readiness of using mental imagery is more fundamental and critical in the process of constructing images in the brain. When the students can imagine the images of their future selves, they do not focus on the vividness of the details of the imagined situations. Second, the researcher searched through the qualitative data collected from focal students' interviews and reflectional journals but did not detect any information concerning the vividness of their imagined situations. The students might not consider the

vividness as helpful or essential for their L2 learning, or for the construction of their ideal Chinese selves.

Teachers' uses of images in classroom activities and the students' views. Regarding the images used in class, as reflected in the qualitative data, the most influential element that the students prefer to see is the presence of Chinese characters because they feel excited and confident to read these characters. The pictures which included the characters can help students to imagine how life looks like in China in the real world. Without the presence of the characters, the students did not indicate the differences between different choices of the pictures, such as the pictures of American teachers and Chinese teachers. Second, pictures that illustrate the images of the real scenarios are found to be helpful, too. For example, as discussed in the last chapter, the teachers used two types of picture prompts to elicit students' use of 把字句 (*Ba sentence*), which indicated the results of specific actions. The first type of pictures used by the teacher was the pictures containing actual objects, which could illustrate the results (an empty bowl suggesting that the meal was finished). The second option of the teachers was to use either a checkmark sign (means finished) or a cross mark sign (means unfinished). In the interview, students indicated that they either preferred to see the picture of an empty bowl (meaning the meal was finished) or the combination of the bowl and a tick sign. No one considered the tick sign itself was beneficial for them to produce the target structure (把字句 *Ba sentence*) in Chinese. An important reason for students' choices is that the pictures with real objects can help them to imagine the scenarios in which they need to use the target structure. Moreover, one student said that the use of the images could reduce his memory load of learning the target structure.

Many studies in the past (Dörnyei and Chan, 2013; Kim and Kim, 2011) found a strong correlation between the use of mental imagery and L2 performance as stated by Dörnyei that these studies "produced sufficient evidence to make us realize that imagery matters, thereby warranting further systematic studies." (p. 442). The results found in this study are in line with the previous literature that there are positive relationships between using mental imagery and learning outcomes. However, the association between using mental imagery in class activities and the learning outcomes is still understudied. The current study's findings make contributions to shed light on our understanding of this issue on a macro level. It means that in a short moment of learning activity, how mental imagery can impact the students' learning result for a particular target form in L2.

RQ3. L2MSS framework and the Performed Culture: Two approaches, one shared objective. The most novel finding in the current study is the close relation between L2MSS framework and the Performed Culture pedagogy. RQ. 3 aims investigate how students' self-related motivators, especially the ideal L2 self, were gradually constructed and enhanced through class activities. In Chapter Four, the findings indicate that from the students' perspective, four types of class activities were considered to be the most helpful to enhance students' ideal Chinese L2 self. Each type of activity is analyzed carefully to reveal how teachers designed them by the guidelines of the performed culture pedagogy. Meanwhile, the teachers' teaching practices are analyzed through the lens of the L2MSS framework to see if any features are in line with the suggestions proposed by Dörnyei and Kubantiova (2014).

The application of the performed culture pedagogy: an example of the most helpful class activity. According to the questionnaire data, among the seven major class activities, the activity received the highest votes is *Activity 1. Doing drills according to the visual prompts*

(photos, pictures, ppt). Students rated it as the most helpful class activity which can enhance their ideal Chinese self. Therefore, it is necessary to examine this activity to determine the crucial factors included in the in-class activities, which are beneficial for cultivating students' L2 motivation. The first step to carry out this activity is that the teachers provided the contexts of the drill and assigned students the roles involved in the communication of the drill. When design the contexts, the teacher helped the students to create imagined scenarios and imagined Chinese selves through including five core elements discussed in chapter 2: *1) place of occurrence, 2) time of occurrence, 3) appropriate script/program/rules, 4) roles of participants and 5) accepting and/or accepted audience*. (p.8). These five core elements were proposed by Walker (2010) (inferred from Carlson, 1996) as the factors can be used for students to imagine the "situated events" (p.8). In the next paragraph, the author uses an example to elaborate on how these five elements can be applied in actual class activities to help students construct their imagination of using the L2 in real life, thus, to enhance their ideal L2 self.

In a short drill activity, the target structure is *我要去 ...* (*Wǒ yào qù…/I need to go to …*). To help the students use this structure in drill performance, the teacher set the context as taking a taxi to some destinations in the middle of the day. As discussed in the last chapter, the teacher used an image of a taxi on the street in China to help students imagine the scenario. In this step, elements 1 and 2 were both included. Then the teacher told the students that there were two people involved in this communication: the taxi driver who is a native Chinese speaker and an American college student who was traveling in China (element 4). When the students performed the role of the passenger (the American student), they need to use the target structure (*我要去 ... Wǒ yào qù…/I need to go to …*) to tell the "driver" their destinations (element 3. The "passenger" also needed to use different Chinese vocabulary (such as restaurants, hospitals, shopping malls,

etc.) in the target sentence structure according to different image prompts provided by the teacher spontaneously. The "driver" must be able to understand the structure and destination words. Both the target sentence structure and the various vocabulary are considered as element 3 (*appropriate script/program/rules*), the "driver" and the "passenger" were also the *accepting audiences* (element 5) in this imagined but authentic scenario. This is because that they are the accepting audience for each other's speech. After the completion of the performance, the teacher or other students would give feedback and make comments to the students in the performance.

The details in the aforementioned example illustrate the reasons why students voted it as the most helpful activity to construct and enhance their ideal L2 self. Using the guidelines of the performed culture pedagogy, the teach included all the elements to create realistic imagined visions about where and when they would be possibly using their L2. Because of the integration of the essential five elements for a real event, the students did not only practice their Chinese language skills but also experienced the "situated event" – take a taxi in China – and rehearsed their ideal L2 self (an American student using Chinese when traveling in China) in their imagination. The guidelines of the performed culture pedagogy used to design this practice are in line with the L2MSS, which emphasizes the effects of the imaged ideal L2 self and the importance of imagination.

Other types of in-class activities: the application of the performed culture pedagogy in different dimensions. This section discusses the designs of another three types of in-class activities rated by the students as hugely useful for them to build and enhance their ideal Chinese selves. The activities included in this section are Activity 2. Performing the Dialogues, Activity 3., which are in purpose to establish and enhance students' motivation through guiding the students to visualize their ideal Chinese selves through various simulated real-life situations. In

the students' opinion, the second most useful activity for practicing imagining their ideal Chinese selves is activity 2, *performing dialogues*. By contrast, Activity 2 is less challenging when compared with Activity 1 for the following reasons. First, in Activity 2, the scripts were the core dialogues that were provided to the students before the class. Students need to learn the core dialogue very well and then *perform* the whole dialogue in class. In this activity, all the five essential elements are set as in fixed knowledge, which the students prepared before the class, so they were very familiar with (Qin, 2013). For example, during the semester, one dialogue was the communication between a Chinese native speaker and an American student who was on a train from one city to another. This dialogue describes a scenario that is a highly common event that the students might use Chinese for. Students' imagined ideal Chinese selves in the specific communicative situation were established through the imagination of the situations, and thus were enhanced through the practice of the dialogues.

Activity 1 differs from activity 2 because students were not provided the complete scripts for each drill before the class. Students need to reconstruct their knowledge of the target forms according to new contexts they did not encounter before. Activity 3 (*oral interview tests*) and activity 4 (*interpretation practice*) were rated as the third and fourth most useful class activities that can help the students to enhance their ideal Chinese selves. To design activity 3, the teachers also need to apply the five elements to create plausible situations. However, this activity includes more than one context, and the students need to carry out multiple communicative tasks with different roles in the whole test. On the other hand, in Activity 4 (*interpretation practice*), the context is fixed (an American speaker and a Chinese speaker talking on the phone), but the contents of the dialogue contain various topics and structures.

The four activities discussed in the previous pages revealed that the performed culture pedagogy advocates the significant effects of setting various, authentic and appropriate contexts for students to practice using Chinese as different roles in many possible future scenarios. During the classroom observation, the researcher captured an important feature in the teacher participant's teaching practice is that teacher provided a great amount of feedback to the students. These feedback can be organized in two categories: 1). corrections for linguistic-form-related problems such as pronunciation, tones and grammar; and 2). corrections or reminders for students' culturally inappropriate behaviors. According to Walker and Noda (2010), the ultimate goal of language programs is to help L2 learners to function successfully not only in the target language but also in the target culture.

In previous studies which investigate the pedagogical implications of L2MSS, the factor of *culture* is not widely analyzed or discussed. The roles that the students played in different contexts in Chinese culture, from the L2MSS approach, can be interpreted as different *preliminary possible ideal L2 selves*. The class activities provide students many chances to establish and enrich their ideal L2 selves through imagining and performing the roles in various contexts. Moreover, the students can refine the images of their ideal selves by adjusting their uses of Chinese and their behaviors to be culturally appropriate. In this sense, the performed culture pedagogy provides another essential and concrete element in L2 learners' ideal L2 selves. More in-depth discussion and analysis of the interrelationship between the L2MSS and the performed culture pedagogy are presented in the next section, which is the pedagogical implication.

Pedagogical Implications

As stated in Chapter Two, one main goal of the current study is to investigate the pedagogical implications of the L2MSS in the CFL teaching practice to enhance students' Chinese motivation. Specifically, the researcher aims to provide suggestions and teaching strategies related to but not limited to the performed culture approach (Walker, 2010). As reported in Chapter Four, students who have the stronger motivation, especially the ideal L2 self, reported more learning efforts in studying Chinese. Therefore, cultivating and enhancing students' ideal Chinese selves should be positively considered by CFL teachers. Second, both quantitative and qualitative findings have revealed many characteristics of strategies and class activities that can be useful to help students establish and develop their ideal Chinese selves. Moreover, all the strategies and activities used by the teacher participant who applied the performed culture pedagogy are all closely related to the use of mental imagery.

It should be noted that the significance of the findings in the current study is not only limited to CFL context but also applicable to the whole SLA field. First, the L2MSS is a widely studied and validified framework across different language and cultural contexts. The importance of self-related motivators and L2 learning experience has been acknowledged by SLA researchers and L2 teachers. The current study sheds a light on how to bridge the motivation theory to teaching practice by not only reporting successful outcomes of the studied CFL program but also proposing practical implications for all foreign language teachers. Second, although the performed culture pedagogy was initiated in the field of CFL, it was never defined as a specific approach only limited to CFL teaching and learning. The core of the performed culture pedagogy is described by Walker (2010) as "an approach to language study, stars with meaning and treats the linguistic code … as a medium for accessing and thereby more fully

participating in that meaning" (p.7). Therefore, although the current study uses a CFL case to investigate the L2 motivation and its implication, the guidelines and strategies of the performed culture pedagogy can be transferable to other languages' contexts.

On the other hand, Dörnyei (2019), in his newly published work, advocates for the significant influences of the third construct of the L2MSS framework: the L2 learning environment. He called for more research to be conducted to investigate this factor. Meanwhile, Walker and Noda (2010) also emphasized the importance of students learning experience in a foreign language class. "If a course of study is not forgotten completely, the concern of a language teacher is the nature of the memories taken away from the course" (p.28). As discussed before, the performed culture pedagogy approach provided many fundamental guidelines for L2 teachers to create positive and lifelong L2 memory for the students. Merging the impressive findings of the current study and Dörnyei's suggestion, in this section, the researcher proposes the pedagogical implications mainly from two aspects: First, use the mental imagery in various ways in foreign language classes to help students initiate, sustain and, and enrich their ideal L2 selves, hence to enhance their L2 motivation and ultimately benefit the students in L2 learning. Second, create a motivational style of learning environment for language learners to have a positive learning experience from which they can develop not only the L2 language skills but, more importantly, the culturally appropriate communicative skills and cultural awareness which are necessary for the students to achieve their ideal L2 selves.

Guide students to use mental imagery to ignite, cultivate, and promote their ideal L2 selves. In the L2MSS framework, the ideal L2 self is a core construct. The ideal L2 represents the L2 learners' hope, aspirations, and wishes of using the L2 in their life (Higgins 1987, 1998). Boyatzis and Akrivou (2006) pointed out, as soon as the ideal self is activated, it "promotes the

development of a person's learning agenda and then a more articulated learning plan, experimentation and practice with new behavior, feelings and perceptions" (p. 628). Dörnyei & Kubanyiova (2014) argued that the biggest challenge for many L2 learners to construct the ideal L2 self is that they lack the properties and skills to create the desired language-self image in general. One solution is to help the L2 learners to offer them the elements of the visions of the ideal L2 self and guide them to practice using these elements to construct the desired visions. They argued that teachers need to seek "guiding them (the students) through a number of possible selves that they have entertained in their minds in the past, and presenting powerful role models as templates for crafting their own ideal language selves." (p.35) However, how to guide the students to achieve this goal and what elements should the L2 teachers use are the questions on the discussion. The researcher, basing on the findings in this current study, suggests that the teachers consider strategies of using images in their class activities design. There are two reasons which support this suggestion. First, the findings indicate that students' mental imagery skills (ready and prepared to use mental imagery in learning Chinese) significantly impact their ideal L2 self.

In the study, the researcher observed and concluded two functions of the images and visuals when they were used in the classes designed according to the performed culture pedagogy.

Function 1. Images as the prompts used in drills on grammar and vocabulary.

Function 2, Images as the background environment to set the contexts of the dialogues and communications.

Walker (2010) argued that social life is a sequence of *performances* that include the five elements of specified times, places, roles, scripts, and audiences. With all of these five elements, people can construct the visions of the events and can interpret the meaning. The two functions of the images used in the class help the students to obtain the five elements. Thus, the students can use the teacher-provided images to construct the *places*, *roles*, *specified times,* and *audience* of the *imagined* situations within which they need to use Chinese. The L2 teachers need to select proper images that are not only compatible with the class content, but also authentic for the target culture. The focal students' voices revealed that they feel one way the images can help them to imagine their ideal Chinese selves is that these images are authentic and reflect how life indeed looks like in China.

Furthermore, it is not enough to only use the images or visuals to set the contexts of using the L2. Teachers need to give more details of verbal descriptions and consider using props. For example, He Xiao described how Yang laoshi created a real-life-like scenario by using a photo of a taxi in China, two chairs, and a verbal explanation of the time and the roles. The student commented that the teacher's strategy is very useful, and "that helps! I'm like, okay, oh, that's the situation, and I can see!" (excerpt 25). Visions and imagined situations are successfully constructed in the student's mind, which are the critical components of the ideal L2 self.

When teachers use the visuals and images for function 1, they have options to choose the images or visuals in the following categories:

1) Objects such as Coke Cola Cans with English texts OR Coke Cola Cans with Chinese texts;

2) People such as Chinse teachers OR American teachers;

3) Locations such as American banks/post offices, Chinese banks/post offices OR cartoon banks/post offices;

As reported in the last chapter, the readiness of using mental imagery has a significant impact on learners' ideal L2 self and self-reported efforts. By contrast, the vividness of mental imagery has no effects on the above two factors. This result revealed that the students have more attention and more sensitive to images, which can help them to trigger or ignite the imagined images in their minds. However, they do not spend efforts on creating the details of the images to achieve better vividness, such as whether or not the people in the scenarios are Chinese or American. Therefore, in their opinions, they prefer the images or visuals to either have Chinese characters (the written texts of the Chinese language) on them or are the actual objects or locations in China. As a result, CFL teachers can choose the realistic photos of commonly seen facilities, street scenes, landmarks in China, and objects with Chinese characters on them.

In the last chapter, the results extracted from student interviews and reflectional journals indicate that after a semester of practice using the mental imagery in the Chinese II course, all the focal students could generate more complex ideal L2 Chinese selves visions. Compared with the descriptions that the students wrote at the beginning of the semester. The illustrations contained both richer details and more varied contexts.

Create motivational and culturally authentic learning experiences for L2 students. In the framework of L2MSS, numerous studies have been done to investigate the two self-guides, the ideal L2 self, and the ought-to L2 self. However, the other important construct, the L2 learning experience, is still understudied and not thoroughly defined. One possible reason for this held-back status of this factor is the researchers' "uncertainty of how the broad concept of

experience could be translated into specific and measurable terms." (Dörnyei, 2019, p.24). Ushioda (2011) also commented that currently, we have not discovered or established a robust framework to connect the situated and contextual L2 learning experience and self-related images in the future. Facing this theoretical difficulty, Dörnyei (2019) also proposed to use the notion of "engagement" (p. 24) to gain a better understanding of the nature of the L2 learning experience. Thus, he decomposed the engagement into five elements: *school context, syllabus and the teaching materials, learning tasks, one's peers,* and *teacher*. The last part of this section has discussed the teaching materials (uses of images and visuals in CFL classes), in the following pages, the researcher focuses on *the learning tasks* first, followed by the item of *one's peer*. At last, the researcher proposes the implication suggestions for CLF teachers from the performed culture perspective on how to create motivational and positive learning experiences for Chinese L2 students.

In the current study, students rated four class activities as the most useful tasks which can help them improve their ideal L2 selves. These four activities are:

1. doing drills according to the visual prompts (photos, pictures, ppt) (M=5.24);

2. performing the dialogue (M=5.23);

3. oral interview (M=5.22)

4. interpretation activity (M=5.16).

Dörnyei and Kubanyiova (2014) suggested that L2 teacher's mission is not only constructing "specific future images" (p.45) for their students but, more importantly, providing "tasters" (p.45) of various possible selves for the students to experience. They also argued that

teachers need to create intercultural encounters in a total immersion environment. The four activities included and discussed in the current study are realistic examples of the "tasters." Students performing different roles in dialogues and communicative oral drills (activities 1 and 2) is the rehearsal of being their potential ideal selves in the future. Compared to activities 1 and 2, which both are shorter casual communications, activity 3 (oral interview) and activity 4 (interpretation activity) need to be carried out in professional contexts. While doing these two activities, the students engaged in more prolonged and formal conversations. These activities are various imagined situations in which the students need to imagine their ideal Chinese selves and use Chinese to accomplish the tasks. They are the applications and operationalization of the teaching strategy of "remembering the past to imagine the future" (Dörnyei & Kubanyiova, 2014, p.18). Students construct, practice, nourish, and develop their ideal L2 self (L2 motivation) through the learning experience of doing these activities in class.

From the perspective of performed culture pedagogy, learning a language is the experience of participating in the target culture (Walker, 2010). Walker argued that language learners' knowledge of a particular culture and language is just the basis for their participation in the social interaction with the speakers of the L2. "It just gets us into the game" (Walker, 2010, p5). The critical factor which determines the L2 communication to be successful is the culturally appropriate behaviors. The successful experience of using the L2 will motivate the L2 learners and help them build their confidence. Thus, the teacher's role is to help the students acquire both linguistic skills and cultural awareness of the target language. Walker (2010) advocated 1) learning to perform the L2 culture can entail the learners crafting a memory of the L2 culture, and 2) L2 teachers can use pedagogical strategies to create simulated situations and devices which facilitate students' memory construction of the L2 culture. All the memories described by

Walker are the components of the L2 learners' learning experience. The L2 learners' imaged selves constitute a significant part of these memories. Noda (2010) even concluded that "if the learners do not have a useable cultural memory that prepares them for future performance in the target culture, the [language] courses have failed part of a language program." (p.29). Therefore, the CFL teachers need to help the students to raise their cultural awareness in the class activities. Feedback should be given not only on students' pronunciation and grammar but also on their behaviors of using Chinese.

Another robust factor in the positive learning experience is the peer students in the L2 class. The peers have multiple influences on an L2 learner, but based on the highlight of the research findings, the researcher only emphasizes the influence of the *role-model*. In their book, Dörnyei and Kubanyiova (2014) quoted Albert Einstein to emphasize how vital a role-model is: *Setting an example is not the main means of influencing another; it is the only way*. A person obtained outstanding accomplishment can help the observers to visualize their own success. The presence of role-model(s) is an essential element to create a positive and motivating L2 learning environment and experience.

As revealed in Chapter Four, several focal students shared how Yang laoshi (one of the course instructors) inspired and motivated them. As an English speaker, Yang laoshi could achieve a superior level of using Chinese. Thus, this teacher became a role-model of the students who are also English speakers learning Chinese as an L2. Yang laoshi's experience also gave the students the confidence that success in learning Chinese is plausible. CFL teachers who are Chinese native speakers can observe the whole class look for the excellent student(s) who can be the peer role-model for other students.

Limitations, Delimitation Strategies, and Suggestions for Future Studies

Despite the theoretical, methodological, and pedagogical significance reported above, there are some limitations to the current study in its scope; the researcher applied some strategies as delamination. First, this is a small-size study. Chinese is a less commonly taught language in the U.S. By nature; there is a limited number of students who are enrolled in the CFL program every year. The current study's goal is to focus on the performed culture pedagogy used in the investigated CFL program; thus, it was conducted on one research site. Therefore, the researcher cannot get a large number of participants to fill the 6-point Likert-scale questionnaire, and the findings of the quantitative data might not be widely representative. As a result, for future studies, the researcher suggests administering the questionnaire on different research sites to test the results of the current study.

Second, the major data used in this study included various self-reported data collected through questionnaires, interviews, and reflectional journals. The issue of the self-reported data is that its reliability can rarely be independently verified. The researcher's delimitation strategy is incorporating multiple types of instruments to collect different types of self-reported data. To answer each research question, the researcher collected, analyzed, and compared different types of self-reported data. In this way, these data can be used to test the consistency of the findings across different data sources. Additionally, the researcher also conducted classroom observation to observe the participants' behaviors and performance in actual classes. The observation data is used to provide a different dimension of the understanding of the research questions, as well as triangulation for data collected through interviews and reflective journals.

Third, the lack of prior studies done on the same topics is another limitation. The current study aims to explore the pedagogical implications of the L2MSS and to investigate CFL learners' motivational profiles using the framework of L2MSS. Both of the two topics are understudied, and there are very few empirical studies that can be used as recourses for methodology design. For delimitation, the researcher adopted different data collection instruments that were used and tested in studies done on similar topics. Additionally, the researcher adopted a parallel mixed-method design that is robust and powerful to yield rich data and findings. However, as pointed out by Teddlie and Tashakori (2008), it is challenging for researchers to conduct because of the complexity of running different data collection and analysis work simultaneously.

Nonetheless, on the other hand, the parallel mixed-methods design (Teddlie & Tashakori, 2008) is also chosen and complete by many investigators to conduct their dissertations. It is challenging but also feasible. For future studies that choose the same design and similar research interests, the researcher suggests that the projects can be carried out by a collaborative team of scholars to reduce the workload and increase the insights on data analysis and conclusion drawing.

At last, based on some interesting findings of the current study, the researcher would like to propose the following suggestions for future studies which 1) investigate L2 motivation using the L2MSS framework, and 2) explore CFL learners' motivation and pedagogy.

First, although the between-system interconnectedness and interaction between other cognitive systems and the L2MSS were investigated and discussed by many scholars (Henry, 2014; Larsen-Freeman & Cameron, 2018), the dynamic interactions between different self-

related motivators included in the L2MSS framework were less discussed in previous studies. Future researchers need to devote more efforts to study the inter-relation and interaction among the three self-related motivators, the ideal L2 self, the ought-to L2 self, and the anti-ought-to L2 self. Second, at the level of methodological design, the researcher advocates that more future studies can be done using the mixed-methods design to collect various types of data and adopt different data analysis methods. The findings of the current study indicate that when the quantitative data failed to detect the correlation between the ideal L2 self and the anti-ought-to L2 self, the analysis of multiple types of qualitative data revealed the interaction between these two motivators. Using the mixed-method design in L2 motivation research can help to reduce the chances that we overlook or neglect important findings.

Meanwhile, the current study found the impact of using different aspects of mental imagery on building up the students' ideal L2 self. Future studies should be carried out in different contexts to verify this result, along with the related pedagogical strategies proposed by the researcher. On the other hand, CFL scholars and researchers need to be aware of the unique characteristics of the CFL students' ought-to selves. The participants in the current students demonstrated positive responses to the perceived obligations and responsibilities to learn Chinese. More studies should be carried out to investigate if this result is still valid for CFL students in other contexts (different programs and different pedagogical approaches).

Conclusion

This study has investigated that the ideal L2 self is a crucial motivator for CFL learners and has significant impacts on their learning efforts. The CFL learners had developed their ideal Chinese selves through participating in several in-class activities designed by the principles of

the performed culture pedagogy. In students' voices, the newly proposed factor, anti-ought-to L2 self, has emerged as a powerful and independent motivator.

Furthermore, the findings also revealed that the three self-related motivators are integrated and interacted with each other. The dynamic relationship between the three self-guides results in students' strong Chinese motivation. Interestingly, through the interview data, the ought-to L2 self presented positive effects on students' learning efforts and holistic Chinese motivation construct. This result shows a different pattern with the previous L2MSS studies, which found the ought-to L2 self has inconsistent or negative effects on L2 learning.

On the other hand, the current study yielded exciting results concerning the effects of mental imagery uses. The readiness of using mental imagery has statistically significant positive impacts on students' ideal L2 self and L2 learning efforts. The study on mental imagery should be expanded in future research. The researcher also proposed pedagogical implications on how to use different types of images or visuals in-class activities to help students practice using mental imager in L2 learning. Inspired by the performed culture pedagogy, pedagogical strategies are also discussed for the CFL teachers to help student students to imagine, establish, and develop their ideal L2 selves.

Both the L2MSS and the performed culture pedagogy emphasize and value the importance of contextual factors in L2 learning. Applying the performed culture pedagogy in teaching can be beneficial to provide positive L2 learning experiences to the students. It is valuable to bridge these two approached in future research to enrich our understanding of L2 motivation.

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APPENDICES

Appendix A. Questionnaire on Chinese L2MSS,

1. Please list the Chinese classes you are taking in this semester (language and culture classes)

_____

2. How long have you been learning Chinese? _____Year(s) _____Month(s)

3. Your gender: A. Male B. Female

4. Where have you been learning Chinese? A. USF B. Other venues (please specify)

---

5. How many hours approximately do you spend in learning Chinese per week? _____

6. In your family, does anyone speak Chinese as his/her native language? If yes, please specify that person(s)'s relation to you, and how/if that person influences your Chinese learning.

_____

_____

7. If you feel comfortable, please provide your email_____

8. If you have already agreed to participate in the interview, please provide your name_____

Please rate the following statements based on your own Chinese language learning experience. Use the scale 1 to 6 to rate your opinion of each statement:

1= Strongly disagree, 2= Disagree, 3= Somewhat Disagree, 4= Somewhat Agree, 5= Agree,

6= Strongly Agree.

Section A

1) I am studying Chinese because it is a challenge.

1	2	3	4	5	6

2) I study Chinese because close friends of mine think it is important.

1	2	3	4	5	6

3) I want to prove others wrong by becoming good at Chinese that I am studying.

1	2	3	4	5	6

4) My parents encouraged me to study Chinese.

1	2	3	4	5	6

5) I can imagine myself studying at a university where all my courses are taught in Chinese.

1	2	3	4	5	6

6) I chose to learn Chinese despite others encouraging me to study something different (another language or a different subject entirely).

1	2	3	4	5	6

7) Learning Chinese is necessary because people surrounding me expect me to do so.

1	2	3	4	5	6

8) Whenever I think of my future career, I imagine myself using Chinese.

1	2	3	4	5	6

9) I enjoy a challenge with regard to Chinese learning.

1	2	3	4	5	6

10) I consider learning Chinese important because the people I respect think that I should do it.

1	2	3	4	5	6

11) I can imagine a situation where I am speaking Chinese with other people in the future.

1	2	3	4	5	6

12) If I fail to learn Chinese, I'll be letting other people down.

1	2	3	4	5	6

13) I can imagine myself speaking Chinese with international colleagues.

1	2	3	4	5	6

14) Studying Chinese is important to me in order to gain the approval of my peers/teachers/ family/boss.

1	2	3	4	5	6

15) I can imagine myself living abroad and using Chinese effectively for communicating with the locals.

1	2	3	4	5	6

16) I have to study Chinese because if I do not study it, I think my parents will be disappointed with me.

1	2	3	4	5	6

17) I would like to reach a high proficiency in Chinese, despite others telling me that it will be difficult or impossible.

1	2	3	4	5	6

18) I can imagine speaking Chinese as if I were a native speaker of Chinese.

1	2	3	4	5	6

19) Learning Chinese is necessary because people surrounding me expect me to do so.

1	2	3	4	5	6

20) I am studying Chinese because it is something different or unique.

1	2	3	4	5	6

21) I am studying Chinese even though most of my friends and family members don't value foreign language learning.

1	2	3	4	5	6

22) I want to speak Chinese because it is not something that most people can do.

1	2	3	4	5	6

23) I can imagine myself writing Chinese emails/letters fluently.

1	2	3	4	5	6

24) I want to study Chinese, despite other(s) telling me to give up or to do something else with my time.

1	2	3	4	5	6

25) Studying Chinese is important to me because other people will respect me more if I have a knowledge of Chinese.

1	2	3	4	5	6

26) The things I want to do in the future require me to use Chinese.

1	2	3	4	5	6

27) It will have a negative impact on my life if I don't learn Chinese.

1	2	3	4	5	6

28) I am studying Chinese because I want to stand out amongst my peers and/or colleagues.

1	2	3	4	5	6

29) In my Chinese classes, I prefer material that is difficult, even though it will require more effort on my part, as opposed to easier material.

1	2	3	4	5	6

30) I imagine myself as someone who is able to speak Chinese.

1	2	3	4	5	6

Section B

31) If my teacher wanted someone to do an extra Chinese assignment I would certainly volunteer.

1	2	3	4	5	6

32) If Chinese course was offered in the future, I would like to take it.

1	2	3	4	5	6

33) Considering how I study Chinese, I can honestly say that I really try to learn Chinese.

1	2	3	4	5	6

34) I'm prepared to expend a lot of efforts in learning Chinese.

1	2	3	4	5	6

35) If I could have access to Chinese-speaking TV shows or other programs, I would try to watch them often.

1	2	3	4	5	6

36) If I had the opportunity to speak Chinese outside of class, I would do it as much as I can.

1	2	3	4	5	6

37) If When I hear a Chinese song, I listen carefully and try to understand the words.

1	2	3	4	5	6

38) In addition to the class assignments, I practice writing and reading Chinese as much as I can.

1	2	3	4	5	6

39) If I heard Chinese conversations outside of class, I try my best to catch the conversations.

1	2	3	4	5	6

Section C

40) If I wish, I can imagine how I could successfully use Chinese in the future so vividly that the images and/or sounds hold my attention as a good movie or story does.

1	2	3	4	5	6

41) Sometimes images of myself using Chinese successfully in the future come to me without the slightest effort.

1	2	3	4	5	6

42) When imagining how I could use Chinese fluently in the future, I usually have a vivid mental picture of the scene.

1	2	3	4	5	6

43) I find it easy to “play” imagined scenes and/or conversations in my mind.

1	2	3	4	5	6

44) My dreams of myself using Chinese successfully in the future are sometimes so vivid I feel as though I actually experience the situations.

1	2	3	4	5	6

45). It is easy for me to imagine how I could successfully use Chinese in the future.

1	2	3	4	5	6

46). I can have several vivid mental pictures and/or sounds of situations when I’m imagining myself using Chinese skillfully in the future.

1	2	3	4	5	6

47). I think I have a natural ability to visualize myself using Chinese successfully in the future.

1	2	3	4	5	6

48). When I’m imagining myself using Chinese skillfully in the future, I can usually have specific mental pictures.

1	2	3	4	5	6

49). I have always found it easy to visualize imagined situations.

1	2	3	4	5	6

Section D

50) I found performed the dialogue is helpful for me to imagine communicating with Chinese native speakers.

1	2	3	4	5	6

51) I found that making my dialogues and performed it is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

52) I found in the movie class, telling stories from different people’s perspectives is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

53) I found in listening and speaking class, when the teacher using various the contexts and ask me to practice the sentence patterns, it is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

54) I found the use of visual aids (photos, pictures, ppt) in class; it is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

55) I found that the "interpretation" activity I do in class is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

56) I found that doing the "oral interview" is helpful for me to imagine communicating with Chinese native speakers in real situations.

1	2	3	4	5	6

Appendix B. Interview protocols with the focal student participants

First interview:

1. Why do you learn Chinese? Is there any particular story related to your choice?

2. Can you tell me about any interesting stories that happened while studying Chinese? For example, challenges and successes?

3. Did you learn, or are you learning any other languages? Is that experience the same or different from your experience of learning Chinese? In what way?

4. How do you like the Chinese program here?

5. What is your opinion on the content you learn in Chinese class?

6. How do you like the class activities? Do you think they are useful? In what ways?

7. How do you like the teaching methods used in this Chinese program? Any advantages and disadvantages? Can you give me some examples to support your opinion?

8. What is the most impressive feature of the teaching method used in your Chinese program?

9. Can you imagine yourself in the future success using Chinese? If yes, how? If not, what is the reason that prevents you from doing that?

10. Do you think the image of yourself speaking Chinese in the future has changed during the past few months? Why?

11. Do you think the class activities are helpful for you in your communication with other Chinese speakers? If yes, in which way(s) do you think they are helpful?

12. Have you been to China? Do you feel that the context and content of the communication with the local people are very familiar to you? How so?

13. If you have been to China, in which ways do you find the class activities useful for your study there? If you haven't been to China, in which ways do you think class activities can possibly help your communication with local people there?

Second interview:

1. Overall, how do you feel about your Chinese learning experience this semester?
2. You mentioned that (different activities that varied across different focal participants) are very useful for you to imagine using Chinese. Why do you think it's useful? Can you see the scenarios when you are using these contents?
3. Do you think the class activities are helpful for you in your actual communication with other Chinese speakers? If yes, in which way(s) do you think they are helpful?
4. In class, when students are having problems with answering questions, the teachers neither gave help immediately nor let other students help. What do you think of it? Do you think it's helpful for learning?
5. When students said something wrong in Chinese, teachers exaggerated the responses or pretended they didn't understand what the students said. What do you think of this kind of response? Is it helpful?
6. When students have pronunciation or tone problems, the teachers let the students repeat the sentence again and again till they can speak it correctly. What do you think of it? Is it helpful? How do you feel in this scenario?

7. How do you like the pictures the teachers used in class? Which picture do you like and why?

[Picture 1A is an empty plate which implies the meal has been eaten]

[Picture 1B is a shape of tick which indicates affirmative answer]

[Picture 2A is a soft drink can with English on it]

[Picture 2B is the same drink but with Chinese on it]

[Picture 3A is a teacher who is an American person]

[Picture 3B is a teacher who is a Chinese person]

[Picture 4A is a Chinese bank with a Chinese word *银行(bank)* on it]

[Picture 4B is an American ban with an English work *Bank* on it]

[Picture 4C is a cartoon building image with the symbols of US dollar on it]

[Picture 5A is a Chinese post office with the Chinese words 中国邮政 (China Post) on it]

[Picture 5B is a U.S. post office with the English on it]

[Picture 5C is a cartoon post office with an image of mails on it]

8. When you are doing the drills in class, do you feel bored or mechanic or not real? If yes, do you have suggestions? If no, what did the teacher do to make it real and enjoyable?

9. Do you like the learning environment of your Chinese classes? The teacher, the textbook, classmates, etc.

10. How do you like the interpretation class? And how about the oral interview? Would you like to do more interpretation and oral interview activities?

11. Through the semester, how do you feel about your ability to imaging using Chinese? Any development? Can me give some sample scenarios that you are using Chinese in China? What did the teacher do to help you make this development?

Appendix C. Interview protocols with the teacher participant

1. How long have you been teaching Chinese and where did you teach?
2. How did you learn the performed culture pedagogy?
3. When you design class activities, what principles do you follow? Please give me some detailed examples.
4. In your opinion, are the class activities are effective and/or useful for the student? If yes, in which way do you see them effective and useful? If not, please give reasons or/and any observations.
5. Are your students are motivated to learn Chinese? How do you know?

Appendix D. Field Observation Form for Student Participants

Date & Location: Class Content:		Participant pseudonym:
How well the student prepared for the class?	How well did the student perform the dialogue?	
	How well was the student able to use the new vocabulary?	
	How well was the student able to use the knowledge in variation practice?	
How active was the participant in class?	When the teacher addressed any question to the whole class, did the student voluntarily give answers? If yes, how many times?	
	When other students failed to give answers, did the student volunteer to help? If yes, how many times?	
How attentive the student is?	Did the students raise questions? How many times?	
	Any distracted behaviors?	
Other Features such as interesting responses and quotes)		
notes		

Appendix E: Biweekly learning reflection journals instruction and prompt

Week 2-3 (The first journal):

1. “Ideal self” is a concept in social psychology. It means the “ideal” person that you desire to be. We can apply this concept in some specific areas. For example, think about your role as a son/daughter in your family. In your opinion, what attributes should an “ideal son/daughter” possess? (such as being able to make parents happy, meet parents’ expectations, can help the parents when they need assistance, so on, and so forth.) These attributes make the image of your “ideal son/daughter self,” which means what kind of “ideal son/daughter” that you want to be in an ideal world?

   Now, imagine in the ideal world, what can you do if you can successfully use Chinese to communicate with other people? Let’s say that the person in this situation is your “ideal Chinese self.” What does your “ideal Chinese self” look like? What would you do with this ability? What type of situations would you use it for? Please give a detailed description. Note that the image can have multiple aspects, and you can write whatever comes to your mind.

   Here I also provide a short description of my “ideal Japanese self” (Japanese is my third language)

   I imagine that in the ideal world, I can speak Japanese fluently with other people (native or non-native Japanese). I can live in Japan and communicate with the locals without difficulties. Probably I will work in a college or university, using Japanese to teach linguistics to the students in my class. I can also make friends with my colleges and neighbors by speaking Japanese to them, not relying on English. I can read various types

of books written in Japanese and can write letters/emails to my friends. Probably, I can do some part-time translation or interpretation jobs.

Now, please describe your "ideal Chinese self."

2. During this week, what class activity helped you imagine yourself using Chinese in the future? Explain.
3. Which activity do you think is helpful for you to achieve your "ideal Chinese self"?
4. What is the biggest challenge of learning in the class? Does it make you feel like giving up? What makes you continue on?
5. Do you feel any obligation to study Chinese? What kind of obligations? (e.g., pressure from family members, the influence of your friends, sense of responsibility to someone or society)
6. Did you talk to any Chinese people in these two weeks? Who is that person, and what did you talk about? Did the communication go well? Why or why not? Do you feel the activities you did in your Chinese class helpful for your communication? If yes, in which ways? If not, what suggestions do you make for future class activities design?

Week4-Week 14

1. During these two weeks, what class activity helped you imagine yourself using Chinese in the future? Explain.
2. Which activity do you think is helpful for you to achieve your "ideal Chinese self"?
3. What is the biggest challenge of learning in the class? Does it make you feel like giving up? What makes you continue on?

4. Did you talk to any Chinese people in these two weeks? Who is that person, and what did you talk about? Did the communication go well? Why or why not? Do you feel the activities you did in your Chinese class helpful for your communication? If yes, in which ways? If not, what suggestions do you make for future class activities design?

Week 15. (the final journal)

1. At the beginning of this semester, you wrote a short passage about your "ideal Chinese self." Now review it, and are there any changes? If yes, please explain it. What is your "ideal Chinese self" now? What is the reason for the changes (if any)?
2. During these two weeks, what class activity helped you imagine yourself using Chinese in the future? Explain.
3. Did you talk to any Chinese people in these two weeks? Who is that person, and what did you talk about? Did the communication go well? Why or why not? Do you feel the activities you did in your Chinese class helpful for your communication? If yes, in which ways? If not, what suggestions do you make for future class activities design?

4. During the whole semester, what is the biggest challenge of learning in the class? Does it make you feel like giving up? What makes you continue on?

Appendix F. Items list organized by different research interests

Items Designed for L2 Motivators from the L2MSS Approach

The Ideal L2 self

2) I can imagine myself living abroad and having a discussion in Chinese.

5) I can imagine myself studying at a university where all my courses are taught in Chinese.

8) Whenever I think of my future career, I imagine myself using Chinese

11) I can imagine a situation where I am speaking Chinese with foreigners.

13) I can imagine myself speaking Chinese with international colleagues.

15) I can imagine myself living abroad and using Chinese effectively for communicating with the locals.

18) I can imagine speaking Chinese as if I were a native speaker of Chinese.

23) I can imagine myself writing Chinese emails/letters fluently.

26)The things I want to do in the future require me to use Chinese.

30)I imagine myself as someone who is able to speak Chinese.

The Ought-to L2 self

2) I study Chinese because close friends of mine think it is important.

4) My parents encouraged me to study Chinese.

7) Learning English is necessary because people surrounding me expect me to do so.

10) I consider learning Chinese important because the people I respect think that I should do it.

12) If I fail to learn Chinese, I'll be letting other people down.

14) Studying Chinese is important to me in order to gain the approval of my peers/teachers/ family/boss.

16) I have to study Chinese because if I do not study it, I think my parents will be disappointed with me.

19) My parents believe that I must study English to be an educated person

25) Studying Chinese is important to me because other people will respect me more if I have a knowledge of Chinese.

29) It will have a negative impact on my life if I don't learn Chinese.

The Anti-ought-to L2 self

1) I am studying Chinese because it is a challenge.

3) I want to prove others wrong by becoming good at Chinese that I am studying.

6) I chose to learn Chinese despite others encouraging me to study something different (another language or a different subject entirely).

9) I enjoy a challenge with regard to Chinese learning.

17) I would like to reach a high proficiency in Chinese, despite others telling me that it will be difficult or impossible.

20) I am studying Chinese because it is something different or unique.

21) I am studying English, even though most of my friends and family members don't value foreign language learning.

22) I want to speak Chinese because it is not something that most people can do.

24) I want to study Chinese, despite other(s) telling me to give up or to do something else with my time.

27) I am studying Chinese because I want to stand out amongst my peers and/or colleagues.

28) In my Chinese classes, I prefer material that is difficult, even though it will require more effort on my part, as opposed to easier material.

Items Designed for the Self-reported Learning Efforts

31) If my teacher wanted someone to do an extra Chinese assignment, I would certainly volunteer.

32) If Chinese course was offered in the future, I would like to take it.

33) Considering how I study Chinese, I can honestly say that I really try to learn Chinese.

34) I'm prepared to expend a lot of effort into learning Chinese.

35) If I could have access to a Chinese-speaking TV station, I would try to watch them often.

36) If I had the opportunity to speak Chinese outside of class, I would do it as much as I can.

37) If When I hear a Chinese song, I listen carefully and try to understand the words.

38) In addition to the class assignments, I practice writing and reading Chinese as much as I can.

39) If I heard Chinese conversations outside of class, I try my best to catch the conversations.

Items Designed for the Mental Imagery

The readiness of using mental imagery

41) Sometimes images of myself using Chinese successfully in the future come to me without the slightest effort.

43) I find it easy to "play" imagined scenes and/or conversations in my mind.

45) It is easy for me to imagine how I could successfully use Chinese in the future.

47) I think I have a natural ability to visualize myself using Chinese successfully in the future.

49) I have always found it easy to visualize imagined situations.

The vividness of using mental imagery

40) If I wish, I can imagine how I could successfully use Chinese in the future so vividly that the images and/or sounds hold my attention as a good movie or story does.

42) When imagining how I could use Chinese fluently in the future, I usually have a vivid mental picture of the scene.

44) My dreams of myself using Chinese successfully in the future are sometimes so vivid I feel as though I actually experience the situations.

46). I can have several vivid mental pictures and/or sounds of situations when I'm imagining myself using Chinese skillfully in the future.

48). When I'm imagining myself using Chinese skillfully in the future, I can usually have specific mental pictures.

Items Designed for Students' perceived usefulness of the class activities that help them to image the authentic context and situations where L2 communication happens

50) I found performed the dialogue is helpful for me to imagine communicating with Chinese native speakers.

51) I found making my own dialogues and performed it is helpful for me to imagine communicating with Chinese native speakers in real situations.

52) I found in the movie class, telling stories from different people's perspectives is helpful for me to imagine communicating with Chinese native speakers in real situations.

53) I found in listening and speaking class, when the teacher using various the contexts and ask me to practice the sentence patterns, it is helpful for me to imagine communicating with Chinese native speakers in real situations.

54) I found the use of visual aids (photos, pictures, ppt) in class; it is helpful for me to imagine communicating with Chinese native speakers in real situations.

55) I found the "interpretation" activity I do in class is helpful for me to imagine communicating with Chinese native speakers in real situations.

56) I found doing the "oral interview" is helpful for me to imagine communicating with Chinese native speakers in real situations.

Appendix G. IRB Approval

USF
UNIVERSITY OF SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

January 17, 2017

Yao Liu
Teaching and Learning
Tampa, FL 33613

RE: **Expedited Approval for Initial Review**
IRB#: Pro00029040
Title: L2 Chinese students' learning experience and pedigogical applications for teachers

Study Approval Period: 1/17/2017 to 1/17/2018

Dear Yao Liu:

On 1/17/2017, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

Approved Item(s):
Protocol Document(s):
Yao Liu_IRB Research protocol.docx

Consent/Assent Document(s)*:
Yao Liu_SB Adult Minimal Risk_Student Participants.docx.pdf
Yao Liu_SB Adult Minimal Risk_Teacher Participant.docx.pdf
Yao Liu_SB Online or Paper Survey Consent Form (No Signature Line).docx (granted a waiver)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s). Waivers are not stamped.

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

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

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

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context. (Online consent).

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

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

Sincerely,

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

USF
UNIVERSITY OF
SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

5/25/2017

Yao Liu
Teaching and Learning
4207 Winding Moss Trail.#J101
Tampa, FL 33613

RE: **Expedited Approval of Amendment**
IRB#: Ame1_Pro00029040
Title: L2 Chinese students' learning experience and pedigogical applications for teachers

Dear Yao Liu:

On 5/24/2017, the Institutional Review Board (IRB) reviewed and **APPROVED** your Amendment. The submitted request and all documents contained within have been approved, including those outlined below, as described by the study team.

1. In the original design, the study team planned to observe every focal participant for six times in their class. Now, they request to add two more observations toward the end of the data collection period. Therefore, they need to make an amendment on the focal participants' consent form. In the original consent form, the participants were told that they would be observed for six times. Now they need to change six times to eight times. The participants will be able to review the amended consent form, and then voluntarily decide if they agree to be observed for two more times.

There are two reasons for adding more observation. The first reason for this change is based on the current data collection results. First, they found that the participants showed very diverse patterns of their class performance. Therefore, more observations are needed so the PI can more confidently illustrate a complete picture of the participants' Chinese learning experience.

Second, through talking to the course instructor, they knew that toward the end of the semester, there would be more class activities focusing on reviewing the learned contents of the whole semester. It will be very helpful if they can do more observations during this period to see students' Chinese learning results.

2. They need to add one new teacher as my non-focal teacher participant. This teacher also taught the student participants. This teacher will be a non-focal teacher participant. It means that this teacher will not be observed. PI will just carry out one interviewed with this non-focal teacher participant.

Therefore, they need to add a consent form for this new non-focal teacher participant to agree to do the one interview with me. They will use different interview guide as for the focal teacher participant.

The reason for making these two amendments is because from the first round interview data, most of the participants mentioned this teacher as their role-model. They also mentioned some characteristics of this teacher, and these characteristics are closely related to a key construct in my study. It will be very helpful for my study if the PI can interview this teacher. So they can do a more thorough and deeper discussion in my

dissertation.

3. Due to the changes above, they also need to make changes on my main application and research protocol. Originally only one teacher participant was involved. Now they need to recruit another teacher participant. They will use different interview guide with this newly added teacher participant. Originally they planned to do 6 times of class observation with the students, while now they need to add two more times of observation.

Approved Item(s):

Protocol Document(s):

Yao Liu_IRB Research protocol Revision Clean Version_2.4.19.2017.docx

Consent Document(s)*:

Yao Liu_SB Adult Minimal Risk_Non-Focal Teacher Participant.docx.pdf
Yao Liu_SB Adult Minimal Risk_Student Participants Revision Clean Version 2_4.19.2017.docx.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab on the main study's workspace. Please note, these consent/assent document(s) are valid until they are amended and approved.

The IRB requires that subjects be reconsented as the revisions to the consent form are substantive and require that subjects be informed.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with USF HRPP policies and procedures and as approved by the USF IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

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

Sincerely,

John A Schinka, Ph.D.

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

Appendix H. Copyright Permissions

request for the L2 imagery questionnaire use in your 2015 study

3 messages

Yao Liu <yaoliu@mail.usf.edu> Tue, Apr 26, 2016 at 1:12 PM
To: youcj2008@gmail.com

Hello Dr.You,

I read your paper published on Language Learning in 2015. The paper's title is Motivation, Vision and Gender: A survey of learners of English in China. I found your study is very interesting and inspiring to me. I'm a phd candidate and now writing my dissertation proposal. My dissertation topic is very related to your study, investigating the link between mental imagery, ideal L2 self and motivation of my students.

If it's proper and no too much trouble, do you mind sharing the 73-item survey about the mental imagery? This concept is very new to me and I'm working on operationalize it in my study. Your instrument has been tested in the study and I believe it will be greatly helpful for me. I will also share my findings (if any) with you when my dissertation is done.

I appreciate your time and help. Have a good day.

Sincerely,
Yao Liu

PhD Candidate of Second Language Acquisition & Instructional Technology (SLA/IT)
USF Chinese Program Teacher
WLE Lab Chinese Tutor
Department of World Languages --- CPR430
University of South Florida

> "If you talk to a man in a language he understands, that goes to his head. If you talk to him in his own language, that goes to his heart."-- Nelson Mandela

---

youcj2008 Julia <youcj2008@gmail.com> Thu, Apr 28, 2016 at 8:40 AM
To: Yao Liu <yaoliu@mail.usf.edu>

Hi Yao Liu,

Thank you very much for your email and your interest in our paper. Also happy to know that you are doing something similar to my research. I would be very happy to share the questionnaire (please see attached the three forms of it) with you. Hope everything goes well with your study.

With best wishes,

Chenjing
[Quoted text hidden]

3 attachments

Academic version.docx
17K

Chinese version.docx
47K

Questionnaire items.doc
45K

flpubs <flpubs@osu.edu>
to Minru, flpubs, me, walker.17@outlook.com

Dear Minru,

I am happy to assist. It did take a little work around to complete.

Thank you and please let your family know we wish them well!

Best,
Lauren

•••

Yao Liu <yaoliu@mail.usf.edu>
to flpubs, walker.17@outlook.com, Minru

Dear Lauren, Dr.Li, and Dr.Walker,

Thank you for granting me permission to use the figure. It's extremely helpful for my dissertation.

Take care and have a great rest of the week!

Best,
Yao

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April 2, 2020

Yao Liu
PhD Candidate, SLA/IT
USF Chinese Program Teacher
University of South Florida
Department of World Languages
4202 East Fowler Ave, CPR 107
Tampa, FL 33620-5700
Phone: 813-974-2548
yaoliu@mail.usf.edu

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