

**Use, function and understanding of metaphor in second  
language writing by Chinese university students**

**Qiuyun Lu**

Submitted in accordance with the requirements for the degree of  
Doctor of Philosophy

The University of Leeds  
School of Education

March 2021

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## Acknowledgments

My heart is full of gratitude to be expressed to those people who have helped me a lot throughout my PhD journey. It would be impossible for me to complete this thesis without their invaluable support.

First, my deep gratitude goes to my primary supervisor Prof. Alice Deignan, for your constant support, guidance, words of encouragement, especially when I was struggling during those dark nights before the dawn. You guided me to enter into the world of metaphor. I also would like to extend my gratitude to my co-supervisor, Dr. Lou Harvey, who offered me inspiring comments on my interview data. It is my great honour to have you two as my supervisors. I learned a lot from your efforts made to push me ahead to be a good researcher, such as learning new ways of academic writing in different genres and being strong when taking on new challenges.

Second, I would like to show my special thanks to Dr. Richard Badger and Dr. Martin Lamb, who are the transfer panel members in my first year of PhD study. Your suggestions have been insightful in helping me grow as a researcher at the early stage of my PhD journey. I also wish to thank Prof. Jeannette Littlemore, for acting as my external examiner; and thank Dr. Richard Badger, for acting as my internal examiner.

Third, my sincere gratitude goes to China Scholarship Council and University of Leeds, for providing me with the joint scholarship. The weekly, monthly and yearly academic and non-academic activities held by the Centre for Language Education Research (CLER) within the School of Education have been very supportive. These let me to have a diverse PhD life in Leeds.

Fourth, I also would like to thank my contacts in School of Foreign Languages at Northwestern Polytechnical University in China, for their kind support in terms of giving me permissions for visiting classrooms, doing paperwork and recruiting participants. My appreciation also goes to all the teachers and students who have contributed enormously to my research concerning my data

collection, such as sharing their writing samples and talking about their writing processes or teaching experiences actively and thoughtfully.

I also owe thanks to Weijia Zhao, for her voluntary participation in my pre-pilot study before I started my fieldwork in China; thanks to my metaphor sister Dongman Cai, who acted as an independent co-rater in my metaphor identification and vehicle grouping procedures and inspired me in terms of metaphor analysis; and thanks to another anonymous PhD researcher in School of Education, who helped improve the reliability of my interview data analysis. I also would like to mention some of my officemates in rooms 1.20 and 1.22 at Hillary Place: Dung Cao, Huiming Ding, Fereshteh Goshtasbpour, Sulaiman Al Jamoudi and Mohamed Suleiman, who shared research experiences with me, and helped me clear puzzles when we talked, had a break, and went for a walk on campus. Their generosity and friendship added passion and fun to my life and study.

Last but not least, I want to thank my husband and my grandparents. During the last year of my thesis writing, which is one of the greatest challenges I have faced in my life, my grandparents and husband have been strong supporters who brought me courage, care, joy and happiness. It is with their love and support that I am able to complete my thesis throughout this meaningful journey.



## Abstract

This research focuses on the use and function of metaphors in Chinese English majors' L2 argumentative writing, and on learners' thinking processes corresponding to their metaphor use. Through textual analysis of 134 argumentative texts collected from 39 participants, I described overall metaphor density, grammatical categories of metaphors, conventional and unconventional metaphors, and communicative functions of extended metaphors in argumentative texts. The conventional and unconventional metaphors are classified by taking L1 influence, creativity, novelty and deliberateness into consideration, with referring to a native English corpus (OECv2) via Sketch Engine when necessary. Communicative functions of extended metaphors are explored through the bottom-up analysis of systematic metaphors. The thinking processes behind learners' metaphor use are investigated by the analysis of stimulated recall interviews conducted with 21 interviewees from the 39 participants.

Results showed that my participants are able to use metaphors thoughtfully in their L2 argumentative writing. L1 influence, cited in participants' thought reports, is a major source leading to conventional metaphors, creative metaphors, innovative metaphors, and possible errors. Creative metaphors, expressed through extended metaphors at strategic stages in argumentative essays, are often the result of participants' consciously manipulation of L1 in producing L2 for various communicative purposes, such as illustrating dramatically, writing emotionally and persuading to change perspectives. Some word-for-word translations from L1 to L2 are better understood as innovative metaphors instead of errors when participants made deliberate efforts to convey meanings confidently or arouse interest. Findings from the two interviews with teachers show that learners may have more awareness than most teachers recognized about metaphor. This research will contribute to the innovation of pedagogies in L2 writing teaching and learning. Teachers may know more about L2 learners' ability to use metaphors, and the factors underlying this. Pedagogical implications on how to develop learners' metaphoric competence in L2 are thus generated.

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## List of Abbreviations

BNC	British National Corpus
CEFR	Common European Framework of References for Languages
CET-4	College English Test Band 4
CET-6	College English Test Band 6
CLAWS	Constituent Likelihood Automatic Word-tagging System
CMT	Conceptual Metaphor Theory
EFL	English as a foreign language
ELF	English as a Lingua Franca
ESL	English as a second language
ICLE	International Corpus of Learner English
L.M.	Linguistic metaphors
L2 English	Learning English as a second or foreign language
MIP	Metaphor Identification Procedure
MIPVU	Metaphor Identification Procedure VU University Amsterdam
OECv2	Oxford English Corpus (version 2)
SLA	Second Language Acquisition
SRI	Stimulated Recall Interviews
TEM-4	Test for English Majors-Band Four
TEM-8	Test for English Majors-Band Eight



## Chapter 1 Introduction

### 1.1 Background and rationale of the research

Metaphor is presented as one type of figure of speech in the intermediate academic writing textbooks designed for Chinese English majors in mainland China. Metaphor is defined and exemplified in one such textbook for fourth-semester English majors' argumentative writing learning as follows:

Metaphor: a figure of speech in which a word or phrase that ordinarily and primarily denotes one thing is applied to another in an implied comparison.

e.g. 1) The bad news was a dagger to her heart.

e.g. 2) He thinks that the economic problems his country is faced with are growing pains.

(Yang et al., 2014, pp.102-103)

Examples given in the writing textbook about metaphors in language are both conventional and poetic. In the first example, the comparison between the bad news and a dagger has been realized by the metaphorical use of the word “dagger”, which helps conceptualize the negative effects of bad news as a very small sword that can be used as weapon to cause physical harm in this specific context. The contextual meaning of “dagger” is not codified in standard dictionaries. In line with Nacey's (2017) description on novel metaphors based on her own data, the “dagger” metaphor is poetic and innovative. In the second example, the use of the verb “face” to express the metaphorical meaning of “dealing with economic problems”, and the comparison of abstract “economic problems” in terms of more concrete “growing (physical) pains”, are conventional metaphor use. Conventional and unconventional metaphor use in learners' texts is one of the primary interests in my research.

Tips on using idioms and figures of speech carefully are also given in this writing textbook (see **Appendix 9** for more information about this textbook's cover page and table of contents page). Students are told the following:

- 1) make sure you understand what an idiom means exactly, e.g., 'to eat one's words' is not equivalent to '食言 (fail to keep one's promise)' in Chinese;
- 2) avoid worn-out figures of speech, such as "as poor as a church mouse";
- 3) use figures of speech only when they fit in with the context

(Yang et al., 2014, p.103).

These metaphor examples and tips on using metaphors explicitly stated in students' intermediate writing textbook suggest that, first, Chinese English majors are likely to use metaphors for rhetoric purposes while writing argumentative essays; second, "metaphor may be difficult for L2 learners" (Nacey, 2020, p. 288). Littlemore and Low (2006a) write,

metaphor [...] account for a high proportion of precisely the aspects of a target language that learners find difficult, because they lack the necessary cultural knowledge that allows a native speaker to say 'right I've understood that expression, I can now stop processing and move on'

(Littlemore and Low, 2006a, p.23).

Littlemore and Low (2006a) argue that the lack of cultural knowledge about the target language may cause challenges for L2 learners' comprehension of figurative language. Littlemore et al. (2014) investigated the metaphor use in essays written by Greek learners of English and German learners of English across different language proficiency levels. They found that "errors and L1 influence are likely to occur at level B2" (Littlemore et al., 2014, p.143) where learners begin to use metaphors at an increased rate, to build persuasive academic argument in writing. They suggest that errors and L1 influence could be difficulties for L2 learners' use of metaphor in English writing.

It seems that Chinese English majors are also expected to utilize metaphors when they have to engage with argumentative writing and to achieve persuasive power or communicative functions. Chinese English majors may have a certain degree of metaphor awareness because of those explicit figures of speech knowledge introduced in their writing textbook. However, the writing topics are sometimes challenging for them and their production may often not

nativelike. Possible errors and L1 influence may also occur in their metaphor production, which is another interest of my research.

Metaphor has been found to be pervasive in language generally, as well as in academic writing specifically (Lakoff and Johnson, 1980; Power and Carmichael, 2007; Herrmann, 2013; Littlemore, et al., 2014; Hoang, 2015; Hoang and Boers, 2018). Research on metaphor and EFL writing have shown that metaphors can be a challenge to EFL learners at different language levels and with different language backgrounds, e.g., Spanish (MacArthur, 2010), Norwegian (Nacey, 2013), German and Greek (Littlemore et al., 2014), and Thai (Hoang, 2015). When EFL learners need to express abstract ideas in their writing, they may produce, or need to produce metaphorical language. Metaphors produced under communicative pressure may not always fit in with the context when assessed by the norms of target language. For instance, the German speaker of English's metaphor use in the sentence "the government has to force the production of bicycles" is not nativelike. The most suitable metaphor is probably "speed up" in this writing context, and "the learner uses the inappropriate metaphor 'force' based on a transfer from the German verb 'forcieren'" (Littlemore et al., 2014, p.141).

Chinese speakers of English may have the same issues. My four-year personal learning experience as an English major at a key university in mainland China gives me some insight into how Chinese English majors are taught to learn English writing, and what kind of challenges they may have during their English learning processes. As for many students around the world, e.g., Chinese university students, mastering different genres of English writing e.g., argumentative writing, narrative writing, and expository writing, is of great importance for them to succeed in high stakes English tests such as English tests for overseas study, national English language proficiency tests and English tests for job interviewing. "College English Curriculum Requirements makes it critical point that writing is the vulnerable skill for the language learners" (Zhang, 2019, p.151). The teaching of English in mainland China has paid much attention to the teaching of English writing, and "writing plays an important part in the learning process of Chinese EFL learners" (Chen and Li, 2016, p. 50).

According to the National College English Teaching Syllabus for English Majors in China and the teaching goals arranged in the academic writing textbooks mentioned above, argumentative writing is the main training objective of the academic writing module for English majors in the fourth semester of their four-year (eight-semester) undergraduate program. Argumentative writing is also the most common writing genre required in the writing tests of the two national English language proficiency tests for English majors—Test for English Majors-Band Four (TEM-4) and Test for English Majors-Band Eight (TEM-8). Argumentative writing is therefore a central part of Chinese English majors' writing module when they are doing their undergraduate program.

Research on Chinese English learners' (including both English majors and non-English majors) metaphor use in their written work at tertiary level has largely been concerned with metaphor production across different language levels and writing genres (Gao, 2016; Jiang, 2016). The widespread conclusion is that the amount of metaphorical language used by Chinese EFL learners in their writing was positively related to their writing proficiency, i.e., learners with higher writing proficiency tended to use more metaphorical language in their writing. This is consistent with what Littlemore et al. (2014) have found in their research on L2 learners' metaphor use in written texts. They found that the overall number of metaphorical languages rises up along with learners' language proficiency from CEFR level A2 to C2, which suggests that learners' metaphor use in their written work can be affected by their language proficiency levels in the targeted language.

Xu and Tian (2012) worked with eight learners in a small-scale research to investigate learners' production processes while producing different metaphors. They used think-aloud protocol and follow-up interviews. Their research suggests that during the process of Chinese EFL learners' topic-based writing, learners' production of metaphorical language is chiefly triggered by their L1 transfer or the commonly used English collocations they have learned before. They write, "in a general sense, Chinese EFL learners do not have the ability of metaphoric thinking in English and they often rely on their metaphorical thinking in Chinese when they have the need to write in English in response to

certain topics” (Xu and Tian, 2012, p. 74). Their findings are in line with Hoang’s (2015) claim that the metaphor production of Vietnam college EFL learners is often not the result of learners’ figurative thinking in English. Metaphor research which includes face-to-face discussions, e.g., interviews, with learners about their language choices remains rare. There is still much room for exploring learners’ thinking process and language choices behind metaphor production.

In my research, metaphor is not only understood as one type of figure of speech, but also a tool of describing or viewing something abstract in terms of something more concrete, following scholars in the applied linguistic tradition, such as Cameron (2003) and Deignan (2017). My research first investigates the density, grammatical categories and functions of metaphors used by Chinese English majors, and then examines how they report their thinking processes behind their metaphor use. Stimulated recall interviews are used with the purpose of developing an understanding of L2 learners’ thinking processes behind their metaphor use, their metaphor awareness and the factors that may trigger both creative metaphors and possible errors. My three research questions are as follows, with three sub-questions of the first question:

1. In what ways do Chinese English majors use metaphors in their argumentative writing?
  - 1a. How frequently do Chinese English majors use linguistic metaphors in their argumentative writing?
  - 1b. What are the grammatical categories of linguistic metaphors in terms of word class and linguistic form?
  - 1c. How do Chinese English majors use linguistic metaphors conventionally or unconventionally?
2. What are the communicative functions of extended metaphors in Chinese English majors’ argumentative writing?
3. How do Chinese English majors report their thinking processes around their use of metaphors in L2 writing?

In this thesis, I will use the term ‘L2 English’ to refer to the learning of English as a second or foreign language (ESL/EFL) in formal classroom environments.

## 1.2 Context and participants of the research

I set my research context in a Chinese university that I am familiar with. The research was conducted in a university located in Xi'an, China. The participants are 39 English majors who have been divided into two English major classes since they were enrolled into that university. All the participants are in the second semester of their second year of undergraduate study. They are required to take the national English language proficiency test TEM-4 near the end of second semester of their second academic year. In mainland China, each of the four academic years has two semesters. According to Jin and Fan (2011), TEM-4 is designed by educators to “assess students’ English proficiency at the end of the foundation stage” (Jin and Fan, 2011, p. 289). On this basis, I decided that these English majors’ English language proficiency level is moving from the foundation stage to the advanced stage, which is at intermediate level. My participants are treated as at the same language proficiency level although inevitably there is some variation.

The testing of students’ writing performance is an important part of TEM-4. Jin and Fan (2011) write, “the writing performance is judged against the criteria of content (relevance and completeness) and language (grammar and vocabulary, and appropriateness)” (Jin and Fan, 2011, p.591). As mentioned above, argumentative writing is the training objective for academic writing module in the second semester of the second academic year. Jin and Fan (2011) write that topic-based argumentative writing could often occur in the writing test of TEM-4. The argumentative writing assignments produced by the English majors when they were doing the academic writing module in their fourth semester (the second semester of the second academic year) are the source of my argumentative writing data, which serves as the raw data for me to identify metaphors and analyse metaphors in Chinese English majors’ argumentative writing. Stimulated recall interviews are conducted by involving volunteers from those English majors to investigate students’ thinking processes and metaphor awareness, which is completely voluntary.

### **1.3 Significance of the research**

I aim to learn more about metaphor use in Chinese English majors' argumentative writing, explore the functions of metaphorical language in Chinese English majors' argumentative writing and trace some of the thinking processes and metaphor awareness of Chinese English majors during their argumentative writing.

My research aims to produce results that can have a positive impact on the innovation of teaching pedagogy for argumentative writing teaching and the development of academic writing module for English majors by integrating metaphor knowledge into argumentative writing. First, my research results generated from the metaphor analysis and interview analysis will be fed back to the teacher of the academic writing module, the students, and the leader of the English department of the university, which may make the use and functions of metaphorical language in English majors' argumentative writing more salient to the teacher, students, and relevant policy makers. In this way I hope to make a positive contribution to the metaphor awareness of all parties involved in this writing teaching and learning process. Second, those English majors who participate in my research, especially for the interviewing part, will have a good opportunity to discuss their writing processes in response to specific writing topics and to reflect on why they have chosen to use certain words or expressions in their argumentative writing during certain period of time, and then may facilitate them to learn to use metaphor as an effective tool in topic-based argumentative writing. I hope to contribute to the growing knowledge of L2 learners' metaphor use and learners' perceptions of their metaphor use in written work, and its significance to L2 pedagogy in terms of writing teaching and learning.

### **1.4 Structure of the thesis**

Chapter 2 describes different viewpoints on metaphor within historical traditions, explains the choice of an applied linguistic approach of linguistic metaphor analysis, prior research and theoretical frameworks of functions of metaphor, the rationale of focusing on extended metaphors, a particular type of metaphor

cluster, and corresponding communicative functions in an argumentative writing essay, and reviews examples of relevant recent literature on metaphor and metaphor use in L2 English writing, which offers the researcher operational basis and inspiration for carrying out this present investigation.

Chapter 3 describes the research design and corresponding methods used in my research. First, the collection procedures of both writing data and interview data are explained step by step. Second, the operational procedure of metaphor identification is illustrated with relevant writing samples in detail. Third, the building of systematic metaphors and functions of extended metaphors are explained with sample data. Fourth, the coding procedure of interview data is introduced. In this chapter, the sample analysis of writing data and interview data and some preliminary results are presented, to demonstrate that the research design and methods are workable in my research.

Chapter 4 provides findings of the metaphor analysis of written texts, in accordance with my first two research questions, including the overall metaphor density in the collected writing data, grammatical categories of linguistic metaphors, the classification of conventional and unconventional metaphors, and functions of extended metaphors in L2 argumentative writing essays.

Chapter 5 provides findings from the interview data analysis, addressing my third research question, which includes participants' verbalized thought reports on their perceptions and thinking processes behind metaphor use, and the degree of their metaphor awareness. The two interviews with the writing teachers involved in my research are also analysed for obtaining more background information for the research.

Chapter 6 presents a discussion obtained from the research findings, in five aspects: 1) metaphors and parts of speech; 2) novelty, creativity, deliberateness and L1 influence in metaphors; 3) communicative functions of extended metaphors; 4) The role of stimulated recall interviews; and 5) Chinese English majors' metaphoric competence in L2.

Chapter 7 is the last chapter, which offers a summary of the major findings



obtained from the written data and interview data and concludes the main contributions of this current research. The related pedagogical implications, the limitations, reflections, and recommendations for future research are also covered in this chapter.

## Chapter 2 Literature review

In this chapter, I review theories of and approaches to metaphor and the previous research on metaphor and L2 English. The theoretical insights and research gap identified in literature review are explained at length and function as theoretical guide and rationale for this present investigation. My research questions are developed and presented at the end of this chapter.

### 2.1 Viewpoints on metaphor within historical traditions

Trčková (2011, 2014) has summarized the early history of metaphor in her research on metaphor use in newspaper discourse on natural catastrophes and much of this section follows her account. Dating back to the Aristotelian viewpoint in the 4th century BC, metaphor has been viewed as “implicit comparison, which is based on the principle of analogy” (Trčková, 2011, p.133; Ortony, 1979, p.3). According to Aristotle, metaphor has been viewed as one of the rhetorical devices used “to persuade others of a particular point of view”, which has been “characterized by the schematic form: A is B, as in Achilles is a lion” (Evans and Green, 2006, p.293). Aristotle suggests that the persuasive function of metaphor has been mainly realized by the rhetoric force of metaphor in discourse (Trčková, 2014).

In the comparison theory of metaphor, which is developed on the basis of Aristotle’s approach to metaphor, metaphor has been often understood by “finding similarities within differences through a process of comparison” (Cameron, 2003, pp.14-16), such as in the example “Juliet is like the sun” (Cameron, 2003, p.16). From the perspective of comparison, metaphor has been regarded as “reduced simile” (Cameron, 2003, p.16). In simile, the comparison of two categories is overtly signalled by the use of “as” or “like”: “Achilles is as brave as a lion”; “Achilles is brave, like a lion”; “Juliet is like the sun” (Cameron, 2003; Evans and Green, 2006). Another approach is the substitution theory of metaphor, which has viewed “metaphor as a way of saying what could be said literally” (Martin and Harré, 1982, p.90; Trčková,

2011, p.140). Within this tradition, metaphors are often characterized by the “renaming of the Topic by the Vehicle” (Cameron, 2003, p.15), such as in the example “the atmosphere is a blanket of gases” (Cameron, 2003, p.15), where “atmosphere” is the metaphor topic and “blanket” is the metaphor vehicle.

Instead of simple substitution, a third historical approach to metaphor is the interaction theory of metaphor, which was “founded by Max Black in the second half of the twentieth century” (Trčková, 2014, p. 26). Different from the theories of comparison and substitution, which described metaphor as “stating figuratively something that might have been said literally, the interaction theory of metaphor has suggested a metaphorical process that is based on the projection of a set of associated implications from the secondary subject upon the primary subject” (Trčková, 2014, p. 26). Black (1993)’s interaction view of metaphor treats metaphor topics and vehicles as conceptual domains underlying metaphorically used lexical items. Assumptions about the interaction between the two juxtapose subjects, i.e., conceptual domains, in the context of a particular metaphorical statement are:

- (a) the presence of the primary subject incites the hearer to select some of the secondary subject's properties; and (b) invites him to construct a parallel implication-complex that can fit the primary subject; and (c) reciprocally induces parallel changes in the secondary subject

(Black,1993, p.28).

Black (1993) argues that the imputed interaction is in the minds of the speaker and hearer and “it is they who are led to engage in selecting, organizing, and projecting” (Black, 1993, p.28). For instance, in making the metaphorical statement “Achilles is a lion”, the speaker’s knowledge about the characteristics of the secondary subject or metaphor vehicle— “lion”, such as braveness, could be selected and then projected onto the primary subject or metaphor topic— “Achilles”. New meanings could be construed through this metaphorical process, which also demands a competent reader. So, by making assumptions about speakers’ and hearers’ conceptualizations, the interaction theory of metaphor not only has viewed metaphor “as a matter of language but also pointed out the cognitive dimension of it” (Trčková, 2014, p. 26; Cameron, 1999).

The influential work *Metaphors We Live By* (Lakoff and Johnson, 1980) has laid the foundations for Conceptual Metaphor Theory (CMT), sometimes known as cognitive metaphor theory, which is a starting point for most metaphor research in the 21<sup>st</sup> century (e.g., Gibbs, 2008; Kövecses, 2017). Similar with some viewpoints of the interaction theory of metaphor, CMT “takes metaphor not simply as an ornamental device in language but as a conceptual tool for structuring, restricting and even creating reality” (Kövecses, 2017, p.13). In CMT, “the essence of metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff and Johnson, 1980, p.5). Kövecses (2010) explains the meaning of the word “understanding” in the above-mentioned and widely used definition of metaphor within the cognitive linguistic framework (e.g., Semino, 2008; Littlemore et al., 2014; Caballero, 2017) as involving “a set of systematic correspondences between the source and the target in the sense that constituent conceptual elements of ‘another (thing)’ correspond to constituent elements of ‘one kind of thing’” (Kövecses, 2010, p.7).

The conceptual correspondences in Kövecses (2010)’s explanation have often been described as “mappings” (Kövecses, 2010). Taking into consideration one of the controversial aspects of CMT, i.e. whether “speakers really are thinking metaphorically” (Gibbs, 2009, p.24) when they are producing certain conventional metaphors, Kövecses (2010) further proposes that “it seems safest to understand the word *understand* as being synonymous in the definition of metaphor to the words *construe* or *conceive*, which commit us less to the real-time, online aspect of understanding and can be more easily used in the long-term sense of what metaphorical understanding involves” (Kövecses, 2010, p.8). So, the modified definition of metaphor is “we construe a more abstract domain (or concept) through a more physical domain (or concept) offline—either by means of long-term memory or as a result of a historical-cultural process (i.e., not necessarily online or in real time)” (Kövecses, 2010, p.8). In this way, a conceptual metaphor, such as LOVE IS A JOURNEY, is triggered and formulated. According to the viewpoint of CMT, “LOVE, which is the target (the domain being described), is conventionally structured in terms of JOURNEY, which is the source (the domain in terms of which the target is described) (Evans and Green, 2006, p.295). The elements of the source

domain JOURNEY, including travellers going anywhere (“We aren’t going anywhere”), events in a physical journey like physical obstacles (“It’s been a bumpy road”), vehicles used in a physical journey (“The relationship is foundering”), decisions that travellers have to make concerning which way to go in the road (“We’re at a crossroads”), etc. are mapped onto the target domain LOVE, which enables us to describe the target domain LOVE with more enriched “conceptual structure from the source domain” (Dancygier, 2017, p.30). The examples in brackets noted above are linguistic expressions referring to human relationships like marriage quoted from Lakoff and Johnson’s (1980, pp. 44-45) research. Lakoff and Johnson (1980) argue that people not only speak metaphorically, but also think metaphorically; and “linguistic expressions that are metaphorical in nature are simply reflections of an underlying conceptual association” (Evans and Green, 2006, p.295).

## **2.2 Operationalizing metaphor in the context of current research**

Aristotle’s view of metaphor is a source of inspiration for my research, but not the only basis for theorizing and operationalizing metaphor. Aristotle’s view seems to undervalue metaphor and the account that “one had to be genius in order to use metaphor properly”, as Mahon (1999, p. 70) argues, is fundamentally wrong. Both Black’s (1993) interaction view of metaphor and CMT (Lakoff and Johnson, 1980) point out the cognitive dimension of metaphor by viewing “a metaphor acting to juxtapose conceptual systems” (Cameron, 1999, p.17). The two juxtaposed conceptual systems are primary subject/Topic/Target domain and secondary subject/Vehicle/Source domain.

Deignan (2005, p.34) writes, “different researchers have used the term ‘metaphor’ to talk about several different kinds of linguistic expressions; the priorities of different academic traditions lead to different focuses”. The conceptual analysis prioritizes thought over language and views the surface language forms or manifestations, i.e., linguistic metaphors, as “evidence of mappings at the conceptual level” (Deignan et al., 2013, p.7; Deignan, 2010, p.55). In cognitive theory, surface language forms are less important than the underlying conceptual systems in the target and source domains (Cameron and

Low, 1999, p.13). “Here, the focus is firmly on the cognitive processes of connecting two concepts” (Lakoff, 1993; Cameron, 2010, p.5). The account of metaphor in the cognitive linguistic view, which “means primarily conceptual metaphor, as opposed to linguistic metaphor” (Kövecses, 2010. p.33) has been problematic for some metaphor researchers focusing on metaphor use in naturally occurring language data (e.g., as described by Deignan, 2005, 2010, 2017) because of its use of invented linguistic evidence for detecting conceptual metaphors, and its top-down approach of apparently identifying conceptual metaphors then searching for evidence of their realisations.

Research focusing on metaphor use in naturally occurring language data from an applied linguistic viewpoint, which “considers language items not in isolation, but within their discourse context, as part of a longer text and as integral to the use of language for particular interactional goals” (Cameron, 1999, p.14), is another strand of contemporary metaphor research. Working within this tradition, metaphor scholars have viewed metaphor as a pervasive linguistic phenomenon and have explored its forms (e.g. parts of speech or word class) and possible functions (e.g. explaining and persuading) in authentic communicative situations such as in teachers’ lectures to L1 or L2 learners (Littlemore, 2001a; Cameron, 2003; Littlemore and Low, 2006b; Low et al., 2008), in business texts and political speeches (Koller, 2003; Charteris-Black, 2005; Deignan, 2005; Semino, 2008; Cameron and Maslen, 2010), and in learners’ written texts (MacArthur, 2010; Nacey, 2013; Littlemore et al., 2014; Hoang, 2014, 2015; Hoang and Boers, 2018; Paris, 2018). In metaphor research of the applied linguistic strand, “the term ‘linguistic metaphors’ often refers to metaphors found in language use” (Cameron, 2010, p.4), and “language is the main object of study, with all the complexities and indeterminacies of the naturally occurring data in context” (Deignan et al., 2013, p.7). Low et al. (2008) and Hoang (2014) use the terms ‘topic’ and ‘vehicle’ in a metaphor for their basic descriptive reporting.

Cameron and Maslen (2010) have developed an applied linguistic approach to identify groupings that they term ‘systematic metaphors’ by establishing ‘vehicle groupings’ from identified linguistic metaphors in the discourse activity. They

use only naturally occurring linguistic metaphors, actually used in the talk or conversations, which, they claim, provides metaphor researchers with a more rigorous method to capture “systematic connections between semantically similar metaphor vehicles” (Cameron and Low, 2010, p.117).

Cameron and Low (2010, pp.131-132) have formulated a systematic metaphor: *TERRORISM IS VIOLENT PHYSICAL ACTION* from their focus group data in which a number of participants talking about terrorism violence in terms of violent interpersonal contact. “Systematic metaphors are written in *SMALL ITALIC CAPITALS* to distinguish them from conceptual metaphors (e.g., *LOVE IS A JOURNEY*), which are written in *SMALL CAPITALS*” (Cameron and Low, 2010, p.117). Linguistic metaphors identified from their focus group data contributing to the systematic metaphor *TERRORISM IS VIOLENT PHYSICAL ACTION* are “bullying”, “hit and run”, “kicking back”, “kicks”, “killing”, “like bullying” and “shook up” (Cameron and Low, 2010, p.131). From these, researchers aim to “draw inferences about their [participants’] thoughts and feelings, their conceptualizations and communicative intentions, from the language they used *then*” (Maslen, 2017, p.89). The systematic metaphors termed by Cameron and Low (2010) resemble the conceptual metaphors suggested by the Conceptual Metaphor Theory, “but they should not be seen as equivalent” (Deignan, et al., 2013, p.9). As Deignan et al. (2013, p.9) write:

conceptual metaphors are intended to capture relatively permanent cross-domain mappings within the conceptual system of speakers of a language. In contrast, systematic metaphors are generalizations on the language used by participants ‘talking and thinking’ in a particular communicative context

(Deignan et al., 2013, p.9).

The process of finding systematic metaphors in a bottom-up manner is not the same as the generalization of conceptual metaphors in the Conceptual Metaphor Theory. The latter, as noted above, has been problematic for some metaphor researchers because of its use of invented linguistic evidence (instead of naturally occurring language data) and its top-down approach

(instead of a bottom-up manner) of apparently preselecting conceptual metaphors then tracking for evidence of their realisations at linguistic level.

In my research into metaphor use in Chinese English majors' argumentative writing essays. I focus on the linguistic dimension of metaphors: forms, functions and learners' thought reports on their metaphor use in argumentative writing.

### **2.3 Metaphor and L2 English**

It has been demonstrated that L2 learners need to understand metaphors used by native English-speaking teachers to avoid misinterpretations of main ideas and related topical information (Littlemore, 2001a), and learners will produce metaphors in L2 to achieve greater expressive power in real-life communication (MacArthur, 2010). Research about metaphor and learners of English as a second or foreign language in the past two decades has been concerned with two foci: first, is the investigation on the impact of incorporating the knowledge of conceptual metaphor in L2 instruction of English in real educational contexts.

Working within the applied cognitive linguistics (Piquer-Píriz and Alejo-González, 2020, p.3) tradition, a number of metaphor researchers have explored the positive impact of explicit conceptual metaphor knowledge in L2 classroom instruction and teaching activities, such as providing learners with explicit source domain information of linguistic metaphors to facilitate L2 vocabulary acquisition and using guided and explanatory instruction about basic meanings and/or about underlying conceptual metaphor to activate learners' process of figurative or metaphoric thinking and to foster learning (Boers, 2000; Li, 2002; Littlemore and Low, 2006a; Littlemore and Low, 2006b; Doiz and Elizari, 2013; Lu and Sun, 2017; Guo, 2019).

Research in this tradition "has discussed the benefits of using the insights of cognitive linguistics and the CMT to foreign language teaching, especially English" (MacArthur, 2010, p.156). The pedagogical value of the cognitive force of metaphor has been emphasized and explored in enhancing L2 learning (Petrie and Oshlag, 1993). For instance, the vocabulary-learning example



quoted in Li's (2002) research showed that Chinese learners of English could benefit a lot from guided figurative or metaphoric thinking process when they were learning English idioms. Li found that compared with the traditional way of merely asking participants to learn and memorize, the query routines that guide learners to interpret new things in terms of the knowledge they already know could significantly better facilitate participants' meaning comprehension and retention of the proverb in the targeted language. Examples of query routines used in Li's (2002) research are "Life is a container; Beliefs are possessions → what image do you have in your mind when you read 'don't put all your eggs in one basket'? → what are eggs?" (Li, 2002, p.331).

Some metaphor researchers have further explored L2 learners' metaphor production: how L2 learners use metaphors in authentic communicative contexts (MacArthur, 2010; Nacey, 2013, 2017, 2019; Littlemore et al., 2014). This is another research focus in the field of metaphor and L2 English. It has been found that apart from the pedagogical value of metaphor noted above, metaphors may also be misleading and trigger sloppy thought. Petrie and Oshlag (1993) write, "if metaphors are eliminated, there will be fewer mistakes" (Petrie and Oshlag, 1993, p.579). Corder (1967) argues that, the making of errors can be regarded as "a device the learner uses in order to learn" (Corder, 1967, p.161). I follow MacArthur's (2010) view:

there are no 'correct' and 'incorrect' metaphors, but rather better, communicatively more successful ones in comparison with communicatively less successful ones. [...] with regard to the learner of English with knowledge of a relatively impoverished stock of words, metaphor helps to make meaning from many everyday, highly familiar words, for among all the forces that drive semantic extension, the most powerful is metaphor

(MacArthur, 2010, p.159).

Focusing on metaphor use in written communication, I will review some recent research on metaphor use in English written texts produced by university learners of English with different L1 backgrounds in **Section 2.3.1**.

### **2.3.1 L2 learners' metaphor use in English written texts**

Prior research on L2 learners' actual use of metaphor in the target language has demonstrated that L2 learners will and can use metaphorical language to convey their ideas in communicative contexts. They often use metaphors unconsciously. MacArthur (2010) analysed the metaphorically used items in the written work of Spanish university advanced learners of English and demonstrated that these learners indeed produce metaphorical language when they have the communicative need to express their ideas about abstract topics, such as talking about their understanding of learning a foreign language. For instance, the learners used metaphorical expressions like, "broaden the mind", "open one's mind", "open the door" and "look beyond" to express the positive impact of learning a foreign language on expanding the range of one's thought (MacArthur, 2010, p.162). She found that her participants had not been guided to produce metaphorical language in their writing and had received very limited knowledge about metaphor and other different tropes from their English language classes when they wrote the written texts. Nacey (2020) notes, "in most previous studies about metaphor and language learners, informants are college-age students, perhaps because they are the most readily accessible to researchers" (Nacey, 2020, p.288). In my research, participants are also college-age students, so while it would be useful to the field more widely to study a wider range of writers, my results are comparable with the results of other researchers.

#### **2.3.1.1 Metaphor use and L2 learners' language proficiency levels**

There has been research comparing learners' metaphor use across different English language proficiency levels, finding that L2 learners' different language proficiency levels are factors that will influence the density, linguistic form, conventionality, and effectiveness of metaphor use in L2 written communication. For instance, Littlemore et al. (2014) have analysed metaphors used in essays written by Greek learners of English and German learners of English across different language proficiency levels, using which is the "Common European Framework of Reference for Languages (CEFR) levels A1 to C2" (Littlemore et

al., 2014, pp.117-118). By looking at the quantitative, distributional, and linguistic features of metaphors used by the two groups of learners in their written work, Littlemore et al. (2014) have found that the overall number of metaphorical languages rises up along with L2 learners' language proficiency from level A2 to C2. The authors argue that learners with lower language proficiency levels (e.g., at level A2) mainly use metaphorical prepositions and fixed expressions that are highly conventional, while more advanced learners (e.g., at level C1) are often able to use metaphors in new ways and to serve a range of functions such as "express abstract and complex issues", "reinforce one's evaluations" and "create dramatic contrasts" (Littlemore et al., 2014, pp.134-135). The colour-related metaphor which could convey negative emotions realized through the metaphorically use of the adjective "black" in the sentence "I believe this is a black date for Greek history" written by the Greek learner of English at C1 level is a case in point. They also found "metaphors are being deliberately used and manipulated (and at times played with) to achieve rhetorical effects" (Littlemore et al., 2014, p.135).

Hoang (2015) and Hoang & Boers (2018) have studied metaphors used by Vietnamese university learners of English who were doing a four-year undergraduate program in English Language in a Vietnam university. The authors have found that the amount and variety of metaphors used by learners have a positive correlation with the learners' writing and language proficiency (measured by the writing scores and year levels of the participants), which is, to some degree, in line with Littlemore et al.'s (2014) viewpoint that "the ability to use metaphor is likely to be a key indicator of the language learners to operate at different levels of proficiency as defined by CEFR" (Littlemore et al., 2014, p.177). Accordingly, Jiang (2016) and Gao (2016) examined metaphor use in written work produced by Chinese university learners of English, including both English majors (Jiang, 2016) and non-English majors (Gao, 2016), students who are doing a four-year undergraduate program in English Language and in other science subjects. Jiang (2016) and Gao (2016) argue that metaphor is pervasive in Chinese learners' topic-based writing and learners with higher language proficiency are likely to produce more metaphors in their writing. For instance, as Gao (2016) writes:

in the compositions with lower scores, students often used a limited range of conventional metaphors to present their own perspectives (e.g. On one hand...on the other hand.); and in the compositions with higher scores, students might use somewhat novel metaphors to serve evaluative functions (e.g. In my opinion, it's smart choice to choose a job which is full with promising future)

(Gao, 2016, pp. 66-67).

Similar to what has been suggested by Littlemore et al. (2014), more advanced Chinese learners of English are able to use metaphors in a creative way and to serve a range of communicative functions in topic-based writing. Research focusing on metaphor use and L2 learners' language proficiency levels, has provided useful insights for policy makers to involve metaphors in developing descriptors for L2 learners' writing, since metaphors can be used to serve different functions at different language proficiency levels. For instance, metaphor use can be involved in all of the five levels of CEFR descriptors (Littlemore et al., 2014), and in the descriptors for college English writing, e.g., the writing ability descriptors for College English Test-Band 4/6 proposed in Gao's (2016) research.

Researchers often restrict the writing topics to some relatively abstract topics when selecting writing data from learner corpora or eliciting writing data from in-class writing tasks, such as "politics, government" (Littlemore et al., 2014), "education as a lifelong process" (Jiang, 2016), "Do you prefer high salary or a promising job" (Gao, 2016) and "viewpoints on whether we should stop reading literary works in the modern world" (Hoang and Boers, 2018), given the common belief that "metaphorical language is more likely to emerge when subject matter becomes relatively abstract" (Hoang and Boers, 2018, p.6). In this way, the impact of writing topic type on learners' metaphor use could be minimized (Littlemore et al., 2014). Possible errors involving both metaphor and L1 influence in learners' L2 production at different proficiency levels have often been noted in research of this strand.

### **2.3.1.2 L1 influence and learners' metaphor use in L2 English**

Ellis (1999) writes, "where the first and second language share a meaning but

express it in different ways, an error is likely to arise in the L2 because the learner will transfer the realization device from his first language into the second” (Ellis, 1999, p.22), known as L1 interference. With viewing Second Language Acquisition (SLA) as a process, theorists treat ‘interference’ as a learner strategy (e.g., Corder, 1979). Corder (1979) has suggested that:

the learner’s L1 may facilitate the developmental process of learning a L2, by helping him to progress more rapidly along the ‘universal’ route when the L1 is similar to the L2. ‘Interference’ errors result not from negative transfer but from ‘borrowing’. That is, when learners experience difficulty in communicating an idea because they lack the necessary target language resources, they will resort to their L1 to make up the insufficiency. This explains why the L1 is relied on more at the beginning of the learning process than later—the learner has greater insufficiency of target language resources to surmount

(Ellis, 1999, p.37).

As noted above, MacArthur (2010) has argued that metaphor is a powerful tool to motivate semantic extension and to help learners make new meanings from highly familiar words in both L1 and L2. Transfer effects can also be found in learners’ metaphor production. MacArthur (2010) has illustrated that the Spanish advanced learners of English in her language class may produce metaphors in L2 that might cause comprehension difficulties to a non-native speaker of Spanish, based on textual analysis of writing samples and analysis of teacher-led feedback discussion sessions on improving learners’ L2 writing. For instance, the metaphorical expression “hold back my nerves” in one participant’s writing: “My sister was really annoying me talking about my boyfriend, but I tried to hold back my nerves” might be a “communicatively less successful metaphor use” (MacArthur, 2010, p.159). The reason is that in Spanish, “nerves” can figuratively refer to “temper” or “anger”, but in English, “nerves” metaphorically refers to “mood” or “temper” when used in plural form to express nervousness in the context of facing something frightening, such as “...he really got on my nerves” (MacArthur, 2010, p.168). The possible communicative inefficacy for the audience without Spanish language background is the result of the participant’s ‘borrowing’ of the familiar word “nerves” from L1 to L2. Similar to what Deignan et al. (1997) have found in the

situations where metaphors in English language may cause comprehension difficulties for Polish students, the “nerves” example has shown that though the literal meanings of certain lexical items are the same in the two languages, students might produce English language that could not be understood by native English speakers if students do not understand the metaphorical meanings of certain items in their L1 and L2 respectively, and produce word-for-word translations in their L2.

Nacey (2013) has examined three situations where ‘novel’ linguistic metaphors can be found as a result of L1 transfer, by analysing the argumentative essays produced by a group of advanced Norwegian learners of English. The three manifestations of L1 transfer found in her writing data are:

- 1) calques, which involves the literal translation of a standard L1 expression into a non-standard target language term;
- 2) deceptive Norwegian-English cognates;
- 3) or semantic divergence where an L1 term may be translated by two or more L2 terms

(Nacey, 2013, p.192).

Nacey (2013) has consulted some bilingual English-Norwegian dictionaries and a corpus of Norwegian L1 writing to “establish linguistic congruence between the particular Norwegian learners’ metaphor use in English writing and the Norwegian language” (Nacey, 2013, p.192), for the purpose of deciding possible L1 transfer. Littlemore et al. (2014) involved a native German-speaking informant to decide L1 influence and they found obvious metaphor related errors that result from the direct translation from standard German expressions to non-standard English ones in advanced German learners’ English writing.

Based on my bilingual language background of Chinese and English, I feel safe to say that instances of ‘calques’ are very likely to be found in the written work produced by Chinese learners of English. Cases can be found in some prior research on L1 transfer and Chinese university students’ metaphor production in writing (Xu and Tian, 2012; Wang and Wang, 2019). For instance, Xu and Tian (2012) found a direct translation of a Chinese idiom “井(jing)底(di)之(zhi)蛙(wa)” into English in one participant’s writing about the eliciting writing task

“Money and Happiness”: “without knowledge, money is likely to make people to become a frog in the well” (underlined part) (Xu and Tian, 2012, p.76). The English equivalent of this Chinese idiom should be “a short-sighted person”. The hyphenated compound “short-sighted” is metaphorical, which refers one’s failure to consider what will happen in the future in terms of the unclear physical vision. The native-English speaking informant involved in Xu and Tian’s (2012) research did not decide the expression “the frog in the well” as innovative metaphor use but a non-native-like one that had caused problem of comprehension to the audience without Chinese language background.

Xu and Tian (2012) used think-aloud training, an elicited topic-based writing task and retrospective interviews to collect both writing data and interview data. These techniques allow participants to verbalize their thoughts during their writing process, which provides the authors with possible supporting evidence of the L1 influence on L2 metaphor production and writers’ intentions of using metaphors. Hoang (2015) examined Vietnamese English learners’ explanations for their metaphor production in L2 writing by using retrospective interviews. The influence of L1 has been demonstrated with the support of some interview data in her research. In Wang and Wang’s (2019) research on the impact of L1 transfer on first-year Chinese university students’ metaphor production in English writing, follow-up interviews have also been conducted to ask students’ viewpoints on L1 influence in the process of language learning. The two main interview questions are: 1) Do you think the Chinese language affect your English language learning? 2) In your English learning, are you often influenced by the Chinese way of thinking? (Wang and Wang, 2019, p.57-58). These interview questions are presumably helpful in deciding metaphors involving L1 transfer, which complements the analysis of writing samples. Wang and Wang (2019) found both positive L1 transfer and negative L1 transfer in their participants’ English metaphor production. For example, “埋(mai)头(tou)” in Chinese and “be buried in” in English are two different expressions in two languages that share the same conceptual mapping, i.e., the sense of concentrating on activities can be mapped onto the physical movement of pushing one object into another very hard (Wang and Wang, 2019, p.58). This can be viewed as a lexicalization of a positive conceptual transfer. Different with

linguistic transfer where “knowledge of L1 words influences production of L2 words, conceptual transfer involves conceptual mapping rather than merely lexical correspondence between L1 and L2 items” (Nacey, 2013, p.191).

Nancy (2013) writes, “negative transfer is easier [than positive transfer] to spot, as it leads to linguistic anomalies (e.g., novel metaphors), where positive transfer leads to conventionally appropriate language (e.g., entrenched or conventional metaphors)” (Nacey, 2013, p.192). The examples found in research mentioned above have shown that L1 influence can exert impact on L2 learners’ metaphor use from conventional (e.g., “be buried in”) to unconventional (e.g., “but I tried to hold back my nerves”). Here, unconventional metaphor use may include instances of novel, creative, “possible deliberate metaphor use” (Nacey, 2013), and “possible metaphor related errors” (Littlemore et al., 2014). Gibbs (2011) has interpreted a deliberate metaphor use “as being employed for particular rhetorical effects that trying to get readers and listeners to consciously reflect on metaphorical topics in new ways” (Gibbs, 2011, p.68). It appears that writers’ intentions and readers’ perceptions are two parameters that are deemed relevant in deciding clues for possible deliberate metaphor use in learners’ written work. Gibbs (2011) argues that “studying the ways that people appear to use and understand metaphors for so-called deliberate, rhetorical purposes is important” (Gibbs, 2011, p.68). In **Section 2.3.2.1**, the notions of deliberateness and deliberate metaphor use are illustrated for better exploring the impact of linguistic creativity on L2 writing regarding metaphor use.

“Error(s)”, in my written data, may also indicate some hints of learning happened. MacArthur (2010) suggests, metaphors are helpful for L2 learners to achieve semantic extension in real-life communication. My assumption is that some ‘calques’ of conventional Chinese metaphors (L1) and the reproduction of conventional English metaphors (L2) might have been consciously produced by Chinese English learners as innovative or meaningful creative metaphor use. Treating anomalous metaphor use as merely errors may be unfair to L2 learners. The reason is that apart from the native English-speaking audience in written communication, L2 learners who produce metaphors for communicative purposes also matter in deciding the metaphorical creativity in L2 writing.



In sum, L1 transfer is likely to occur when learners try to fill the gap between their limited L2 vocabulary and their communicative purposes. Learners' L2 metaphor production may not always help them express themselves in an ideal way, where unconventional metaphor use is often lexicalized. Compared with the involvement of native language-speaking informants and the use of bilingual dictionaries and L1 corpora in deciding possible L1 transfer, follow-up tracking interviews and retrospective interviews that allow participants to verbalize their thoughts in their writing process as freely as possible are presumably more practical for knowing L2 learners' intentions, language choices and possible cognitive efforts (e.g. metaphoric thinking, Hoang, 2015, p.120) made as they are producing certain linguistic metaphors in writing.

So, I conclude that L1 transfer is often discussed with learners' conventional, novel, creative, deliberate metaphor use. One of my research questions concerning learners' thought reports is therefore: how do my participants report their thinking processes around their metaphor use in L2 writing?

### **2.3.2 Theoretical notions and L2 learners' metaphor use**

In this section, theoretical notions that are used as guidelines in analysing learners' ways of using metaphors for communicative purpose in L2 writing are presented. An operational framework in categorizing conventional and unconventional metaphor use in terms of possible deliberateness, L1 influence, novelty, and creativity will be developed.

#### **2.3.2.1 Deliberateness and deliberate metaphor use**

In line with the applied cognitive linguistic tradition, I focus on linguistic metaphor investigation and acknowledge the cognitive force of metaphor which "enables one to transfer learning and understanding from what is well known to what is less well known in a vivid and memorable way, thus enhancing learning" (Petrie and Oshlag, 1993, p.580) in educational contexts. Research has demonstrated that both teachers and students should be consciously aware of the use of metaphor in lectures (Littlemore, 2001a; Low, et al., 2008). Some teaching activities are needed to strengthen students' awareness of metaphor

use in learning and combine the knowledge of conceptual metaphors into specific subjects and courses like psychology, critical thinking, and science (Boyd, 1993; Berger, 2016).

Research of this kind has contributed knowledge to the growing interest in metaphor use with possible deliberateness and the intended communicative function of changing perspectives of the addressee's part. Steen (2011a) writes "when a metaphor is used deliberately, it instructs the addressee to momentarily adopt another standpoint, in another frame of reference, and to reconsider the local topic from that point of view" (Steen, 2011a, p.16). For example, teachers often explain the less familiar concept "electricity" to elementary science students in terms of a more well-known concept — "water flow through pipes" (Goatly, 2011, p.155), to allow students, who may never have considered electricity before, to possibly view electricity in science in terms of water flow. Steen (2011a) assumes that "changing perspective is the main communicative motive for deliberate metaphor, which in turn may have various rhetorical goals (entertainment, information, persuasion, instruction, and so on)" (Steen, 2011a, p.16).

There have been some proposals for identifying deliberate metaphor use in speaking and writing contexts. Cameron (2003) has used "the single occasion of metaphor use for a particular purpose in the discourse context, her own native speaker knowledge of English, and her experience of how teachers talk in classrooms" (Cameron, 2003, p.101). An example in her research is the deliberate metaphors employed by the teacher in a geology classroom for explaining the formation of igneous rock. Here is a reproduced extract of the teacher (T) and students/pupils (Ps) classroom interaction:

T : [...] so that it becomes like (.) sticky treacle

Ps: ugh

T : (*whisper*) treacle

T : or even like (.) runny butter [...]

P: is molten lava like wax?

T : yes (.) it can be a bit like wax

(Cameron, 2003, p.103)

Both teacher's and student's deliberate metaphor use are underlined. Instances of deliberate metaphor use underlined in the above example suggest one important feature of signalling deliberateness of metaphor use, which is the lexical signals such as "like" and "as if" that are often found in a simile. Simile and metaphor identification are explained in Chapter 3: Research design and methods. Cameron (2003) found that teachers often use metaphors with deliberateness to explain concepts and students often play with deliberate metaphors in peer talk. Both the teacher and students involved in Cameron's (2003) research are native English speakers.

Krennmayr (2011) developed a set of criteria for checking the deliberateness of metaphor use in native English news texts. Krennmayr (2011) discusses the lexical signals (or metaphor signals in MIP and MIPVU for metaphor identification), the "A=B" form, novelty, creativity, semantic extension through metaphorical comparison, and the elicited rhetoric effects of metaphor use in deciding deliberateness. However, researchers depend on intuition to a great extent in identifying the language users' intention, and the reactions in the minds of addressees in the process of production and reception. As Nacey (2013) writes, "metaphor may be deliberate on the part of the producer, but not recognized as such. Similarly, metaphor may be perceived as deliberate, regardless of whether it was intended by the writer" (Nacey, 2013, p.169).

Steen claims that "all language use is intentional in some sense and all metaphors (produced for communication purpose) is part of intentional language use" (Steen, 2008, p.223; Gibbs, 1999). In Steen's (2008) view, "deliberate metaphor is a relatively conscious discourse strategy that aims to elicit particular rhetorical effects which distinguishes deliberate metaphors from all nondeliberate ones" (Steen, 2008, p.223). The determination of deliberateness of metaphor use still awaits empirical evidence. As Cameron (2003) suggests, "further triangulating evidence of the deliberate use of metaphors would be gathered through retrospective interviews with the users" (Cameron, 2003, p.101), apart from text/discourse analysis and the novelty/conventionality of metaphor use checked with the tool of a reference corpus.

Turning to this present investigation on Chinese learners' metaphor use in

English writing, my hypothesis is that evidence of possible deliberate (conventional, novel, and creative) metaphor use may be found when asking participants' explanations about their language choices during L2 writing. The notions of possible "deliberateness" and "deliberate metaphor use" are mentioned as my analysis proceeds with respect to conventionality and unconventionality of metaphor use, functions of metaphors, and the possible factors (e.g., L1 transfer) affecting participants' metaphor use, which possibly be further evident in my stimulated recall data.

Nacey (2013) found that "there is little indication that the advanced Norwegian learners of English consciously manipulate a Norwegian expression to purposefully create a particular effect or meaning in their English texts" (Nacey, 2013, p.192). There is no evidence indicating a correlation between L1 transfer and deliberateness relating to metaphor use based on Nacey's (2013) text data chosen from the International Corpus of Learner English. She (2013) only found incidentally occasions of novel metaphor use "stemming from transfer accompanied by any of the proposed lexical flags of deliberate metaphor", as the underlined part in the corpus citation: "...the same thing with films/videos as with books, we tend to use them as a port to an imaginary world" (Nacey, 2013, pp.180-192). One of the possible reasons might be Nacey (2013) did not use learner interviews, so it would be difficult for her to be sure about learners' intentions. In my research, apart from textual analysis, the factors (e.g., L1 influence) affecting my participants' metaphor use in L2 writing for communicative purposes has been further explored with the stimulated recall interviews. More detailed information about stimulated recall interviews is presented in Chapter 3: Research design and methods.

### **2.3.2.2 Conventional and unconventional metaphor use**

Developing the L2 learners' ability to use the conventionalized expressions for successful communication in the targeted language is also important to both teachers and learners. Cameron (2003) has proposed a distinction between "metaphors that occurred because that was 'just the way to say it' and metaphors seemed to be used deliberately" in her research as noted above. She termed the "metaphors that occurred because that was 'just the way to say

it” as ‘conventionalized’, which I term as conventional metaphors. Cameron (2003) writes, “deliberate metaphors are not necessarily novel or creative metaphors as in traditional metaphor theory” (Cameron, 2003, p.101).

The connection between deliberateness, conventionality, novelty, and creative metaphors has often been discussed in research on metaphor and L2 English or learning English as a lingua franca (Littlemore and Low, 2006a, Nacey, 2013; Pitzl, 2012, 2018; Hoang, 2015). For instance, Littlemore and Low (2006a) distinguish conventional metaphors from novel metaphors. The connection between conventionality and novelty has been exemplified in the case that the conventional expression “have an idea” (underlying conceptual metaphor: A MENTAL EVENT IS AN OBJECT) can be extended to the novel and creative expression “playing with an idea, twisting it in different directions, before throwing it in front of possible critics” (Littlemore and Low, 2006a, p.16), which may evoke new conceptual metaphors such as THINKING IS A BALL GAME and MAKING DECISION IS A PHYSICAL ACTION OR MOVEMENT. In Littlemore and Low’s (2006a) classification, novel metaphors and creative metaphors appear overlap. Littlemore and Low (2006a) assume the conventional metaphors (e.g., Jean was in love) and conceptual mappings underlying the conventional metaphorical expressions (e.g., being inside a closed container, LOVE IS A CONTAINER) are of equal importance for the meaning to be conveyed. “Jean was in love” may be termed as a deliberate conventional metaphor in specific context (Littlemore and Low, 2006a, p.16), which is similar to Cameron’s (2003) view that deliberateness may not always result in novel or creative metaphor use. Deliberateness is much dependent on text or discourse contexts. “A metaphor that is deliberate in one context may be non-deliberate in another” (Nacey, 2013, p.170).

It seems that, apart from conventional metaphors, novelty and deliberateness are deemed to be relevant in determining metaphorical creativity or creative metaphor use. Pitzl (2018) has defined linguistic creativity as “being the creation of new linguistic forms and expressions or the use of existing forms and expressions in a non-conventional way” (Pitzl, 2018, p.34) in her research on English as a Lingua Franca (ELF) speakers’ language use in the Vienna-Oxford International Corpus of English. Pitzl (2018) argues that this definition

of linguistic definition can be applied to all kinds of language data. So as one type of naturally occurring language data in authentic communication, metaphors in L2 writing may also be creative. Pitzl (2018) also puts emphasis on novelty and unconventionality in the process of identifying creativity. Another important point in Pitzl's (2018) definition on linguistic creativity is that "a language user does not need to intend to be creative in order to produce a creative linguistic form" (Pitzl, 2018, p.35), which suggests that creative language use, e.g., learners' creative metaphor use, do not necessarily to be intentionally or deliberately creative on part of the language users.

Birdsell (2018) writes, "in order for a metaphor to be judged as being creative, it needs to be both novel and meaningful" (Birdsell, 2018, p.98). He suggests that the closer the distance between the topic term and vehicle term of a metaphor, the more chances of finding the metaphor fit and comprehensible. For instance, in the metaphor "College is a library", the semantic distance between the topic "college" and the vehicle "library" is understood as closer than that as in the metaphor "College is a spoon". If it is difficult to find meaning from a novel metaphor, it may "cause one to find it less pleasing" (Birdsell, 2018, p.98). So, the three features that signal a creative metaphor use formed by topic and vehicle terms are: (1) appropriate; (2) remote; and (3) aesthetically pleasing (Birdsell, 2018).

Kövecses (2010b) offered another account of metaphorical creativity, by interpreting metaphorical creativity as linguistic metaphor production "that is novel or unconventional (with the understanding that novelty and unconventionality are graded concepts that range from completely new and unconventional through more or less new and unconventional to well-worn, entrenched and completely conventional cases)" (Kövecses, 2010b, 656). It becomes clearer that a creative metaphor use may involve novelty (pertaining to linguistic forms of metaphors), deliberateness (pertaining to conceptual shift in perspective and intended rhetorical function of metaphors) and appropriateness or effectiveness. A creative metaphor use does not necessarily involve novelty, deliberateness, and appropriateness spontaneously, in order to be decided as creative.

There has also been research suggesting that learners' metaphoric thinking in

L1, possibly as a result of L1 influence involved in writing strategy, is likely to contribute to learners' metaphoric creativity in L2 writing (e.g., Xu and Tian, 2012; Hoang, 2015). For instance, the use of creative metaphors, mental images, and associations are evidence of metaphoric thinking found in thought reports of Vietnamese learners of English accounting for their metaphor production (Hoang, 2015, p.120). Littlemore and Low (2006a) argue that the metaphoric thinking process for foreign language learners to understand metaphors in their targeted language involves a decision made in a given context, that is "whether two entities are to be treated as incongruous" (Littlemore and Low, 2006a, p.11), or "at times involves the conscious activation of a conceptual metaphor" (Littlemore and Low, 2006a p.16). Given the definition of a conceptual metaphor noted in **Section 2.1**, metaphoric thinking process in learners' mind is based on the conceptual mapping from a familiar source domain to a less familiar target domain. The learners' thought reports of their thinking processes concerning metaphor use in L2 writing could be useful signals of possible metaphoric thinking (e.g., Wang and Wang, 2019). Findings of this regard may also be helpful to L2 learners in understanding their own metaphorical thinking processes while being involve in topic based L2 writing and using metaphors in new or creative ways, thus "facilitating both L2 learning and use" (Littlemore and Low, 2006b, p.7).

Novel metaphors, as an important indication for determining metaphorical creativity, has been demonstrated to be often motivated by negative L1 transfer into learners' L2 writing (Xu and Tian, 2012; Nacey, 2013). According to Philip (2017), "novelty is not a clear-cut category, but one which operates along a conventionality cline with the utterly predictable at one end, and the previously inconceivable at the other" (Philip, 2017, p.224). Infrequency and unfamiliarity are two useful criteria for defining novel metaphors in language (Philip, 2017). As Deignan (2005) writes, "innovative/novel metaphors are infrequent and corpus frequencies can be used as a rough guide: any sense of a word that is found less than once in every thousand citations of the word can be considered either innovative/novel or rare" (Deignan, 2005, p.40).

Nacey's (2013) comparative investigation into Norwegian English learners' and British native English learners' metaphor use in writing has shown that novel

metaphor “was twice as frequent in the Norwegian L2 English (approximately 5%) when compared to that in the British A-level texts (almost 3%)” (Nacey, 2013, pp.152-153). The metaphorical language used by both native English learners and non-native English learners were quite conventional. Hoang’s (2015) research on metaphor use in Vietnam English learners’ writing also showed that novel metaphors were relatively rare in her participants’ writing, accounting for 2.14% in all the identified metaphors. Wang and Cheng (2016, p.205) writes, “L2 learners often create novel metaphors they have never encountered to enrich their communication, such as highlighting the gist of their messages”. A case in point is the example “love is a magical medicine that can cure all disease” found in their research, which is a novel metaphor initiated by the Production Task of Novel Metaphors designed by the research team (Wang and Cheng, 2016, pp.208-209). Research on novelty and novel metaphors in L2 writing, including the comparison between linguistic metaphors in L1 and L2, has shown that novel metaphors, though not as common as conventional metaphors in L2 writing, can be treated as opportunities for creative metaphor use in the targeted language, and as possible evidence of L2 learners’ efforts made to “resort to their L1 to make up the insufficiency in L2” (Ellis, 1999, p.37). It seems fairly safe to conclude that there is no clear-cut criterion for deciding the metaphor use in authentic communication as conventional, novel, deliberate, or creative. In line with previous research on what characterizes a creative metaphor use, the L1 influence on novel, creative, deliberate, and possible communicatively less successful metaphor use, I categorize the types of linguistic metaphors in **Table 2.1**.



**Table 2.1 Conventional and unconventional linguistic metaphors**

Categories	Subcategories and examples
Conventional metaphor	<b>1) Metaphors occurred in ‘just the way to say it’</b> e.g., “ <u>Between</u> these two different <u>views</u> ” (Shen, 2015, p.46)
	<b>2) Metaphors with positive L1 transfer (and deliberateness)</b> e.g., “I believe this is a <u>black</u> date for Greek history” (Littlemore et al., 2014, p.135) e.g., “be <u>buried in</u> ” (Wang & Wang, 2019, p.58)
Unconventional metaphor	<b>3) Creative metaphors (with positive L1 transfer and deliberateness)</b> e.g., “(...) your heath [health] will <u>suffer</u> when you <u>reath</u> [reach] a <u>higher</u> age. An <u>old car</u> doesn’t <u>run</u> as <u>smooth</u> as a <u>new one</u> . <u>This</u> will sooner or later <u>reduce</u> your quality of life” (Littlemore et al., 2014, p.136)
	<b>4) Novel metaphors with negative L1 transfer (and deliberateness) or communicatively less successful metaphor use</b> e.g., “but I tried to <u>hold back my nerves</u> ” (MacArthur, 2010, p.167)
	<b>5) Possible errors with simple translation</b> e.g., “without knowledge, money is likely to make people to become <u>a frog in the well</u> ” (Xu and Tian, 2012, p.76)

This operational framework developed on the basis of relevant literature is used in the analysis of the metaphors in my participants’ L2 writing, including linguistic forms, functions, and learners’ recall comments on their thinking processes with respect to metaphor use. Here comes another question: in what ways do my participants use metaphors in their L2 writing?

### 2.3.3 Metaphoric competence in L2 English

Research on language learners’ ability to use metaphors has given rise to the concept of metaphoric competence (Littlemore, 2001b; Littlemore and Low, 2006b; MacArthur, 2010; Nacey, 2013; Hoang, 2015; Danesi, 1992, 2016). Low (1988) writes that metaphoric competence refers to:

a number of skills related to metaphor which native speakers

are frequently expected to be good at, and which learners need to develop to some degree if they hope to be seen as competent users of the language

(Low, 1988, p.129).

The concept of metaphoric competence has been more recently defined as consisting of four dimensions: “1) originality of metaphor production, 2) fluency of metaphor interpretation, 3) ability to find meaning in metaphor, and 4) speed in finding meaning in metaphor” (Littlemore, 2001b, p. 461). These four dimensions may be developed independently and differently concerning the distinct features of individual learners.

MacArthur’s (2010) research is mainly concerned with one specific dimension of metaphoric competence, which is the linguistic correctness of metaphor production in L2 writing. She has studied the English writing data produced by a group of Spanish undergraduate students. She writes, “metaphor appears spontaneously in response to task, rather than appearing as a result of any pedagogical focus on metaphor awareness” (MacArthur, 2010, p.170). She has proposed corresponding pedagogical practices such as the teachers’ effective feedback on learners’ metaphor production to facilitate learners’ development of metaphoric competence in L2.

Chen (2010) reviewed research on metaphorical competence, leading her to suggest the necessity of introducing metaphor theories to the mainstream English curriculum content design. She argues that metaphor theories should be applied to all aspects of second language teaching such as vocabulary, reading, and cross-cultural communication. Wang and Cheng (2016) suggest, “probing factors behind learners’ metaphoric creativity can thus enrich teachers’ knowledge of how to develop learners’ ability to use L2 metaphorically, preparing them to participate in actual social communication” (Wang and Cheng, 2016, p.205).

Research on L2 learners’ metaphoric creativity in L2 writing is one aspect of learners’ metaphoric competence in L2. The investigation of metaphoric creativity Chinese English learners’ L2 writing, and the examination of potential factors underlying L2 learners’ metaphor use in writing still seems to be an under-researched area.

## 2.4 Functions of metaphor in texts or discourses

Following the linguistic forms and types of L2 learners' metaphor use, I examine the functions of metaphor in L2 learners' topic-based writing. Halliday and Matthiessen (2004) write, "functionality is intrinsic to language: that is to say, the entire architecture of language is arranged along functional lines" (Halliday and Matthiessen, 2004, p.31). Functions of figurative language, especially metaphor, in different types of texts/discourses have drawn metaphor researchers' attention. Metaphor researchers "not only treat metaphors as monologic language use, but also as language used in social interaction between speakers" (Cameron, 2003, p.267). Both the linguistic and social aspects of metaphor use have been focused on (Skorczynska and Deignan, 2006). For instance, working on the linguistic metaphors in different text-types in English (e.g., conversation, popular science texts), Goatly (1997, 2011) describes functions of metaphors using Halliday and Matthiessen's (2004) framework of metafunctions of language: ideational, interpersonal, and textual:

1) functions of explanation and modelling, e.g., explaining electricity in terms of water flow for elementary science students, and the conventional metaphor of understanding computer as a brain are grouped as ideational when metaphor is used to construe human experience;

2) functions of argument by analogy, especially when using metaphorical analogy to justify an action or recommendation and to achieve persuasive power, is described as both ideational and interpersonal; the ideological functions of metaphor with evaluative power which influence opinions and judgements are also interpersonal, e.g., the food metaphors used on women like sugar baby and eye candy may trigger negative judgements on women;

3) metaphors can also achieve textual functions by providing textual coherence when used to structure and develop a text, e.g., metaphors are used as framing or agenda-setting devices to organize classroom discourse (Cameron, 2003, p.79),

(Goatly, 2011, pp.154-177)

### **2.4.1 Semino's (2008) model of functions of metaphor**

The use of figurative language in texts/discourses “often seems to carry out more than one of the three functions (i.e., ideational, interpersonal and textual) simultaneously” (Deignan, 2012, p.452), which can be evident in the use of metaphor in real-life communication. In Semino's (2008) analysis of linguistic forms and functions of metaphor in different types of communication such as political speeches, educational and scientific discourse, occasions of metaphor use that lexicalize more than one of the three dimensions of functions of language have been illustrated.

#### **2.4.1.1 Ideational and interpersonal function of metaphor**

First is the example where the ideational function and interpersonal operate simultaneously and combined in an evaluative metaphor use in a conference speech by Tony Blair. The British Prime Minister Tony Blair described the false choices in terms of a concrete reverse gear in a conference speech: “Get rid of false choices...Forward or backward. I can only go one way. I've not got a reverse gear” (Semino, 2008, p.81), which could add evaluative power by suggesting the backward movement might not be good when compared with the forward movement and could achieve ideational and interpersonal functions that are consistent with Goatly's (1997, 2011) description of functions of metaphor. Both Semino's (2008) and Goatly's (1997, 2011) interpretations of functions of metaphor in texts/discourses have been based on Halliday and Matthiessen's (2004) three-dimensional framework.

#### **2.4.1.2 Ideational and textual function of metaphor**

Semino (2008, p.23) explains the textual function of metaphor in by describing metaphorical patterning in specific contexts, such as the four repetitive occurrences of the same linguistic metaphor “progress” that is in reference to the same topic and argument in a news article about actions should be done towards climate change. The four instances of “progress” (underlined) all refer to positive change in terms of forward movement, and contribute to the internal coherence of the text:

[...] And as for trade, even the prime minister conceded that he had failed to make progress. [...] But together with Africa, he insisted: “Politics is about getting things done step by step, this is progress, and we should be proud of it.” The bottom line is this. On Africa, the G8 made progress that, if implemented, will be substantive and meaningful, particularly on the issues of aid and debt relief. [...] The least progress was made on combating climate change, but then there wasn’t a big concert in London for that, was there?

(Semino, 2008, p.23)

By viewing the positive change as forward movement, the repetition of “progress” metaphor in this long quotation could also have ideational function, which operate simultaneously with the textual function of providing internal coherence. It seems that the cognitive force of metaphor—talking about something abstract in terms of something more concrete contributes substantially to the realization of ideational function in texts/discourses. Halliday and Matthiessen’s (2004) three-dimensional framework have been demonstrated as useful guidelines for analysing functions of metaphor use in texts/discourse (e.g., Goatly, 1997, 2011; Semino, 2008; Deignan, 2012).

#### **2.4.2 Communicative functions of metaphor**

Cameron (2003) writes, “we cannot, however, understand the interactional use of metaphor without looking at the sociocultural factors of the context of use” (Cameron, 2003, p.268.) In the past decades, metaphor researchers have examined the communicative or discourse functions of metaphor by taking specific metaphorical patterns and contexts into consideration.

For instance, Boyd (1993), Littlemore (2001a), Cameron (2002, 2003) and (Beger, 2016) investigate the informational and pedagogical functions of metaphors in academic lectures in educational contexts. Lecturers may use metaphors to make the information they delivered more organized and systematic (framing or textual), exploit metaphors in order to develop and communicate knowledge of specific disciplines (ideational) and express their own perspectives on the messages they will deliver to their students that may achieve evaluative and persuasive power (interpersonal). I do not assume that

possible communicative functions of metaphors used by my participants in their L2 writing are all deliberate functions of metaphors. This conceptual possibility is only likely to be evident in situations where my participants, in the stimulated recall interviews, explicitly verbalize about their metaphor knowledge and their consciously use of metaphors in L1 or L2 to achieve rhetoric effects in their L2 argumentative writing. The focus on whether the linguistic forms and functions of metaphors are brought about consciously by my participants or not is a different research direction for future investigation.

Charteris-Black (2004) describes the persuasive function of metaphors in political discourse. Deignan (2005) summarizes the ideological functions of metaphor in naturally occurring spoken language, such as developing, negotiating, and communicating knowledge, primarily found in political, educational and health discourse. Skorczynska and Deignan (2006) and Dongman and Deignan (2019) focus on the functions of metaphors that are specific to economics and business texts (e.g., modelling, illustration, filling terminological gaps and evaluation). Dorst (2011) explains the stylistic effect and conceptualization function of personification metaphors in fiction. Krennmayr (2011) writes the forms and functions of metaphors in two selected newspaper articles about business with focusing on “metaphorical lexical units that cluster together and may thus act as cohesive devices” (Krennmayr, 2011, p.143). Krennmayr’s (2011) purpose is to explore why particular linguistic metaphors occur in particular news texts and contexts with particular forms or patterns, and to link some functions of metaphors in line with Goatly’s (1997, 2011) and Semino’s (2008) work mentioned above. In her work, the ideational and textual functions of metaphor have been primarily recognized.

Herrmann (2013) summarizes the most typical functions in academic prose as follows by reviewing a couple of influential text/discourse-based studies on metaphor in academic contexts:

- **Ideational function**
  - Theory-constitutive function (also Boyd, 1993; Semino, 2008): establishment of reference, lexical gap filling, explanation and reconceptualization

- **Interpersonal function**
  - Pedagogical function (also Boyd, 1993, Semino, 2008): explanation and (individual) reconceptualization
  - Argumentation and evaluation (also Semino, 2008)
- **Textual function**
  - Creation of textual cohesion and textual structuring (also Darian, 2000; Low, 2010; Semino, 2008)

(Herrmann, 2013, p. 41).

Herrmann (2013) works on the forms and functions of metaphor in academic discourse across four registers: academic prose, news, fiction, and conversation on the basis of the functional framework mentioned above. She found that metaphor use is more frequently used in academic prose, compared with the other three registers, “suggesting an important role of metaphorical word use in informational production, but also in abstract production and elaborated reference” (Herrmann, 2013, p. 308) In terms of communicative functions of metaphor, she found that metaphors used in academic prose often serve the ideational and textual function primarily, and also have interpersonal functions like education, evaluation and persuasion (Herrmann, 2013). As mentioned in the example of “progress” metaphor, the three dimensions of metaphor functions in academic prose may overlap. Metaphors sometimes can be used for achieving more than one of the three dimensions of functions of language proposed by Halliday and Matthiessen (2004) simultaneously (e.g., Semino, 2008; Deignan, 2012).

## **2.5 Functions of metaphor in L2 learners’ argumentative writing**

As mentioned in **Section 2.4.2**, the terms of communicative functions and discourse functions are often used interchangeably, with both viewing metaphors in text/discourse as interactional and contextualized (Cameron, 2003; Herrmann, 2013) in native speaker writing; I now turn to EFL and ESL.

Hyland (1990) offers a preliminary model on the description of the rhetorical structure of EFL argumentative writing, based on 65 papers collected from the top 10% of essay scripts submitted for the Papua New Guinea High School

matriculation in English in 1988. In his model, an EFL argumentative essay is divided into three stages: 1) thesis—introduces the proposition to be argued; 2) argument—discusses grounds for thesis; 3) conclusion—synthesizes discussion and affirms the validity of the thesis (Hyland, 1990, p. 69). As Paquot (2010) puts it, “unlike experts’ writing in academic prose, the learners who produced the argumentative essays were not supposed to show that they were familiar with the subject by referring to or quoting from the literature. By contrast, they were explicitly encouraged to give their personal opinions” (Paquot, 2010, pp. 84-85). As mentioned in the introduction chapter, metaphor is defined as one types of figure of speech in Chinese university students’ academic writing textbooks but there is not enough evidence to show that metaphor has been considered important and commonly taught to Chinese English learners of English to serve rhetorical functions of argumentative essays: 1) expressing personal opinion; 2) using objective, logical reasoning, facts, and hard evidence to demonstrate the soundness of a position and to encourage readers to accept the point of view; 3) using emotional language and dramatic appeals to affect readers’ concerns, beliefs, and values, often in the hope of encouraging them to take a specific action, besides encouraging acceptance of an opinion (Hyland, 1990; Paquot, 2010; Yang et al., 2014, pp.2-3). As Semino (2008) writes, “metaphor enables us to think and talk about abstract, complex, subjective and/or poorly delineated areas of experience in terms of concrete, simpler, physical and/or better delineated areas of experience, often connected with our own bodies” and “metaphors can be used to persuade, reason, evaluate, explain, theorize, offer new conceptualization and so on (in discourse)” (Semino, 2008, pp.30-31). It is safe to assume that my participants’ use of metaphor may play a role in helping achieve rhetoric functions in argumentative writing as noted above.

Recent investigations into L2 learners’ actual use of metaphors and corresponding functions in written communication, including argumentative essays (MacArthur, 2010, Kathpalia and Carmel, 2011, Nacey, 2013, Littlemore et al., 2014; Hoang and Boers, 2018) have shown that L2 learners at different language proficiency levels are able to use metaphors for different communicative purposes, such as explaining abstract concepts and achieving



dramatic illustration. For example, working with a group of first year science and arts students involved in a communication skills course at Nanyang Technological University (NTU), Kathpalia and Carmel (2011) analyse 113 written texts and found that students' use of metaphors could fulfil ideational functions of explaining, textual function of structuring internal coherence and interpersonal functions of persuading in writing. For instance, in the sentences "Singapore is a multi-racial, multi-religious country that is rich in both flavour and taste ... I'm proud to say that NTU provides the key ingredients such as ...", the different metaphorical expressions like "flavour", "taste" and "ingredients" clustered in close proximity that belong to the same food metaphor could serve both ideational and textual functions in the written text (Kathpalia and Carmel, 2011, p. 282). Littlemore et al. (2014) explore the functions of metaphor by analysing metaphors in argumentative essays written by Greek and German learners of English across different language proficiency levels defined by the Common European Framework of Reference for Languages (CEFR). Focusing on learners' writing ability described in CEFR as six levels (A1, A2, B1, B2, C1, and C2), Littlemore et al. (2014) find that learners at level B1 "are now beginning to use metaphor to present their own personal perspective" and learners' texts at level B2 "have the beginnings of persuasive academic argument and its accompanying language" and "persuasive academic argument is an important function of metaphor" (Littlemore et al., 2014, pp. 132-133). Metaphors also function as providing discourse coherence in essays that relate complex subjects, or offering re-conceptualization relating to abstract subjects, "as metaphor is nearly always involved in the expression of abstract concepts" (Littlemore et al., 2014, p. 133). The evaluation function of metaphor can be found in learners' texts at level C1 where "some learners are starting to make use of direct metaphors (such as similes)" (Littlemore et al., 2014, p. 135).

In sum, research in this regard suggests that the functions of metaphors offering new conceptualization, providing coherence, and achieving persuasive, evaluative and emotional power in the learners' written texts would make the written communication more effective as well as memorable (Kathpalia and Carmel, 2011). One example of this is the dramatic contrasts created by the use of metaphors relating to the best and the worst experience (underlined):

“Once having the dream job, the nightmare starts” (Littlemore et al., 2014, p. 135). Therefore, as Kathpalia and Carmel (2011) write, “encouraging the use of metaphor to perform the various illocutionary communicative functions would be beneficial to second language learners, especially those with intermediate to advanced proficiency in the target language” (Kathpalia and Carmel, 2011, p. 285). Following Littlemore et al.’s (2014) practice of focusing on the metaphor clusters in learners’ argumentative texts, my research intends to emphasize on the communicative functions that metaphor clusters serve in my participants’ argumentative essays. The definitions of metaphor clusters and the rationale of concentrating on the particular metaphorical pattern of clustering for metaphor function analysis are presented in **Section 2.6**.

## **2.6 Exploring texts with metaphorical bursts or clusters**

### **2.6.1 Metaphor clusters and functions of metaphor clusters**

Several researchers have noted the tendency for metaphors to cluster at certain points in texts or discourse (Corts, 1999; Corts and Pollio, 1999; Corts and Meyers, 2002; Corts, 2006; Cameron, 2003; Koller, 2003; Cameron and Stelma, 2004; Semino, 2008; Krennmayr, 2011; Littlemore et al., 2014; Dorst, 2017; Sun and Chen, 2018). The widespread and intriguing phenomenon where speakers or writers suddenly produce multiple metaphors in close proximity in texts or discourses has been defined as the pattern of metaphor clustering or metaphor clusters (Cameron and Stelma, 2004; Semino, 2008).

“Textual patterns of metaphor which involve clusters are also linked to a range of functions that linguistic metaphors serve in different parts of the text as well as in relation to each other” (Moghadam and Samar, 2020, p. 2). For instance, working on three video-taped lectures by the same professor selected from an undergraduates’ abnormal psychology course, Corts and Pollio (1999) find that the teacher tends to use figurative language and gestures in ‘bursts’ simultaneously to provide a concrete representation for the topic under discussion. A case in point is the metaphorical vehicle terms (underlined) “stirs up conflict within us” and “an attack on our narcissism” in teacher’s figurative outputs in burst on the topic of aging, accompanied by figurative gestures of

“hands mesh and press against each other” and “both fists clenched and held in front of the body”, “all of which are implied and summarized by the (root) metaphor *AGING IS AN ATTACK*” (Corts and Pollio, 1999, pp. 91-92).

Corts and Meyers (2002) analyze burst-like clusters of figurative language in three Baptist sermons, to further explore whether patterns of metaphor clusters will occur in all contexts and the factors that drive the production of figurative clusters in natural speech. They suggest that figurative bursts or clusters occur in both preaching and teaching contexts that involve the need of elaboration. The figurative clusters in sermons also provide coherence when the same root metaphor is implied in the process of describing a topic at length. As Corts and Meyers (2002) write, “in the contexts of college lectures, the point is to introduce new information or interpretations” (Corts and Meyers, 2002, p. 394). Similar to Corts and Pollio (1999) have found in undergraduate lectures, Cameron (2003), in her analysis of the interaction between a teacher and a group of around 10-year old primary school students in a geology lesson, concludes that “metaphors about content tend to occur in bursts and these bursts or clusters of deliberate metaphors occur in explanations of difficult concepts in educational discourse” (Cameron, 2003, p. 106). For instance, in Cameron’s (2003) research, the teacher explained the formation of igneous rocks by volcanic action, with deliberately comparing the “volcanic lava” with two different vehicle terms: “sticky treacle” and “runny butter” (Cameron, 2003, pp. 103-105), hoping to offer a more familiar and concrete representation of the volcanic activity in terms of the runny butter heated in microwave. As discussed in **2.3.2.1** on the deliberate metaphor use, I would like to make it clear that I also do not mean that all my participants’ use of metaphor clusters are deliberate ones. As Nacey (2013) argues, one cannot decide the deliberateness of a metaphor use on the basis of text data alone.

Apart from developing and communicating new knowledge or conceptualization in the explication sequence of educational discourse, metaphors also occur in clusters in the agenda management sequence of organizing and framing lesson procedures, such as the “journey metaphors (e.g., can you see where you've got to go from here?) often occur in clusters in agenda management sequences” (Cameron, 2003, p. 248). Krennmayr (2011) explores metaphorical lexical units

that cluster together in two highly metaphorical news texts on business. The textual function of metaphor clusters of providing coherence and the ideational function of conceptualizing abstract ideas discussed above are primarily recognized in her research. Koller (2003) investigates metaphor clusters in magazine texts on marketing. She also summarizes the functions of metaphor clusters based on Halliday (1984)'s framework of three meta-functions of language, concluding that:

- 1) clusters at the beginning of a text often activate the ideational function of metaphor by creating a new representation of an abstract concept
- 2) metaphor clusters in mid-text often achieve the interpersonal function by developing persuasive argument and directly supporting the author's viewpoint in a journalistic text
- 3) metaphor clusters occurring in the end also frequently achieve the interpersonal function by helping authors reinforce the metaphorical arguments and making the authors themselves understood. The persuasive force of the metaphor clusters in the end of the text is often salient
- 4) and the textual function of metaphor clusters such as creating internal coherence can be captured in different parts of the text

(Koller, 2003, p. 120).

An example of a prominent metaphor chain in a business magazine text is:

“But with so many different corporate cultures spread across so much space, should investors fear indigestion?” “We don't digest them; we integrate them,” says CFO Muller.”

(Chen, 2000; see also Koller, 2003, p.117)

According to Koller (2003), the move to a different metaphor “we integrate them” enables the speaker to distance himself from his interlocutor, thus meeting the interpersonal function of metaphor. The metaphorical expressions “We don't digest them” and “we integrate them” are used to construct certain new representations of the topic (e.g., food metaphor implied by the metaphorical unit “digest”) during the negotiation process, thus actualizing the ideational function of metaphor; and the expression “We don't digest them”, which is a negation to the former expression “fear indigestion”, helps to achieve the textual

function of metaphor by creating cohesion to this metaphor cluster. Therefore, as discussed above (e.g., Deignan, 2012), metaphor clusters or bursts seem to coincide with interpersonal, ideational and textual functions.

As Littlemore et al., (2014) put it, “people tend to produce metaphors in clusters, that these clusters serve important communicative functions...One might expect development in the production of metaphor clusters in learners’ writing at the different levels” (Littlemore et al., 2014, pp. 119-120). Kimmel (2010) summarizes three functions of metaphor clusters by reviewing prior studies on metaphor clusters in written text:

- 1) metaphor clusters are attention-grabbing and thus a relevance-producing device
- 2) clusters seem to occur ‘where the action is’
- 3) and metaphor clusters connect and dynamize discourse.

(Kimmel, 2010, p. 98).

The discussion of functions of metaphor clusters in spoken and written contexts such as lectures, sermons, political speeches, news articles and business magazines mentioned above shows that metaphor clusters can occur at particularly significant points in texts or discourses and can relate to a range of communicative functions. “Metaphor clusters are often used in strategic positions for rhetorical purposes” (Semino, 2008, p. 24; see also Koller, 2003; Cameron, 2003).

### **2.6.2 Methods of identifying metaphor clusters**

Methods used to define and identify metaphor clusters in spoken and written contexts in prior research include: 1) the centred moving average (CMA) procedure, the values of which can be calculated and described by a Poisson distribution and used “to define a region of unusually high levels of output (i.e., a burst)” (Corts and Pollio, 1999, p. 86); 2) the visual inspection of cumulative frequency graphs (Corts and Meyers, 2002, p. 179); 3) the visual display method which can display metaphors as points on a time line with the aid of the VisDis software (Cameron and Stelma, 2004); 4) a time series analysis which can “produce metaphoric density charts and help to identify stretches of text

with high localized metaphoric density” (Littlemore et al., 2014); 5) an emphasis on the “higher metaphor density of a portion of text compared with the ‘normal’ density of metaphorical expressions in a particular kind of data (e.g., in spoken data, the average density of metaphorical expressions varies between 27 and 107 per 1,000 words)” (Semino, 2008, p. 24; see also Cameron and Stelma, 2004, p. 120 ); 6) and the identification of the same source domain or the same root or systematic metaphor shared by linguistic metaphors “assembling in close proximity” (Corts and Meyers, 2002; Cameron, 2003; Semino, 2008; Sun and Chen, 2018, p. 629). The prior techniques for defining and identifying metaphor clusters suggest that metaphor clusters can be viewed from two angles. First is the statistically high metaphor density and second is the systematic use of different linguistic metaphors implied in the same root metaphor, such as the journey metaphor in classroom talk (Cameron, 2003) and the *AGING IS AN ATTACK* metaphor in university lectures (Corts and Pollio, 1999) discussed above. To explore metaphor clusters and its communicative functions in argumentative texts produced by Chinese learners of English at the same language proficiency level, I follow Semino’s (2008) definitions of the patterns of metaphor clusters in texts or discourses. The definitions of three types of metaphor clusters are as follows:

- 1) **Clustering**: the use of several different metaphorical expressions drawing from different source domains in close proximity to one another, often with higher metaphor density in a portion of text compared with the ‘normal’ density of metaphorical expressions in a particular kind of data (e.g., in spoken data, the average density of metaphorical expressions varies between 27 and 107 per 1,000 words).
- 2) **Extension**: a particular type of cluster, where several metaphorical expressions belonging to the same semantic field or evoking the same source domain, or the same root metaphor, are used in close proximity to another in relation to the same topic, or to elements of the same target domain.
- 3) **Combination and mixing**: when metaphorical expressions that evoke different source domains that occur in close proximity to each other, they can interact in various ways, and the mappings they evoke may be either compatible or incompatible. When metaphor clusters evoke different source domains that can be merged meaningfully, this is called

combination. When the domains clash, on the other hand, and the expressions cannot be combined meaningfully, this is called mixing.

(Semino, 2008, pp. 24-27)

On this basis, there are two groups of metaphor clusters: 1) statistically dense metaphor clusters that do not imply systematic metaphors, and 2) extended metaphors from which systematic metaphors can be identified out by establishing related vehicle terms (Cameron and Maslen, 2010) from metaphorical expressions occurred in close proximity. I want to mention that the first type of metaphor clusters is excluded from the analysis of functions of metaphor in this present investigation. The reason is that systematic connections that can be obtained from extended metaphors can “open a window on the ideas, attitudes, and values which may be active in speakers’ or writers’ minds at the time when they engage in texts/discourses” (Cameron et al., 2010, p.117). The establishment of systematic metaphors may minimize the impact of my intuition on the analysis of functions of metaphor clusters.

### **2.6.3 Focusing on extended metaphors in argumentative texts**

“Extension involves different vehicle terms from one topic domain, which, when numerous, forming organizing metaphors (systematic metaphors) and contribute to ‘textual structuring’” (Denroche, 2018, p.7; Goatly, 1997, 2011). As noted above, Semino (2008) describes extended metaphor as a particular type of cluster. The bottom-up analysis of systematic metaphors could be a useful tool for examining the intended communicative functions of extended metaphors in my written data. The definition of systematic metaphor is repeated here for convenience: “a ‘systematic metaphor’ is a set of linguistic metaphors in which connected vehicle words or phrases are used metaphorically about a particular topic” (Cameron and Maslen, 2010, p.127).

The procedures of identifying metaphors and systematic metaphors from extended metaphors are presented in detail in the methodology chapter. I can expect some parts of my writing data that are low in metaphor density, while other sections are high in metaphor density and contain a burst of metaphors. For the analysis of functions of metaphor, my research will then focus on

extended metaphors in argumentative essays produced by my participants, hoping to contribute knowledge to the research area on metaphor clusters and its communicative functions in L2 learners' written contexts. In line with studies on metaphors in academic texts or discourses (e.g., Herrmann, 2013), the investigation on what rhetorical functions that extended metaphors can serve in different parts of an argumentative essay, as well as in relation to each other, will also be summarized by using Halliday and Matthiessen's (2004) framework of three metafunctions of language: ideational, interpersonal and textual. This leads to one research question of this thesis: what are the communicative functions of extended metaphors in Chinese English majors' argumentative writing?

## **2.7 Summary: research questions**

In this chapter, I have reviewed different theories of and approaches to metaphor (e.g., cognitive metaphor theory and systematic metaphors), some theoretical notions with respect to metaphor use (e.g., novelty, creativity, deliberateness and metaphoric competence), and the prior research on metaphor and L2 teaching and learning, in terms of my research focus on forms and functions of metaphor, and the possible factors influencing learners' metaphor use in L2 writing. The operational frameworks for defining linguistic metaphors and categorizing linguistic metaphors in L2 writing have been developed, respectively.

I have found that the investigation on metaphor production in L2 learners' topic-based writing still seems to be an under-researched area. To date, little research has adopted the stimulated recall methodology to ask L2 learners about their perceptions of metaphor use in L2 writing, and to gather further evidence about the role of metaphor in L2 learning and how language teachers can help learners better understand the writing process and then facilitate metaphoric competence in L2. With an attempt to fill the research gap as illustrated in this chapter, my three research questions, with three sub-questions of the first research question, are developed as follows:



1. In what ways do Chinese English majors use metaphors in their argumentative writing?

1a. How frequently do Chinese English majors use linguistic metaphors in their argumentative writing?

1b. What are the grammatical categories of linguistic metaphors in terms of word class and linguistic form?

1c. How do Chinese English majors use linguistic metaphors conventionally or unconventionally?

2. What are the communicative functions of extended metaphors in Chinese English majors' argumentative writing?

3. How do Chinese English majors report their thinking processes around their use of metaphors in L2 writing?

In the next chapter, the research methods that are used to answer the above research questions are presented and explained in detail.

## Chapter 3 Research design and methods

This chapter describes the research design and corresponding methods. It first introduces the context of this study and data collection procedure, explains the established methods of identifying metaphors in my participants' writing texts and some challenges, then describes the methods of establishing systematic metaphors from extended metaphors, and then outlines the rationale and procedure of carrying out stimulated recall interviews and analysing interview data. Some necessary changes to the research design and decisions made by learning from the pilot study are also discussed in relevant sections. At the end of this chapter, a summary of the research procedures is given. The examples used for illustration purposes in the methodology chapter are cited from my collected written data and interview data.

### 3.1 Procedure of collecting research data

#### 3.1.1 Collection of written data

The argumentative writing samples collected in my research were produced by a group of 39 second-year university Chinese English majors in March and April 2018. The second semester of each academic year in Chinese universities usually starts from March. In this semester, the learning objective of the writing module studied by my participants was argumentative writing. As part of preparation for their TEM-4 test (a national English language proficiency test for second year English majors on the third Saturday of April every year in mainland China), my participants also needed to practice argumentative writing by attending one TEM-4 writing training session. This enabled me to collect authentic writing samples in a natural and principled way, without imposing additional work on teachers and students.

To collect the writing samples produced in one TEM-4 writing training session and involve writing teachers for more background information, I made a minor amendment to my originally approved ethical application on 15/08/2017 (see **Appendix A1**). In my first ethical application form, I did not mention the

involvement of one TEM-4 writing training session and the semi-structured interviews with related writing teachers. The sample questions for me to ask teachers for more contextual information are listed in **Appendix A3**, and the sample consent form for teacher's interview participation is in **Appendix A4**. The amendment application was approved on 04/04/2018 (see **Appendix A2**). I emailed the Head of English Department, the teacher of the academic writing module (hereafter Teacher A) and the teacher of the TEM-4 writing training session (hereafter Teacher B) respectively, for permissions to be allowed access to my prospective participants in the targeted university, Xi'an, Shaanxi province, China. The sample email for seeking gatekeepers' permission is presented in **Appendix A5**.

With the permissions given by the Head of English Department, Teacher A and Teacher B (see **Appendix A6**, i.e. **A6-1**, **A6-2-1**, **A6-2-2**, **A6-2-3**, and **A6-3**), I finally got seven data collection points in total by involving 39 Chinese English majors who were divided into two classes and were in the second year of undergraduate study. The seven time points on four different dates for visiting classrooms and doing paperwork within my approved ethical applications were:

- first and second time points: 8:10am and 10:10am on 21/03/2018
- third and fourth time points: 8:10am and 10:10am on 28/03/2018
- fifth time point: 4:45pm on 30/03/2018
- sixth and seventh time point: 8:10am and 10:10am on 11/04/2018.

I arrived the classroom around 15 to 20 minutes before the class really began. The date (30/03/2018) to visit Teacher B's TEM-4 writing training session was four days before the approval of the amendment ethical application (04/04/2018), which was acceptable since there were just minor changes to my original ethical application form. The timeline of the written data collection procedure, involving specific time points and activities, is in **Table 3.1**.

**Table 3.1 Milestones in the process of collecting written data**

<b>Date and time</b>	<b>Activities during each time point</b>
2017.08.15	First ethical application approved Ethical approval of collecting writing samples from the academic writing module
2018.04.04	Amendment application approved Ethical approval of collecting writing samples from TEM-4 writing training session and interviewing Teacher A and B for more background information
2018. 03.21 8:10am visiting Class One 10:10am visiting Class Two (20 minutes before Teacher A's writing modules really begin)	Delivering research information sheets and participants consent forms; explaining the research, answering questions, and telling students what to include in emails if they are willing to send the e-copies of their writing samples to me by the end of the day and to participate in the follow-up stimulated recall interviews within the next two days
2018. 03.28 8:10am visiting Class One 10:10am visiting Class Two (20 minutes before Teacher A's writing modules really begin)	Delivering research information sheets and participants consent forms; explaining the research, answering questions, and telling students what to include in emails if they are willing to send the e-copies of their writing samples to me by the end of the day and to participate in the follow-up stimulated recall interviews within the next two days
2018. 03.30 4:45pm visiting the TEM-4 writing training session (15 minutes before Teacher B's session really begins; Class One and Class Two attend the session together)	Delivering research information sheets and participants consent forms; explaining the research, answering questions, and telling students what to include in emails if they are willing to send the e-copies of their writing samples to me by the end of the day and to participate in the follow-up stimulated recall interviews within the next two days
2018. 04.11 8:10 am visiting Class One 10:10am visiting Class Two (20 minutes before Teacher A's writing modules really begin)	Delivering research information sheets and participants consent forms; explaining the research, answering questions, and telling students what to include in emails if they are willing to send the e-copies of their writing samples to me by the end of the day and to participate in the follow-up stimulated recall interviews within the next two days

The two English classes attended Teacher B's TEM-4 writing training session together, so I just needed to visit the classroom and did my paperwork at a single point in time, i.e., at 4:45pm on 30/03/2018. Samples of research information sheet and participant consent form for students are presented in **Appendix 7** and **Appendix 8**.

**Table 3.2** shows descriptive statistics of the written data collection results.

**Table 3.2 Descriptive statistics of written data collection results**

Date	Written data collection results on each date
2018.03.21	<ul style="list-style-type: none"> <li>• 40 of the 41 students from the two English classes signed the consent forms for participation; later on, 9 students wanted to withdraw from the research and 3 sent to me unusable writing samples; in total, 28 usable writing samples were collected</li> <li>• 14 of the 28 participants also replied me in emails indicating that they had time to participate in the follow-up interviews on 22/03/2018 and 23/03/2018; 5 of 14 interviewed</li> </ul>
2018.03.28	<ul style="list-style-type: none"> <li>• 34 of the 41 students from the two English classes signed the consent forms for participation; 1 sent to me unusable writing sample; 33 usable writing samples were collected</li> <li>• 15 of the 34 also replied me in emails indicating that they had time to participate in the follow-up interviews on 29/03/2018 and 30/03/2018; 5 of 15 interviewed</li> </ul>
2018.03.30	<ul style="list-style-type: none"> <li>• 37 of the 41 students from the two English classes signed the consent forms for participation; 1 forgot to take a photo of her writing; 36 usable writing samples were collected</li> <li>• 14 of the 27 students who had not been involved in the interview process replied me in emails indicating that they had time to participate in the follow-up interviews on 31/03/2018 or 01/04/2018; 6 of 14 interviewed</li> </ul>
2018.04.11	<ul style="list-style-type: none"> <li>• 38 of the 40 students (one is absent) from the two English classes signed the consent forms for participation; 1 sent me the same sample submitted before; 37 usable writing samples were collected</li> <li>• 6 of 22 students who had not been involved in interview process by that day replied me in emails indicating that they had time to participate in the follow-up interviews on 12/4/2018 or 13/04/2018; 5 of 6 interviewed</li> </ul>

As illustrated in **Table 3.2**, not all 41 participants from the two English classes were willing to share the e-copies of their writing assignments with me via email on each written data collection date. Finally, 28 usable writing samples were collected on the first date from the two classes, 33 were collected on the second date, 36 were collected on the third date and 37 were collected on the fourth date. In total, 134 writing samples from 39 participants on four themes were collected, consisting of 47,689 words in total. **Table 3.3** shows the numbers and word counts of the argumentative writing samples collected in this research.

**Table 3.3 Argumentative writing samples collected and analyzed**

Topics	Number of texts	Total words	Average word length
<b>Writing themes taken from the writing textbook used in Teacher A's module</b>			
Spend and Save	38	13,532	356
Campus Love—Pros and Cons	34	13,511	397
Pop Icons and Heroes	26	11,688	450
<b>Writing theme in Teacher B's TEM-4 writing training session</b>			
Will Online Medical Treatment Bans help?	36	8,958	249
<b>Total</b>	<b>134</b>	<b>47,689</b>	<b>356</b>

The writing topics of argumentative writing samples collected on 21/03/2018, 28/03/2018 and 11/04/2018 were related to the themes arranged in the first three units of my participants' writing textbook, which are "Spend and Save", "Campus Love—Pros and Cons", and "Pop Icons and Heroes" (Yang et al., 2014). As suggested by Teacher A, my participants were free to choose specific sub-topics from these themes for the submission of their three argumentative writing assignments on 21/03/2018, 28/03/2018 and 11/04/2018 respectively. Teacher B had prepared the writing topic for the writing training session on 30/03/2018 based on his investigation on the writing topics for the writing section of TEM-4 test from 2008 to 2017. The writing topic for the session was "Will Online Medical Treatment Bans Help?" **Appendix 9** presents more information about my participants' writing topics taken from the textbook used in Teacher A's academic writing module and the topic in Teacher B's TEM-4 writing training session. The 134 argumentative writing samples are on 4 main themes and 27 specific sub-topics (see **Appendix 9**).

The three argumentative writing assignments for Teacher A's module were home writing tasks and the argumentative writing task for Teacher B's training session was an in-class task. I ignored the differences, such as the length of writing sample, the range of vocabulary use and different writing performances since I do not judge the writing performances of my participants. The e-copies of writing assignments for Teacher A's academic writing module were in word format because students often wrote their home assignments on their laptops and then printed out for in-class submission. The e-copies for Teacher B's

writing training session were in JPG format. The reason was that the students needed to write on their test paper prepared by Teacher B and Teacher B needed to collect their writing in class right after they finished their writing. To avoid causing extra work and pressure for my participants and allowing myself enough time to prepare the follow-up stimulated recall interviews, I asked my participants to take a photo of their writing papers by using their mobile phones before they handed in their writing to Teacher B, and to send the e-copies to me via emails by the end of that day, if they had signed the consent forms. I reproduced the writing samples in JPG format verbatim into word format for data analysis later on.

To anonymize my participants' personal information, I used Label 1 (refers to class number)-S1 (refers to student number)-1(refers to the order of data collection date) to stand for the writing sample produced by S1 from English Class One on the first date for data collection. Label 2-S1-2 stands for the writing sample produced by S1 from English Class Two on the second date of data collection. According to the labelling principle like this, for instance, 1-S1's four writing pieces produced on four different written data collection dates were labelled as 1-S1-1, 1-S1-2, 1-S1-3 and 1-S1-4 (see **Appendix 10** for examples of collected writing samples in word format and JPG format). My second-year university student participants are treated as intermediate learners of English according to their curriculum design (Yang et al., 2014).

### **3.1.2 Collection of stimulated recall interview (SRI) data**

#### **3.1.2.1 Using stimulated recall methodology**

“Stimulated recall methodology can be viewed as a subset of introspective research methods which help the researchers to access, examine and understand participant's reflections on mental processes” (Gazdag et al., 2016, p.119; Fox-Turnbull, 2011, p.205). The application of stimulated recall methodology to L2 research has been extended from investigating classroom practices and interactions like videotaped lectures or discussions to exploring participants' mental process in events like reading and writing (Gass and Mackey, 2017).

Tode (2012) has conducted a study on how Japanese learners of English processed the reduced relative clause during their reading. She has arranged a self-paced reading task for her 28 participants, 25 of whom participated in the final phase of stimulated recall investigation. During the reading task, if the participant encountered a phrase and was ready to give a response like “I understand or I don’t understand”, he or she could press a button and the phrase would remain on the computer screen. The whole task has been video-taped. In the final stimulated recall interview, she has used the video of each participant’s session as the stimulus. Her purpose is to reveal the participants’ thought processes when they were processing certain parts of the sentence, by way of transcribing and categorizing the participants’ comments in the stimulated recall interviews. In Tode’s (2012) research, the recall has been conducted after the reading task event in an immediate manner. The analysis of recall comments has enabled Tode (2012) to find the differences between successful and unsuccessful reading comprehension. Hoang (2015) has used keystroke data generating by the Input-Log program together with the stimulated recall interviews to explore how Vietnam learners of English explain the metaphorical language in their in-class compositions based on an elicitation writing task prepared by the researcher. The Input-Log program could “record a writing session in MSWord and generate linear analysis that shows the pauses in participants’ writing process” (Hoang, 2015, pp. 85-86). The linear analysis of computer-assisted writing process with pauses has been used as the stimulus and the recall interviews have been conducted immediately after the writing event. The time interval is “just enough for the participant to read the instructions and for the researcher to read their writing product and generate the linear analysis” (Hoang, 2015, p.87). Hoang (2015) has focused on the pausing periods before the metaphorical units identified in students’ English writing. She has used the stimulated recall interviews, with well-prepared interview protocol and instructions for both researcher and the students, to reveal the underlying factors that may directly link to the development of metaphorical units in students’ writing, by transcribing and categorizing the participants’ comments. The three outstanding categories in her participants’ comments on metaphorical language were “the use of images, background knowledge and novel metaphors” (Hoang, 2015, pp. 97-98).



The stimulated recall methodology, once designed and conducted appropriately, can generate useful results in L2 research concerning the research topics like reading comprehension and writing production. The time delays between the event and the recall in Tode's (2012) and Hoang's (2015) research are short, which can be regarded as immediate retrospection, or "consecutive recall", according to Gass and Mackey's (2017) categorization of three types of stimulated recall in terms of time delays. **Table 3.4** is cited from Gass and Mackey's (2017) work on using stimulated recall methodology in L2 research, which presents three types of stimulated recall with corresponding examples.

**Table 3.4 Three types of stimulated recall**

(Gass and Mackey, 2017, p.46)

Consecutive recall	Example: L2 Writing. Immediately after finishing revisions on an essay draft, participants are interviewed about the changes they made, using the initial and final written products as stimuli.
Delayed recall	Example: L2 Reading. After reading a passage in the L2, participants are given a list of questions about their comprehension of the passage. After the straight comprehension questions, they are asked to write about particular difficulties they may have had with the passage, and how they overcame them. They are asked to take the questions home and bring their answers in the next day.
Nonrecent recall	Example: L2 Strategies. After taking a placement test in the middle of the instructional year, one class of participants is divided into groups of successful and less successful students. These students are given email accounts, and are asked to send at least one message a week to a researcher, speculating on the ways in which they are learning vocabulary during the current semester, as opposed to the previous semester.

As noted in Chapter two: literature review, there has been researchers using think-aloud protocols to investigate possible difficulties encountered by Chinese learners of English while producing metaphors in L2 writing (e.g., Xu and Tian, 2012), and using post hoc interviews to explore the impact of L1 transfer on Chinese EFL learners' metaphorical production in English writing (e.g., Wang and Wang, 2019). Gass and Mackey (2000, 2017) argue that the stimulated recall methodology has an advantage over simple post hoc interviews and think-aloud protocols, since simple post hoc interviews "rely heavily on memory

without any prompts” and think-aloud protocols require the “researcher to train participants, and even after training, not all participants are capable of carrying out a task and simultaneously talking about doing the task” (Gass and Mackey, 2000, p.13). Little research on Chinese EFL learners’ metaphor use in L2 writing has used the stimulated recall methodology to have access to learners and contribute knowledge of learners’ understanding of their writing process with respect to metaphor use. I have attempted to fill this gap.

Prior research has demonstrated that “stimulated recall methodology can be used to prompt participants to recall thoughts they had while performing a task or participating in an event” (Gass and Mackey, 2000, p.13; Mackey and Gass, 2005; FoxTurnbul, 2009, 2011; Henderson et al., 2010; Ryan and Gass, 2012; Gazdag, et al., 2016; Gass and Mackey, 2017). Though “the recall accuracy declined as a function of the intervening time between the event and the recall”, this recall method with the aid of possible prompts “does not rely heavily on memory without any prompts” (Gass and Mackey, 2000, p.13) and “does not require extensive participant training” (Hoang, 2015, p.86). Gass and Mackey (2017) recommend “recall should be taken place as soon as possible after the original task” (Gass and Mackey, 2017, p.47). Gass and Mackey (2000) argue that “if the recalls were prompted a short period of time after the event (generally 48 hours), recall was 95% accurate” and they believe that “the recall method itself is valid for the procurement of information about one’s thoughts during an event” (Gass and Mackey, 2000, p.13). So, as mentioned in **Table 3.1**, I conducted the stimulated recall interviews within two days after the day when the students handed in their argumentative writing assignments, to maximize my participants’ recall accuracy. The stimulated recall in the research described here can also be regarded as the consecutive recall, as categorized, and exemplified in **Table 3.4**.

### **3.1.2.2 Developing a protocol for stimulated recall procedures**

Gass and Mackey (2017) write, “a detailed protocol helps the researcher to anticipate problems in advance while also acting as a checklist for the many variables and factors the researcher needs to consider and balance while carrying out the procedure” (Gass and Mackey, 2017, p.52). The word ‘protocol’

here “refers to a set of instructions, parameters, and details for carrying an experiment, as opposed to a verbal protocol or report” (Gass and Mackey, 2000, p.42). In addition to the issue of time delays between the event and the recall, questions to be asked in the interviews are needed to be structured carefully to ensure the reliability of the interview protocol. Castillo-Montoya (2016) has developed a four-phases interview protocol framework, which are:

- Phase 1: Ensuring interview questions align with research questions,
- Phase 2: Constructing an inquiry-based conversation,
- Phase 3: Receiving feedback on interview protocols
- Phase 4: Piloting the interview protocol.

Castillo-Montoya (2016, p.812)

Castillo-Montoya’s (2016) framework is developed for the fine-tuning of structured interviews or semi-structured interviews. Considering the Phase 1, the key questions to be asked in the stimulated recall interviews are those that are most likely to address research questions. As Gass and Mackey (2017) note, “the goal of stimulated recall is to tap learners’ thought processes while they were performing a particular task” (Gass and Mackey, 2017, p.50). To avoid questions that may trigger reflection about the event at the time of the interview, i.e., “hindsight report”, rather than thoughts during the events, Gass and Mackey (2017) suggest some appropriate questions to elicit reliable data for the purposes of stimulated recall. The appropriate questions are:

- What were you thinking when she said x?
- What were you thinking when you shook your head?
- I notice that you shifted your position in your chair and you hesitated, what were you thinking about then?

Gass and Mackey (2017, p.50)

In line with my third research question: how Chinese English majors report their language choices and thinking processes around their use of metaphors in L2 writing, I have developed two key interview questions: 1) When writing words or phrases like this, what were you thinking about or how did you perceive it? 2) Why did you use this/these particular word/words or phrases, what were you thinking about then? Both conventional and unconventional metaphors identified from participants’ argumentative writing samples have been focused during the stimulated recall session. Though not all metaphors in the collected

writing samples are able to be asked in the stimulated recall interviews due to time limitation and ethical consideration, the stimulated recall method has been able to generate interesting insights when efforts have made to ensure that the accurate recall in fact has been taken place.

To make the recall as accurate as possible, first, I have controlled the time delay between the event and recall within two days; second, key interview questions have developed in line with corresponding research questions, and with the aim to focusing on participants' thinking processes at particular point during the event; third, instructions for both the researcher, I, and my participants have been stated clearly in the interview protocol, to keep the interviews on track. In addition to the key interview questions mentioned above, introductory questions, e.g., "Are you ready for the interview?", which "serve to help the researcher begin the interview with easy, non-threatening questions that ask for narrative descriptions" (Castillo-Montoya, 2016, p.822), and closing questions, e.g., "Would you like to add anything?", which "provide the participant an opportunity to raise any issues not addressed" (Castillo-Montoya, 2016, p.822) have been developed to construct an inquiry-based conversation and to enable participants to keep talking. The draft of interview protocol has been reviewed by my supervisors regularly with feedbacks and also been reviewed by the University of Leeds Ethics Committee for ethical approval. Pilot testing of the interview protocol has also been conducted to test whether the interview protocol is workable or not, which is explained in detail in **Section 3.1.2.3**. Working within Castillo-Montoya's (2016) four-phases interview protocol framework, I aim to develop an interview protocol that can elicit rich, focused, and meaningful recall data. Detailed information of the original interview protocol, mainly based on Gass and Mackey's (2000, 2017) recommendations and adapted from Hoang's (2015, pp. 240-241) interview protocol concerning her research on metaphor use in Vietnam learners' English writing, is presented in **Appendix 11**.

I conducted the stimulated recall interviews either in English or Chinese, which depended on the participants' language preference. As Gass and Mackey note, the advantage of giving participants freedom to choose the language of recall is that participants will be "able to verbalize more thoughts when they feel

comfortable in expressing their thoughts” (Gass and Mackey, 2017, p.49). The participants’ corresponding writing samples that had been submitted one or two days before the interviews were printed out and used as stimuli when the interviews really took place, to help the participants to recall as much as possible about the thinking processes during his/her writing. During the process of stimulated recall interview, “a subject may be enabled to relive an original situation with great vividness and accuracy if he (sic) is presented with a large number of the cues or stimuli which occurred during the original situation” (Bloom, 1954, p.25). Before each interview really started, the participant needed to discuss and sign the consent form for interview participation (see **Appendix 12** for consent form for individual interview participation). The whole interview process has been audio-recorded, and the interview data has been transcribed into text data for further analysis.

### **3.1.2.3 Pilot testing of the interview protocol**

To examine how long the interview protocol really takes and whether my targeted participants indeed are able to answer questions, I piloted the interview protocol with 5 participants after the first date of written data collection. As mentioned in **Table 3.2**, in addition to sending me usable writing samples, 14 of the 28 participants also replied me in emails indicating that they had time to participate in the follow-up interviews on 22/03/2018 or 23/03/2018. I first read through the writing samples written by the 14 students and highlighted the metaphorical expressions that are noticeable and draw attention to themselves, such as “healing financial diseases of college students” (2-S1-1), “get through the sticky patch” (1-S12-1) and “three carriages of the economy” (1-S1-1). I then discussed with 8 of them respectively via emails to negotiate the specific time for conducting individual interviews in terms of their metaphor use in argumentative essays and their proposed free time. Finally, I was able to conduct 3 stimulated recall interviews on 22/03/2018 and 2 stimulated recall interviews on 23/03/2018, because of the need to strictly control the time delay between the event and recall, and the fact that students were often free at the same time in terms of their course schedules. The 5 participants involved in the pilot interviews were 1-S1-1, 1-S12-1, 2-S1-1, 2-S5-1, 2-S9-1. The topics of

their writing samples were centred around the general topic “Spend and Save”. The longest interview is about 32 minutes and the shortest one is about 18 minutes. The average time duration for each interview is about 26 minutes. The individual interviews were conducted in unoccupied offices and classrooms on campus, which enables ideal environment for concentration and audio-recording.

I learned from the first 5 interviews that, first, it is useful and efficient for me to highlight the outstanding metaphors, both the conventional and unconventional ones, in the argumentative writing based on my research experience before the interviews really take place. Those outstanding metaphors then could be asked and focused on during the interviews. For example, one question that I asked 2-S1-1 during the interview is “I noticed that you used the expression ‘healing financial disease’, what I want to ask is, when you were writing this essay, have you thought differently by writing this expression?” Second, it is necessary for me to avoid the same volunteer being interviewed more than once though she or he submits different writing samples each time and is willing to participate in the interview procedure more than once. The reason is that the participants may be familiar with my interview questions, and they may verbalize something purposely for my research if they were interviewed for the second time. I have avoided mentioning the words like “metaphor” and “metaphorical” during the interview process. So, I decided to mention clearly when visiting the two classes on the remaining three dates (28/03/2018, 30/03/2018, 11/04/2018) that if one had been involved in the interview process once, he or she did not need to participate in the stimulated recall anymore.

One of the five participants, 2-S5-1, had tried to use English in the interview, but she changed her mind halfway and decided to use Chinese since she found it was difficult to verbalize her thoughts accurately by using English. After interviewing her, I decided to inform my other participants again before the interviews that the interviews needed to be conducted in either Chinese or English and interviewees needed to make a careful decision about which language they preferred. As noted above, participants’ language preference will influence their verbalization about their thoughts during their writing at the time of the interviews. To decrease the amount of unnecessary information in the

interviews and make the students more focused on the recalling process, I further refined and finalized the interview protocol by adding some important tips for the interviewer. The rationale to add some tips for the interviewer to my original interview protocol is that “the instructions on the interview protocol should not tell the researcher what to say to prompt the recall comments but also provide information about what to say during the recall and after it” (Gass and Mackey, 2000, p.42). The interviewer should avoid “concrete reactions to participants’ responses and the back-channeling or non-responses such as ‘oh, mhm, I see, uh-huh and ok’ are preferable” (Gass and Mackey, 2000, p.44), to avoid the interviewer’s interference on the interviewee’s recall process. One more key interview question starting with “could you tell me...” was also added to the interview protocol to let participants keep talking, instead of asking participants to explain, because “if participants are asked not just to vocalize their thoughts but also to explain them, the additional cognitive load may interfere with memory and recall” (Gass and Mackey, 2017, p.53). The finalized interview protocol is in **Appendix 13**.

In sum, the first five stimulated recall interviews have demonstrated that the originally refined interview protocol is workable, with necessary instructions keeping the interviews on track. The actual time duration for each individual interview is acceptable, which is around 30 minutes. My participants have been able to verbalize interesting thought processes during their writing process clearly. For instance, when 1-S1-1 recalled her thinking process during the time when she was using the word “carriages” in the metaphorical expression “three carriages of the economy” in the first sentence of her argumentative essay: “there is a common view in China saying that the three carriages of the economy are consumption, export, and investment”, she said, “I did not think too much at that time. I knew the same Chinese expression and I just translated it into English and used it here”. When I asked her about her thinking about the use of metaphorical expression “powerful driving force” in the last sentence in the same essay—“we should pay a lot attention to consumption and rationally spend more so that our economy can have a sustainable and powerful driving force”, she recalled, “I just thought that the use ‘driving force’ here could match with my use of ‘carriages’ in the first sentence, because both of them

emphasized on the power of moving forward but they are different expressions. So I wrote it here". 1-S1-1 might not know that the words or expressions that she was using while she was writing were metaphorical. Interesting insights have been generated by the interview protocol focusing on thinking processes around metaphor use in L2 writing. The recall data in the five interviews that were conducted to test the interview protocol at the very beginning of the formal data collection procedure, has been considered as usable interview data for further data analysis.

#### **3.1.2.4 Recruiting of interview participants**

As explained above, the stimulated recall interviews were conducted within the next two days after each date of the classroom visits and volunteers were recruited via emails. The collection of argumentative writing data and follow-up stimulated recall data was conducted in a consecutive order. During each classroom visit, the participant information sheets (see **Appendix 6**) were delivered on the day when students hand in their assignments. This was to let students know that if they were willing -to participate in the follow-up interviews (around 30 or 45 minutes for each interview) within the next two days, they needed to mention that clearly in the emails. Participants were told to send emails to me by the end of the submission day, with their e-copies of writing samples as attachments.

I recruited volunteers from the 39 participants to conduct stimulated recall interviews on the basis of various objective restrictions. First, I only emailed participants who both were voluntary to send e-copies of writing samples and were voluntary to be interviewed within the next two days, to discuss specific time for interviewing. Second, due to time limitation, writing samples with metaphors that were easier to be noticed were more likely to be asked in the interviews. Third, volunteers' free time for interviewing were often coincide because of their similar curriculum. Fourth, each participant was interviewed no more than once. For instance, the 5 participants involved in the pilot interviews, recruited from 14 volunteers, were not to be regarded as targeted interviewees in the remaining dates for interview data collection (i.e. 29/03/2018 and 30/03/2018, 31/03/2018 and 01/04/2018, 12/04/2018 and 13/04/2018). As



noted in **Table 3.2**, the 5 participants recruited from 14 volunteers on 22/03/2018 and 23/03/2018, the 5 participants recruited from 15 volunteers on 29/03/2018 and 30/03/2018, the 6 participants recruited from 14 volunteers on 31/03/2018 and 01/04/2018, and the 5 participants recruited from 6 volunteers on 12/04/2018 and 13/04/2018 were all interviewed no more than once respectively. In total, 21 interview participants are involved in my stimulated recall interviews, including 5 interviewees in the pilot interviews.

**Table 3.5** shows the 21 interviewees' basic information, themes of writing samples interviewed, the corresponding interview dates, duration, and language.

**Table 3.5 Information of 21 stimulated recall interviews conducted**

Participant	Year of University	Interview date	Interview duration	Interview language	Writing themes of texts
1-S1-1	Second year	2018.03.22	28m56s	Chinese	Spend and Save
2-S5-1	Second year	2018.03.22	23m17s	English & Chinese	Spend and Save
2-S9-1	Second year	2018.03.22	32m08s	Chinese	Spend and Save
2-S1-1	Second year	2018.03.23	18m46s	Chinese	Spend and Save
1-S12-1	Second year	2018.03.23	30m58s	Chinese	Spend and Save
1-S18-2	Second year	2018.03.29	28m38s	English	Campus Love
1-S20-2	Second year	2018.03.29	16m23s	Chinese	Campus Love
1-S7-2	Second year	2018.03.30	21m09s	Chinese	Campus Love
1-S17-2	Second year	2018.03.30	21m17s	Chinese	Campus Love
2-S3-2	Second year	2018.03.30	24m28s	English	Spend and Save
1-S2-3	Second year	2018.03.31	17m38s	Chinese	Medical Treatment
1-S13-3	Second year	2018.03.31	14m51s	Chinese	Medical Treatment
2-S13-3	Second year	2018.03.31	13m48s	Chinese	Medical Treatment
2-S15-3	Second year	2018.03.31	17m27s	Chinese	Medical Treatment
2-S6-3	Second year	2018.04.01	15m16s	Chinese	Medical Treatment
1-S6-3	Second year	2018.04.01	15m12s	Chinese	Medical Treatment
1-S11-4	Second year	2018.04.12	41m49s	Chinese	Icon Worship
1-S15-4	Second year	2018.04.12	32m48s	Chinese	Campus Love
2-S18-4	Second year	2018.04.12	22m32s	Chinese	Campus Love
2-S4-4	Second year	2018.04.13	18m13s	Chinese	Campus Love
1-S4-4	Second year	2018.04.13	28m22s	Chinese	Campus Love

**Notes:**

1. Label 1 (refers to class number)-S1 (refers to student number)-1(refers to the order of data collection date); 1-S1-1 stands for the writing sample produced by S1 from English Class One on the first date for data collection. The participants' real names are anonymized in this principle consistently.
2. Terms like "28m56s" referring time duration, "m" refers to "minute(s)", "second(s)".
3. "English & Chinese" refers to the fact that both English and Chinese are used in the interview.

2-S5-1's interview is in half English and half Chinese, as mentioned in the pilot

testing of the interview protocol; 2 are completed in English; the remaining 18 interviews are in Chinese, according to interviewees' language preference. The time interval between the recall and event was not more than 48 hours. The longest interview was conducted with 1-S11-4, which lasts for 41 minutes and 49 seconds; the shortest one was with 2-S13-3, which lasts 13 minutes and 48 seconds. In total, I have collected around 8-hours (about 484 minutes) of SRI data. The average length for each interview is 23 minutes and 27 seconds. The themes of the writing samples asked in the interviews are not distributed evenly. There are two possible reasons. First, interviewees are recruited on the basis of voluntary participation. Second, my participants were allowed to choose sub-topics freely from the themes of the three units taken from the writing textbook to write. As suggested in **Table 3.3** and **Table 3.5**, my participants wrote more on the themes of "Spend and Save" and "Campus Love", compared to that of on the theme of "Icon Worship".

### 3.1.3 Interviews with Teacher A and Teacher B

To get more background information about teachers' marking criteria and what teachers think about students' metaphor use in L2 writing, I interviewed Teacher A on 10/05/2018 and Teacher B on 08/05/2018 respectively. The key questions asked in the two semi-structured interviews with teachers are: 1) When you grade those pieces of writing, what are the common criteria? 2) What is your opinion on the use of metaphorical language in argumentative writing? 3) What is your general impression on Chinese English majors' argumentative writing when taking the use of metaphorical language into consideration? (see **Appendix 3**) **Table 3.6** shows basic information of the two interviews with Teacher A and Teacher B for background information.

**Table 3.6 Information of 2 interviews with teachers**

Teacher	Nationality	Interview date	Interview duration	Interview language	Course of study
Teacher A	American	2018.05.10	32m31s	English	Intermediate academic writing
Teacher B	Chinese	2018.05.08	36m51s	Chinese	TEM-4 writing training session

**Note:** Terms like "32m31s" referring time duration, "m" refers to "minute(s)", "second(s)".

The consent form for teacher's participation in interviews is in **Appendix 4**. With ethical approval, the two follow-up interviews with teachers for background information were also audio-recorded and then transcribed verbatim into text data for further analysis. The two interviews were around 30 to 35 minutes. Teacher A is a native speaking English teacher from America and was interviewed in English as preferred by the teacher. Teacher B is a non-native speaking English teacher from China and was interviewed in Chinese as preferred by the teacher. Some metaphors that stand out in collected argumentative writing samples and were asked in the stimulated recall interviews with students were also asked in the interviews with teachers. Teachers' responses may generate insights for analysing the collected SRI interview data. Findings from the two interviews with teachers is summarized in Chapter 5: findings from interview data.

### **3.2 A demonstration of analyzing written data**

#### **3.2.1 Metaphor Identification Procedure: MIP & MIPVU**

The very first step for analysing written data is to identify linguistic metaphors. Identifying metaphors at linguistic level through metaphor scholars' intuitions, e.g., the "I-know-it-when-I-see-it' approach" (Krennmayr, 2011, p.15), is problematic in terms of quantifying metaphor density in texts or discourses, investigating patterns of linguistic metaphors in texts or discourses, and comparing different empirical studies on metaphor use. I therefore begin by discussing the issue of metaphor identification, which is less straightforward than it might at first seem.

The Pragglejaz Group's (2007) work laid the foundation for methods of metaphor identification in the past ten years. It was the work of metaphor scholars from different research fields, aiming to create "an explicit, reliable, and flexible method for identifying metaphorically used words in spoken and written language" (Pragglejaz Group, 2007, p.2). The Metaphor Identification Procedure (MIP), it is claimed, has "provided a research tool that is relatively simple to use and flexible for adaptation by scholars interested in the metaphorical content of natural discourse" (Pragglejaz Group, 2007, p.2). In

MIP, researchers start from obtaining a general understanding of the meaning of text or discourse, then deciding lexical units on a word-by-word basis, then establishing the basic meaning and contextual meaning of carefully determined lexical units by using external resources such as dictionaries and relevant corpora, and then contrasting the contextual meaning with the basic meaning. If the contextual meaning can be understood in terms of the more concrete basic meaning by way of comparison, the lexical unit can be identified as metaphorical (Pragglejaz Group, 2007).

Steen, Dorst, et al. (2010) created the Metaphor Identification Procedure VU University Amsterdam (MIPVU), which is developed and adjusted from the core steps of MIP. MIPVU extends the word level analysis in MIP by treating the lexical unit as the unit of analysis instead of the single word. MIPVU allows phrasal verbs (e.g., look up, turn on), compounds (e.g., pitter-patter), proper names (e.g., Pulitzer Prize, Roy Wood) and multi-word expressions or poly-words (e.g., a good deal, by means of, of course) to be regarded as one lexical unit of analysis (Steen, Dorst, et al. 2010; Krennmayr, 2011; Nacey, 2013). MIPVU also explains the identification of direct metaphors, such as similes; implicit metaphors, such as “have” and “it” in the example “However, not everybody has the need to escape from reality, and my impression is that those who have, always take their time to do it” given by Nacey (2013, p.77); metaphor flag, such as “like” in similes that signals a direct metaphor; and the personification metaphor when “the (metaphorical) tension between abstract and concrete is combined with a tension between human and non-human” (Steen, Dorst, et al. 2010, p.110).

Another point needs to be made clear is that “the refined MIPVU procedure does not cross word-class boundaries when analyzing lexical units for metaphorical use since the MIPVU procedure emphasizes a discourse perspective” (Krennmayr, 2011, p.33). Krennmayr (2011) provided a representative example—the verb “dog” used in “Photographers dogged the princess all her adult life”. This example can be found in the online Macmillan Dictionary under the second sense of the entry of “dog” as a verb ([https://www.macmillandictionary.com/dictionary/british/dog\\_2](https://www.macmillandictionary.com/dictionary/british/dog_2)). Based on MIPVU, researchers will not identify the word “dog” as a metaphorically used

word since the contextual meaning of the verb “dog”—“to follow someone closely in a way that annoys them” (online Macmillan Dictionary sense 2) cannot be compared to its basic meaning as a noun—“an animal kept as a pet, for guarding buildings, or for hunting” (online Macmillan Dictionary sense 1) (Steen, Dorst, et al. 2010; Krennmayr, 2011). In other words, since the word “dog” does not have a more basic meaning when used as a verb, which can be distinguished from its contextual meaning, the verb “dog” here cannot be marked as metaphorical in terms of MIPVU. In my research, by using MIP, language use like the “dog” example mentioned above is marked as metaphorical.

So, MIPVU and MIP will generate different quantitative analysis results even though identifying metaphor use in the same texts or discourses. The core procedure of MIPVU still concerns about the cross-domain mapping from a more concrete referent in other contexts to a more abstract topic in the given context. In addition to those refinements and extensions in MIPVU, the procedures in both MIP and MIPVU compare the contextual meaning of a lexical unit with a more ‘basic’ meaning in other contexts and looking for a relation of comparison. The operational definition of linguistic metaphors for my research purposes is explained as follows:

Linguistic metaphors are words and phrases which are used to indirectly talk about the more abstract topic-related information in a more concrete sense, and the contextual meaning of which are incongruous with its more basic meaning in other contexts but its contextual meaning can be understood in comparison with its more basic meaning because of certain sense of similarity

(Pragglejaz Group, 2007; Steen, 2017).

### **3.2.2 The application of MIP to the collected written data**

The previous section presented the key procedures, similarities and differences involved in both MIP and MIPVU. Though MIPVU has been formulated to resolve the difficulties that researchers may encounter when using MIP, I choose to follow the core procedures of MIP in this research. The reasons are: first, MIP has generated reliable analysis results for metaphor scholars (e.g.

Chapetón, 2010; Hoang, 2015, Gao, 2016; Deignan, 2017); second, my research focuses on the writing texts produced by a group of Chinese intermediate learners of English and I cross the word classes during the metaphor identification process without putting emphasis on a discourse perspective; third, the implicit metaphors and metaphor flags described in MIPVU, which are somewhat irrelevant to the realization of the communicative function in writing an argumentative essay and are never the results of the metaphoric thinking (Steen, Dorst, et al., 2010; Hoang, 2015), are not the focus of my study. The overall function of a students' argumentative essay is to present an opinion, support it with relevant arguments and achieve persuasive purposes (e.g., Hyland, 1990; Amogne, 2013; Yang et al., 2014). In **Section 3.2.3**, I explain how the four steps of MIP have been used in my research in detail, by using my collected written data for exemplification.

### **3.2.3 Four steps of using MIP in my research**

#### **Step 1. Reading through participants' argumentative writing text**

The very first step is to read through the argumentative writing sample and to obtain a general understanding of the topic information in the writing context. The metaphorical meanings and functions of words are dependent on context so “an appreciation of the overall text adds insight to their interpretation” (Nacey, 2013, p.85). The length of writing samples in my text data ranges from around 200 words to 500 words. It is practical for me to conduct the first step before moving on to the identification of each lexical unit. I also decided to include the writing topics developed by my participants themselves into the metaphor identification procedure. The reason is that there was still enough room for my participants to develop the specific writing topics based on the allocated writing themes (see **Appendix 9**), which could convey their viewpoints on certain controversial social phenomena. Typical examples of the writing topics developed by my participants are “Spending Encouraged, Economy Boosted” (2-S6-1), “Two Sides of A Coin” (1-S7-2), “Icons Are Drugs” (2-S8-4) and “Online Medical Treatment Bans—Useless and Short-sighted” (1-S13-3). The possible metaphors are underlined. The inclusion of the writing titles written by my participants in the metaphor identification procedure may make a

substantial contribution to the metaphor analysis later.

## **Step 2. Determining the lexical units in argumentative writing text**

The second step is to “clearly establish the exact unit of analysis incorporated into the operational definition of metaphor” (Nacey, 2013, p.86). Following MIP (Pragglejaz Group, 2007), I carried out the metaphor identification mainly on a word-by-word basis. In practice, the word level analysis in MIP is sometimes problematic. Hinkel (2002) wrote, “fixed strings included phrasal verbs and idiomatic prepositional and noun phrases, typically contained in many ESL/EFL texts on vocabulary and idioms” (Hinkel, 2002, p.158). So, four kinds of exceptional cases, which are phrasal verbs, polywords, compounds and proper nouns, are treated as single lexical units in my research.

Phrasal verbs are demarcated as single lexical units for metaphor identification since “phrasal verbs cannot be decomposed without loss of meaning” (Pragglejaz Group, 2007, p.26) and the combination of verb and particle designates one referent in the projected text world” (Steen, Biernacka, et al. 2010, p. 171). For instance, the meaning of the phrasal verb “passed down” in the sentence “It (thrift) has been passed down from generation to generation and Chinese people always put it into practical actions (2-S9-1)” cannot be reached by simply combining the semantic meaning of the two words “pass” and “down” (Steen, Biernacka, et al. 2010). This phrasal verb refers to one action which is “to give knowledge or teach skills to your children or to younger people” (online Macmillan Dictionary). Another example is “feed back” in the sentence “Besides, increasing money can also feed back family and society, because no matter family or society it would spend a lot to fertilize a college student (2-S1-1)”. The phrasal verb “feed back” in this specific writing context was considered as an unconventional metaphor use by me since its contextual meaning cannot be established by consulting the two online dictionaries used in my research: the online Macmillan Dictionary (<https://www.macmillandictionary.com/>) and the online Oxford English Dictionary (<http://www.oed.com/>). Based on my understanding of the whole writing sample, I interpreted its contextual meaning as the meaning of the verb “repay” in the online Macmillan Dictionary, which is “to reward someone who has helped you or been kind to you” (sense 2). Nevertheless, I treated this phrasal verb as a single lexical unit since it also

designates one concept and action which is to repay someone. So, I decided to treat phrasal verbs that consist of verbs and particles as single lexical unit in metaphor identification.

In order to distinguish phrasal verbs (verb-plus-particle) from the very similar linguistic structures like “put (something) into (practice)” (verb-plus-preposition) and “increase money in (verb-plus-adverb)”, I first sought supporting evidence from the two online English dictionaries mentioned above. For instance, entries like “pass down” and “feed back” are listed in the online Macmillan Dictionary as phrasal verbs. The combination like “increase (money) in” and “decrease (money) out” in my data are not treated as phrasal verbs in that there are no such entries in the two standard dictionaries. Nacey (2013) writes, “English dictionaries prove insufficient because they tend to conflate phrasal and prepositional verbs into a single category” (Nacey, 2013, p.87). I then decided to find more supporting and accurate evidence for determining possible phrasal verbs by following Nacey’s practice, which is to consult both dictionaries and the part-of-speech tagging generated by Constituent Likelihood Automatic Word-tagging System (CLAWS, <http://ucrel.lancs.ac.uk/claws/test.html>). In this tagging system, the particle constituting a phrasal verb is “tagged as AVP (adverb particle) rather than AV0 (adverb unmarked) or PRP (preposition)” (CLAWS, <http://ucrel.lancs.ac.uk/claws/test.html>). So, if the part-of-speech tagging result shows “a combination of a verb and an adverbial particle (AVP)” (CLAWS, <http://ucrel.lancs.ac.uk/claws/test.html>) and the entry is also listed in the dictionaries as a phrasal verb, I will treat the multiword expression as a phrasal verb and a single lexical unit in the metaphor identification procedure. If not, I decided to break the combination into different lexical units. For instance, the expression “get through” in the sentence “In an attempt to get through the sticky patch as rapidly as possible... (1-S12-1)” is listed in the online Macmillan Dictionary as a phrasal verb. However, its part-of-speech tagging result is a verb (VVI) and a preposition (PRP) in the CLAWS system, which is a verb-plus-preposition combination. So, “get through” cannot be treated a phrasal verb and single lexical unit. The expression “put (something) into (practice)” is treated in the same manner in my study. Though the CLAWS system cannot ensure 100% accuracy in part-of-speech tagging, its 96-97% accuracy rating is reliable



enough for me to gain support in this regard (Nacey, 2013).

Polywords are demarcated as single lexical units for metaphor identification since they “do not inflect and are continuous in text” (Pragglejaz Group, 2007, p.26). Like the phrasal verbs mentioned above, polywords also “are not decomposable and designate one single aspect of the text world” (Steen, Biernacka, et al. 2010, p.172). Following Pragglejaz Group (2007)’s and Nacey (2013)’s practice, I treated the polywords such as “a little”, “as long as”, “as well as”, “in short”, “by no means”, “of course” and “as for” in my research data as single lexical units for metaphor identification. To establish reliable and consistent criteria for determining polywords, I consulted both the contemporary English dictionaries and the BNC “List of Multiwords and Associated Tags” (<http://www.natcorp.ox.ac.uk/docs/multiwd.htm>) (Nacey, 2013, p.88). If a multiword expression is not listed in the dictionaries as an individual entry but is listed in the BNC list as a polyword, the expression will be treated as a single lexical unit. In other words, the BNC list is strictly followed when there are doubts in determining polywords by using contemporary English dictionaries mentioned above (Steen, Biernacka, et al. 2010).

Compounds are also treated as single lexical units in my metaphor identification procedure. The solid and hyphenated compounds, such as “armchair” and “poverty-stricken” in my research data are demarcated as single lexical units (Steen, Biernacka, et al. 2010). The reason is that these compounds refer to one concept or referent in the specific writing context. For instance, the compound “poverty-stricken” in the sentence “some of us may encounter financial problems arising from poverty-stricken family” (1-S12-1) designated the single concept of being extremely poor based on the meanings of this conventional compound in the two dictionaries mentioned above and no more concrete meanings can be found in other contexts. So, this compound word is treated as a single lexical unit and identified as non-metaphorical in my research data.

When there are doubts in whether demarcating compounds as single lexical unit or more than one lexical unit, the two online dictionaries are consulted. The stress pattern of each compound’s pronunciation listed by the online Oxford English Dictionary can provide me with reliable and consistent criteria for

demarcating compounds. For instance, the stress pattern of the compound “turning point” in the sentence “for college students who are in the turning point of their lives” (1-S12-1) is listed as “turning-point” in the online Oxford English Dictionary. The primary stress is on the first word of this compound. Following Steen, Biernacka, et al. (2010)’s practice, compounds of this kind in my data are treated as single multiword lexical units. If the primary stress is on another element of a compound in addition to the first one, each element of the compound word will be treated separately in the metaphor identification procedure (Steen, Biernacka, et al. 2010). Exceptions are spaced compounds like “rainy day” in the sentence “thrift will save the unnecessary expenditure and will help save more money for a rainy day (1-S9-1)”, which are treated as single lexical units because individual entries as such can be found in the online Oxford English Dictionary as nouns though the primary stress is on the second word “day”. The online Oxford English Dictionary also offers both the literal and figurative meanings of this compound noun. So, the two online dictionaries used in my study can provide me with supportive evidence for me to dealing with compounds and the metaphoricity of compounds. The spaced compounds such as “driving force” that is listed as a noun in the online Macmillan Dictionary but is not listed as a compound noun in the online Oxford English Dictionary are not treated as single lexical units in my practice, which shows that “driving force” has not been fully accepted as a compound noun in standard English dictionaries. I relied extensively on the online Oxford English Dictionary when determining the stress pattern of each compound, because it offers more information about stress patterns of pronunciation and word formation.

There were several reasons for the choice of the two online dictionaries for demarcating every single lexical unit and establishing the basic meaning and contextual meaning of each lexical unit. The two free online dictionaries mentioned above are always at hand when I need to consult meanings and pronunciations of lexical units, which saves time and energy in the time-consuming process of identifying metaphors in texts manually. Developed from the second edition of Macmillan English Dictionary for Advanced Learners (2007), the online Macmillan Dictionary launched 2009 is based on a corpus of over 200 million words collected from contemporary written and spoken sources.

As Pragglez Group (2007) notes, this dictionary “is considered adequate for general language analysis, and which is large enough to provide a number of citations for all but the rarest words” (Pragglez Group, 2007, p.16). This online Macmillan Dictionary gives the most up-to-date information available about the meanings of words and how they are used in current British English and American English, which is important for my purpose of identifying metaphors in Chinese English learners’ contemporary English texts. Wang Ying and Wang Yang-Yu (2020) write that “traditional English language teaching in China tends to model Standard British English or Standard American English” (Wang Ying and Wang Yang-Yu, 2020, p.2). It is also important to note that “Macmillan Dictionary offers unique treatment of metaphor, showing how many ordinary familiar words and phrases have metaphorical meanings, although people do not usually realize this when they use them” (Rundell et al., 2009 to present). The historical dictionary—Oxford English Dictionary provides students and teachers with guide to the meaning, history, and pronunciation of 600,000 words—past and present—from across the English-speaking world (Murray et al., 2000 to present). The online version of this dictionary, which first launched in 2000, is consulted when checking pronunciation of compounds, and establishing basic meanings and contextual meanings of lexical units when decisions cannot be made with the aid of the online Macmillan Dictionary only. The establishment of basic and contextual meanings of lexical units is explained in **Step 3a & 3b**.

Proper nouns, such as “Bruce Lee”, “kung fu”, “Elvis Presley”, “Shang Zhou” and “Su Daji”, in my research data are treated as single lexical units for metaphor identification, “including the names of people, streets and cities and etc” (Nacey, 2013, p.95). The rationale is that proper nouns seem to all refer to a single referent like the phrasal verbs and certain compounds mentioned above (Steen, Biernacka, et al. 2010). For instance, proper noun in pinyin “Shang(商) Zhou(纣)” (1-S20-2) refers to the name of the King in an dynasty in Chinese ancient history and “Su(苏) Daji(妲己)” (1-S20-2) refers to a famous beauty deeply loved by the King in that dynasty. Following Steen, Biernacka, et al. (2010)’s and Nacey (2013)’s practice, I decided to treat all proper nouns in my written data as single lexical units for metaphor identification.

In addition to the above mentioned phrasal verbs, polywords, compounds and proper nouns, the frequently occurring multiword expressions such as the idiomatic prepositional phrases— “on the one hand, on the other hand” and “in the long run”, verb phrases—“make ends meet”, noun phrases— “driving force” and “sticky patch”, and idioms/proverbs—“many a little makes a mickle” were analysed on a word-by-word basis in the metaphor identification procedure. Pragglejaz Group (2007) write, “fixed collocations and idioms are decomposable, and they may be divided into their component words” (Pragglejaz Group, 2007, p.27). In other words, “each unit thus typically designates a referent in the text world, in contrast to for instance compound nouns and phrasal verbs” (Steen, Biernacka, et al. 2010, p.172). For example, the proverb “many a little makes a mickle” (2-S9-1) in my written data metaphorically refers to actions are not of great importance (a little) can achieve (makes) bigness (mickle) if they are done persistently by people. Therefore, each word in these multiword expressions was demarcated as single lexical unit and analysed for metaphoricity separately in my metaphor identification procedure.

### **Step 3a & 3b: Establishing the contextual meaning and basic meaning of each lexical unit**

Pragglejaz Group (2007) write, the procedures to establish the contextual meaning and basic meaning of each lexical unit are “for each lexical unit in the text, establish its meaning in context, that is, how it applies to an entity, relation, or attribute in the situation evoked by the text (contextual meaning); take into account what comes before and after the lexical unit; and then determine if it has a more basic contemporary meaning in other contexts than the one in the given context” (Pragglejaz Group, 2007, p.3). I take the more concrete and physical sense of each lexical unit as the basic meaning of each lexical unit, which can or cannot be compared to its abstract contextual meaning for my research purposes (Pragglejaz Group, 2007).

In practice, the establishment of basic meanings of lexical units in my written data are unproblematic, which indicates that the millions of words and quotations in the two online English dictionaries used are adequate for language analysis in texts produced by intermediate Chinese learners of

English. As noted in the “feed back” (2-S1-1) example above, when I think there is a contextual meaning within the writing text, but this is not listed in the two online English dictionaries, I classify the lexical unit as an “unconventional metaphor use” (Nacey, 2017, p. 509). Unconventional metaphors will be further categorized into four subtypes as explained in **Table 2.1** in Chapter 2: literature review. The way of categorizing conventional and unconventional metaphor use is presented in detail in **Section 3.2.8**.

For example, the contextual meaning of the noun “mirror” in the sentence “That kind of culture is a “mirror” of the time” (1-S11-4) is listed in both the online Macmillan Dictionary and the online Oxford English Dictionary. The figurative contextual meaning is “someone or something that matches or expresses the qualities, features, or feelings of another person or thing”, such as in dictionary quotations like “your fears are a mirror of my own” and “time with other new mothers is a chance to hold up a mirror to your life”. The basic meaning of the “mirror” in the dictionaries refers to “a piece of special glass/ looking-glass in which you can see yourself or see what is behind you”. When establishing contextual meanings and basic meanings, the online Macmillan Dictionary is used as the major supportive tool. The online Oxford English Dictionary is used complementarily when there is not sufficient information provided in the online Macmillan Dictionary to establish the contextual meaning and basic meaning of a lexical unit, such as in the example of the lexical unit “rainy day” mentioned in the section about dealing with compound nouns.

There are cases when my participants produce unconventional metaphors within their argumentative writing texts. A case in point is the lexical unit “Moonlight” in the sentence “if we still have no idea about budgeting, then there is great chance for us to join in the Moonlight, who always run out of their monthly salary before the end of every month”(2-S5-1). The meanings listed in the two online dictionaries about the entry “Moonlight” as a noun cannot be matched with its meaning in this specific writing context. The metaphorical meaning found in the two online English dictionaries is “to have a second job in addition to your main job that you do not tell the tax authorities about” when the word “moonlight” is used as a verb. In cases like this, if the contextual meaning of certain lexical units cannot be found in English dictionaries, I decided to

follow my participants' further interpretations if they had specified in the writing texts, such as the interpretation for the word "Moonlight": "who always run out of their monthly salary before the end of every month" (2-S5-1). There may be situations when the dictionaries do not show the contextual meanings and my participants also did not further specify their interpretations in the writing texts. In cases like these, possible unconventional metaphor use is marked. The basic meaning of the word "moonlight" is easy to be establish by consulting the dictionaries, which refers to "the light of the moon" or "the moon's radiance", which is more concrete and visible.

Another point needs to be made clear is that I crossed the word class when establishing the more concrete basic meanings of the lexical units in my study (Pragglejaz Group, 2007). For instance, the contextual meaning of the verb "vent" in the sentence "Actually, there are many healthy ways to vent the frustrations, such as running, yelling in a place where there is no one and shift their focus to their study" (1-S15-4) is "to express your feelings of anger very strongly". The metaphoricity of this word is realized by comparing its contextual meaning as a verb to the more basic meaning when it is a noun: "a hole or space that allows air, gas, or smoke to escape or fresh air to enter". The abstract sense of expressing people's bad feelings can be understood in terms of the physical action of allowing air or gas to come out from a concrete hole. So, the verb "vent" is identified as metaphorical.

The establishment of contextual meanings and basic meanings for content words (e.g., nouns, verbs, adjectives) is much easier than that of contextual meanings and basic meanings for delexical verbs and grammatical words. Delexical verbs, such as "make", "have", and "take" in some cases may evoke a cross-domain mapping between an abstract contextual meaning and a more concrete basic meaning since the metaphoricity of a lexical unit is heavily dependent on the given context, which calls for a case-by-case approach in order to keep the consistency of metaphor identification (Deignan, 2005; Hoang, 2015). I use the meaning "to create or produce something by working" in Macmillan Dictionary as the basic meaning of the delexical verb "make". In cases in my writing data like "make a budget (1-S6-1)" and "makes a beneficial effect (2-S9-1)", the delexical verb "make" is identified as metaphorical since

the basic meaning of physically constructing something concrete can be mapped onto the contextual meaning of generating an abstract budget and effect. In Deignan's (2005) example "ice cream and yoghurt made with milk" from the Bank of English, the delexical verb "made" is non-metaphorical. Similarly, I use the meaning to "talk about possession (physically)" in Macmillan dictionary as the basic meaning of the verb "have". In cases like "have no idea (1-S15-2)" and "have many solutions (2-S1-1)", the delexical verb "have" is identified as metaphorical since we can understand abstract ideas and solutions in terms of concrete objects that can be possessed physically. But in the case like "have enough money (2-S18-2)", the verb "have" is non-metaphorical. When "have" is an auxiliary verb in cases like "have + to-infinitive", e.g., "College students have to figure out... (1-S15-4)", and "have" in perfect tenses of verbs, e.g., "have you ever thought about... (2-S5-1)", the delexical verb "have" is also non-metaphorical. For the verb "take", I use the meaning "to move something or someone from one place to another" in Macmillan Dictionary, including both concrete and abstract things, as basic meaning. So, there is no more concrete basic meaning of the verb "take" that can be established. The verb "take" is non-metaphorical. I identify less typical verbs like "give" and "help" as metaphorical when the non-human agent is personified as a human agent. Two cases in point are "It is college that gives students the most comfortable condition to learn how to love properly (1-S2-1) and "Besides, careful budgeting helps college students to avoid undue pressure even financial traps (2-S10-1)". This leads to the category of personification metaphor, which is explained further in **Section 3.2.4**. These conventions, concerning delexical verbs with fuzzy edges, are followed consistently in the metaphor identification procedure. Following Cameron and Maslen's (2010) practice, the very common verbs "do" and "get" are ignored in the metaphor identification procedure (Cameron and Maslen, 2010, p.111).

Grammatical words, such as prepositions, may also be problematic when establishing their basic meanings (Pragglejaz Group, 2007). In my written data, prepositions that have more concrete basic meanings (e.g., the spatial relations related to "in", "on", "into") are taken into consideration; those have "highly abstract meanings" (Pragglejaz Group, 2007, p. 29) (e.g., "with", "for", "of", "by")

are ignored in my identification procedure. Grammatical words such as “conjunctions, auxiliary verbs, pronouns and determiners” (Pragglejaz Group, 2007, p.29) that have abstract basic meanings are also ignored in the identification procedure. The exceptions about grammatical words in the original MIP method are personal pronouns and demonstrative pronouns, but metaphorical instances as such, which are described as implicit metaphors in MIPVU (Steen, Dorst, et al. 2010), are presumed to make very minor contributions to my metaphor analysis later on. So, personal pronouns and demonstrative pronouns are not taken into consideration in establishing basic meanings.

### **Step 3c: The comparison between contextual meaning and basic meaning**

After the precise contextual meaning and more concrete basic meaning in other contexts of each lexical unit have been established based on standard English dictionaries and specific writing contexts, the contextual meaning is compared to the basic meaning by looking for certain sense of similarity. For instance, the abstract contextual meaning of the lexical unit “rainy day” in the sentence “thrift will save the unnecessary expenditure and will help save more money for a rainy day” (2-S9-1), which is “a possible future time of hardship or relative poverty” (online Oxford English Dictionary, sense 2), can be compared to its basic meaning “a day characterized or dominated by rainfall” (online Oxford English Dictionary, sense 1). A time of hardship or poverty can be understood in terms of a day with heavy rainfall because both will also cause inconvenience and potential disaster. In the example of possible unconventional metaphor use noted above, the contextual meaning of “moonlight”, which refers to a group of people “who always run out of their monthly salary before the end of every month”(2-S5-1), can also be compared to its basic meaning which derives from the etymology of the noun “moonlight” consisting the noun “moon” and the noun “light” by checking the online Oxford English Dictionary. The moon is associated with months, which seems to be the origin. This expression “moonlight” may also be interpreted as a word-for-word translation of a Chinese homophonic pun— “月(yue)光(guang)族(zu)”;月(yue)光(guang) in Chinese literally means “moon(月)light(光)” in English; 族(zu) refers to a group of people. The pronunciation of 月(yue)光(guang) in Chinese has the same meaning with that



of “running out of one’s monthly salary before the end of every month” in Chinese culture. This kind of possible unconventional metaphor use with L1 influence, which is possibly received as an error on part of the targeted readership, is cultural-specific.

#### **Step 4: Final decision on marking the lexical unit metaphorical or not**

As mentioned above, if the abstract contextual meaning of each lexical unit can be compared to its more concrete basic meaning because of certain similarities, the lexical unit then can be marked as metaphorical in my study. If not, the lexical unit is non-metaphorical. For example, the contextual meaning of the lexical unit “value” in the sentence “It is also beneficial to their spending value system” (2-S1-1) is “the principles and beliefs that influence the behaviour and way of life of a particular group or community” (online Macmillan Dictionary, sense 4). Its basic meaning is “the amount that something is worth, measured especially in money” (online Macmillan Dictionary, sense 1). There is no sense of similarity between the contextual meaning and basic meaning of the lexical unit “value”. Therefore, in this context, I marked the word “value” as non-metaphorical though its contextual meaning and basic meaning can be established through consulting dictionaries.

#### **3.2.4 Potential difficulties when using MIP**

When putting the explicit and justified metaphor identification steps mentioned above into practice, I need to make clear decisions in dealing with controversial cases like similes, metonymy, and personification.

Similes, or signalled metaphors labelled by Dorst (2017), often “stand out and tend to draw attention to themselves and often have a clear function in creating vivid imagery, and adding emotion to the text” (Dorst, 2017, p.190). The Pragglejaz group (2007) defined similes as “metaphorical comparisons marked by ‘like’, ‘as’, ‘as if’, or ‘as though’ from the perspective of rhetoric” (Pragglejaz group, 2007, p.32). A case in point found in my participants’ argumentative writing is that “Pursuing romantic love is the instinct of human, just like hungry people find food (2-S1-2)”. This kind of pattern, which creates a metaphorical comparison between love and food is somewhat innovative when examined in

the naturally occurring writing data rather than in the invented or elicited data (Deignan, 2005). This pattern occurs at the very beginning of the writing sample may achieve the specific rhetoric function of dramatic illustration and arresting attention (Hyland, 1990). So, different with the practice in original MIP method, I choose to take similes, which can represent a cross-domain mapping by way of incongruity and comparison (e.g., comparing love with food), as metaphors in my written data for the ease of metaphor identification. The signals or markers in similes (e.g., “like”), which may be identified as metaphor flags in MIPVU (Steen, Dorst, et al. 2010), are ignored in my metaphor identification procedure.

Metonymy and metaphor are often intertwined, and some metaphorical expressions are realized by both metonymy and metaphor (Nacey, 2013; Deignan, 2005). Goossens (1990) uses the term “metaphonymy” to describe the interplay of metaphor and metonymy. The two types of integrated “metaphonymy” are: metonymy within metaphor and metaphor within metonymy. Denroche (2018) further exemplifies these two types of “metaphonymy” at text level. Littlemore (2015) refers to the popular taxonomy on metonymy described by Radden and Kovecses (1999). The two overarching categories of metonymy types are WHOLE AND PART and PART AND PART (Littlemore, 2015, p. 20). The major difference between metaphor and metonymy is that “metaphor involves a mapping cross domains, such as the conceptual metaphor LOVE IS A JOURNEY; in metonymy the mapping is thought to take place within a single domain” (Littlemore, 2015, p.14), such as the part standing for the whole relationship (underlined) in the following example: “This process, which is the most useful way to teach these young hearts to know how to get along with opposite sex” (2-S1-2). In this example, the lexical unit “hearts” can stand for people by being part of the human body. So, the lexical units like this are marked as metonymy and ignored in my practice of metaphor identification. I will not go further about the interplay of metaphor and metonymy (Biernacka, 2013). I decided to ignore metonymy for the ease of metaphor identification and metaphor analysis.

Personification, metonymy, and metaphor may also co-occur in my data, which also cause confusion in metaphor identification. As mentioned above, the

personification metaphor is realized when “the (metaphorical) tension between abstract and concrete is combined with a tension between human and non-human” (Steen, Dorst, et al. 2010, p.110). In a case like “..., because no matter family or society it would spend a lot to fertilize a student” (2-S1-1). The noun “family or society” stands for the people in the family or in the society. So, this can be identified as a metonymy. But it can also be identified as a “personification metaphor in which the “family or society” is being personified through the use of the verb “spend”, which normally has a human agent” (Littlemore et al., 2014, p.132). Similar to the examples Littlemore et al. (2014) found in their data, I also encountered a number of examples in which metonymy co-occurs with possible personification in my research data. Littlemore et al. (2014) further wrote, the most precise interpretation of examples like theses “is likely to be that the personification metaphor and/or metonymy sits over the whole sentence and cannot be attributed to any particular word” (Littlemore et al., 2014, p.132). In line with Littlemore et al.’s (2014) practice, I identify the lexical units of this type as personification metaphors instead of metonymies considering the ease of metaphor identification and categorization.

So, I do not distinguish narrowly between metaphor, metonymy, simile, and possible personification. To some extent, I identify these cases as metaphorical when the metaphorical meaning can be established by following the already-existing metaphor identification method—MIP (Pragglejaz group, 2007). Below is a detailed description showing how MIP is applied to my authentic research data.

### 3.2.5 The application of MIP step by step

Writing topic: Increasing Money in is the Real Solution

Author: 2-S1-1

“① I have never heard any college student do not worry about their money. ② Healing financial disease of college students possibly have many solutions, but the substantial way is increasing money in. ③ The reasons are as follow.[...]”

In this section, I use the first paragraph from the writing sample entitled

“Increasing Money in is the Real Solution” produced by 2-S1-1 to demonstrate how the four steps of MIP work. Reading through the 358-word writing sample (Step 1 of MIP), I learned that 2-S1-1 was presenting and supporting his viewpoint on how to solve the financial problems of college students.

① /I /have/ never/ heard /any/ college/ student/ do/ not/ worry/ about/ their/ money/. ② /Healing/ financial/ disease/ of/ college/ students/ possibly/ have/ many/ solutions/, but/ the/ substantial/ way/ is/ increasing /money in/. ③ The/ reasons/ are /as /follow/.

The slashes are used to “indicating the boundaries between lexical units” (Pragglejaz Group, 2007, p. 4). There are 36 lexical units in the chosen paragraph (Step 2 of MIP). I identified linguistic metaphors from the first paragraph by establishing the contextual meaning and determining the basic meaning of each lexical unit with the aid of external sources as mentioned above: the online Macmillan Dictionary, the online Oxford English Dictionary, the part-of-speech tagging generated through CLAWS, and the BNC “List of Multiwords and Associated Tags”. No metaphorically used lexical units are identified in Sentence ①. In total, there are six linguistic metaphors (underlined ones) identified from this excerpt, which are the verb metaphor “healing”, “follow”; the noun metaphor “disease”, “way”; the delexical verb metaphor “have” and the adverb metaphor “in”.

The analysis of each metaphorical lexical unit is explained step by step as follows:

### **Healing (the V+ing form of the verb “heal”)**

Step 3 (a) contextual meaning: In this context, the V+ing form of the verb “heal” refers to “restore (a person, etc.) from some evil condition or affection (as sin, grief, disrepair, unwholesomeness, danger, destruction)” (online Oxford English Dictionary, sense 3a).

Step 3 (b) basic meaning: The basic meaning of the V+ing form of the verb “heal” relates to the physical/concrete act of “curing (of a disease or wound)” (online Oxford English Dictionary, sense 1a).

Step 3 (c) contextual meaning versus basic meaning: The contextual meaning

contrasts with the basic meaning and can be understood by comparison: the abstract sense of restoring a person, from some evil condition or financial danger can be understood in terms of the physical action of curing of a physical disease or wound.

Step 4 metaphorically used? Yes.

### **disease**

Step3 (a) contextual meaning: In this context, the noun “disease” refers to “a serious problem in college students’ personal/financial life” (online Macmillan Dictionary, sense 2).

Step3 (b) basic meaning: The basic meaning of “disease” relates to “an illness that affects people or animals, especially one that is caused by infection” (online Macmillan Dictionary, sense 1).

Step3 (c) contextual meaning versus basic meaning: The contextual meaning contrasts with the basic meaning and can be understood by comparison: the abstract sense of a serious problem regarding the financial issue can be understood in terms of the physical illness that affects people.

Step 4 metaphorically used? Yes.

### **have**

Step3 (a) contextual meaning: In this context, the delexical verb “have” is used as a verb, expressing the contextual meaning of describing the fact or state that there are many solutions existing or available for the purpose of solving the financial problems of college student (online Macmillan Dictionary, sense 10).

Step3 (b) basic meaning: The basic meaning of the word “have” refers to “physically holding or owing something concrete” (online Macmillan Dictionary, sense 3).

Step3 (c) contextual meaning versus basic meaning: The contextual meaning contrasts with the basic meaning and can be understood by comparison: we can understand abstract ideas and solutions in terms of concrete objects that can be possessed physically. The abstract sense of existing/availability can be understood in terms of the concrete sense of physical possessing or ownership.

Step 4 metaphorically used? Yes.

### **way**

Step3 (a) contextual meaning: In this context, the noun “way” refers to “a method for doing something, i.e. for solving the financial problem” (online Macmillan Dictionary, sense 1).

Step3 (b) basic meaning: The basic meaning of “way” relates to “the particular road, path, or track that you use to go from one place to another”, as in the example “I don’t think this is the right way” (online Macmillan Dictionary, sense 3).

Step3 (c) contextual meaning versus basic meaning: The contextual meaning contrasts with the basic meaning and can be understood by comparison: the abstract sense of a method for solving a problem regarding the financial issue can be understood in terms of the concrete sense of a right path for you to go to your destination.

Step 4 metaphorically used? Yes.

### **in**

Step3 (a) contextual meaning: In this context, the adverb “in” is used to express the contextual meaning of “near to some point or limit specified or implied” (online Oxford English Dictionary, sense 3).

Step3 (b) basic meaning: The basic meaning mainly derives from the adverb “in” when it refers to “moving into a place or a space” (online Macmillan Dictionary, sense 2b).

Step3 (c) contextual meaning versus basic meaning: The contextual meaning contrasts with the basic meaning and can be understood by comparison: the abstract sense of becoming close to a point, limit or amount concerning the accumulation of money can be understood in terms of the physical action of moving something into the inside of some places.

Step 4 metaphorically used? Yes.

### **follow**

Step3 (a) contextual meaning: In this context, the verb “follow” is used to

express the contextual meaning of “something to happen or come after something else” (online Macmillan Dictionary, sense 2).

Step3 (b) basic meaning: The basic meaning mainly derives from the verb “follow” when it refers to “walk or drive behind someone, when you are going in the same direction as them” (online Macmillan Dictionary, sense 1).

Step3 (c) contextual meaning versus basic meaning: The contextual meaning contrasts with the basic meaning and can be understood by comparison: the abstract sense of happening after something else be understood in terms of the physical action of walking behind someone.

Step 4 metaphorically used? Yes.

I analysed the other lexical units in other paragraphs of the whole text in the same way. It is important to note that senses like the sense 1 and 1a, 1b, 1c...in the two online dictionaries are treated as different meanings. For instance, the sense 2 of the adverb “in” in Macmillan Dictionary is “into something”. Sense 2b is “moving into a place or a space, e.g., the door was open, so I just walked in.”. Sense 2b is more concrete and is chosen as the basic meaning of the adverb “in”, and then compared to its contextual meaning in the writing context. Case like this, of which both the contextual meaning and basic meaning can be obtained from standard English dictionaries, is classified as conventional metaphor use. **Table 3.7** shows all of the linguistic metaphors identified in 2-S1-1’s writing sample. In total, 40 linguistic metaphors were identified out, among which, 41 words are metaphorically used. The metaphor density is about 11%. 4 out of the 40 metaphors are possible unconventional metaphor use. The remaining 36 metaphors are conventional. **Section 3.2.7** and **Section 3.2.8** describe the grammatical categories of metaphors and categorization of conventional and unconventional metaphor use.

**Table 3.7 Analysis example: linguistic metaphors (L.M.) identified in 2-S1-1's writing sample**

**Sample argumentative text produced by 2-S1-1 Total word length:** 358 words (including writing topic)

**Topic:** Increase Money in is the Real Solution      **Submitted on** 21/03/2018

Sentence #	Partial context before L.M.	Linguistic metaphors (L.M.)	Partial context after the L.M.	Number of words for each L.M.	Linguistic forms of L.M.	Number of L.M.	Metaphor category: Conventional or unconventional
0	Increasing Money	<u>in</u>	is the Real Solution	1	Adverb	1	Conventional
1		<u>Healing</u>	financial	1	Verb	2	Conventional
2		<u>disease</u>	of college	1	Noun	3	Conventional
2	possibly	<u>have</u>	many solutions	1	Delexical Verb	4	Conventional
2	most substantial	<u>way</u>	is	1	Noun	5	Conventional
2	increasing money	<u>in</u>	The reasons are as follows.	1	Adverb	6	Conventional
4		<u>after</u>	graduating	1	Preposition	7	Conventional
6	increasing money	<u>has</u>	two benefits	1	Delexical Verb	8	Conventional
6	it	<u>gives</u>	students	1	Personification	9	Conventional
6	more	<u>opportunities</u>	to experience	1	Noun	10	Conventional
7	not only	<u>focusing</u>		1	Verb	11	Conventional
7		<u>on</u>	academy	1	Preposition	12	Conventional
8	increasing income is	<u>feedback</u>	to family and society	1	Noun	13	Unconventional



	something of a						
9	ask more money	<u>from</u>	parents	1	Preposition	14	Conventional
10	college students	<u>pursue</u>	a satisfying life	1	Verb	15	Conventional
11	increasing income can	<u>lead</u>	college students	1	Verb	16	Conventional
11	their parents	<u>raise</u>	them	1	Verb	17	Conventional
12	their value	<u>system</u>	increasing	1	Noun	18	Conventional
13	money can also	<u>feed back</u>	family and society	2	Phrasal verb	19	Unconventional
13	it would	<u>spend</u>	a lot	1	Personification	20	Conventional
13	to	<u>fertilize</u>	a college student	1	Verb	21	Unconventional
14	increasing income	<u>creates</u>	more	1	Personification	22	Conventional
14		<u>opportunities</u>		1	Noun	23	Conventional
15	benefits of learning at college is	<u>opening</u>		1	Verb	25	Conventional
15		<u>eyesight</u>		1	Noun	25	Conventional
16	might	<u>see</u>	so many	1	Verb	26	Conventional
16	interesting	<u>things</u>		1	Noun	27	Conventional
16	find one	<u>field</u>	which	1	Noun	28	Conventional
17	Increasing money	<u>gives</u>	college students more possibilities	1	Personification	29	Conventional

17	and more	<u>opportunities</u>		1	Noun	30	Conventional
18	more money can	<u>support</u>	college students	1	Verb	31	Conventional
18	college students to	<u>fertilize</u>	them (subjects or hobbies)	1	Verb	32	Unconventional
19	to a research	<u>over</u>	seventy percent	1	Preposition	33	Conventional
20	provide alternative	<u>fields</u>	for college students	1	Noun	34	Conventional
20	and they might	<u>have</u>	better life	1	Delexical verb	35	Conventional
21	not only a	<u>challenge</u>	but also	1	Noun	36	Conventional
21	an	<u>opportunity</u>		1	Noun	37	Conventional
22	Decreasing money	<u>out</u>	is something	1	Adverb	38	Conventional
22	of	<u>escaping</u>		1	Verb	39	Conventional
22		<u>growth</u>		1	Noun	40	Conventional

**In total, there are 40 linguistic metaphors, among which, 41 words are metaphorically used.**

**Metaphor density : 41/358=11.45%**

**Note:** In this analysis example, linguistic metaphors or the vehicle terms of linguistic metaphors are underlined.

### 3.2.6 Inter-rater reliability of metaphor identification results

The metaphor identification results were checked with a co-rater, who is bilingual in Chinese and English, and who is also a metaphor researcher. The instructions of metaphor identification for co-rater are in **Appendix 14**. The co-rater is very familiar with practicing the four steps of MIP, as illustrated in **Section 3.2.3** in detail, when identifying metaphors in economic discourse. It was not necessary therefore to go through this in detail with her. The focus was on potential difficulties when applying MIP to my research data in particular, i.e., L2 learners' written texts. For instance, I clarified possible cases that may arouse confusions between the two metaphor analysts before independent coding, including how I demarcated multiword units, how I identified personification metaphors, how I dealt with delexical verbs and how I decided and compared basic meanings and contextual meanings in the context of my research by following MIP.

Following Pragglejaz (2007) and Low et al. (2008), I used Cohen's Kappa to measure the inter-rater reliability between two metaphor raters. By identifying the metaphors used in 4090-word texts, with three writing samples on each of the four writing themes: "Spend and Save", "Campus Love", "Online Medical Treatment", and "Icon Worship" individually, my co-rater and I agreed on 423 metaphorical lexical units and 3473 non-metaphorical ones. There were 194 controversial cases, among which 95 were identified as metaphorical only by me, 99 were identified as metaphorical only by my co-rater. The overall percentage of agreement before discussion was about 95%. As Sim and Wright (2005) writes, "although this calculation provides a measure of agreement, it does not take into account the agreement that would be expected purely by chance" (Sim and Wright, 2005, p.258). The fact was even if my co-rater and I were to guess randomly about each lexical unit, we would end up agreeing on some lexical units simply by chance. "What the Kappa does is correct for chance" (Nacey et al., 2019, p.49; Cohen, 1960).

I coded the 4090 pair ratings by using IBM SPSS Statistics versions 27. Metaphorical decisions labeled as "1" and non-metaphorical ones labeled as "0". The result of associated Cohen's kappa for the inter-rater reliability test was

$\kappa = .786$ ,  $p < .001$ , which indicated that a substantial agreement between my co-rater and I could be achieved before discussion (Landis and Koch, 1977). Since  $p < .001$ , the kappa ( $\kappa$ ) coefficient is statistically significantly different from zero, which represented a reliable agreement rate between my co-rater and I (McLeod, 2019). The results of inter-rater reliability before discussion are summarized in **Table 3.8**.

**Table 3.8 Inter-rater reliability of the metaphor identification results**

Overall percentage of agreement	Cohen's Kappa	Number of agreed metaphorical lexical units	Number of agreed lexical units	Number of disagreed lexical units	Number of total lexical units
95%	.786	423	3896	194	4090

The disagreements and differences were resolved by face-to-face discussions. For instance, one difference with my co-rater was that, when dealing with borderline cases involving delexical verbs like “give” and “help”, I identified them as metaphorical when the non-human agent was being personified. I made a principled decision on this point and followed it consistently, as recommended by the Pragglejaz Group (2007). The disagreements on conventional metaphors in prepositions (e.g., in, on, between, before, after, by, to), in nouns, adjectives and adverbs (e.g., aim, icon, key, still) were also double-checked and resolved by face-to-face discussions.

### 3.2.7 Word class and metaphor

As noted in Chapter 2: Literature review, “a linguistic metaphor consists of a vehicle term combined with a topic term” (Cameron and Maslen, 2010, p.103). In line with MIP (Pragglejaz Group, 2007), vehicle terms “are the words or phrases that...have some other meaning that is more basic in some way and that contributes to the meaning in the context through comparison” (Cameron et al., 2009, p.71). In the example “healing financial disease of college students” in **Table 3.7**, the vehicle terms (underlined) are “healing” and “disease” and the topic term is “financial problems” based on the writing text. “Topic terms are not always present in the linguistic metaphor. However, where absent, the topic can usually be retrieved either from preceding clauses or the immediate context”

(Knapton, 2020, p.239).

Goatly (2011) writes, “the most obvious way of classifying metaphors is to categorize them according to the word class to which the vehicle terms belong” (Goatly, 2011, p.80). Nouns (Noun), verbs (Verb), adjectives (Adj), adverbs (Adv), prepositions (Prep), conjunctions (Conj) and determiners (Det) are widely agreed to be the seven major word classes (Goatly, 2011; Nacey, 2013). For example, “healing” can be classified as a verb metaphor and “disease” is a noun metaphor. In the present research, conjunctions (Conj) and determiners (Det) are ignored concerning my research focus, the identified linguistic metaphors are classified in term of the five major word classes to which the vehicle terms of identified linguistic metaphors belong. The CLAWS Part of Speech tagger system functions as supporting tool in deciding word classes. There are exceptional cases in terms of linguistic form arise from the MIP procedure, and possible difficulties when using MIP, as described in **Step 2** and **Section 3.2.4**. In my writing data, phrasal verbs, spaced compounds and ploywords are described as three groups of multi-word metaphors. The delexical verbs that do not personify the non-human agent are grouped into the verb category. Personification metaphors realized by possible verbs and nouns that can attribute human nature and characteristics to something that it not human are another group of metaphor for the ease of metaphor identification and categorization.

To answer the research question 1b: What are the grammatical categories of linguistic metaphors in terms of word class and linguistic form? I got nine grammatical categories of linguistic metaphors: 1) nouns; 2) verbs; 3) adjectives; 4) adverbs; 5) prepositions; 6) phrasal verbs; 7) ploywords; 8) spaced compounds, and 9) personification. Findings of grammatical categories of linguistic metaphors used by my participants in their L2 writing is presented in Chapter 4: Findings from metaphor analysis of written texts.

### **3.2.8 Categorization of conventional and unconventional metaphor use**

To answer the research question 1c: How do Chinese English majors use metaphors conventionally or unconventionally? I distinguished participants' conventional metaphor production from those unconventional ones. I stick to

the framework on conventional and unconventional metaphor use in **Table 2.1** in Chapter 2: Literature review. The analysis example in **Table 3.7** shows that my participants produced both conventional and unconventional metaphors to fulfil the communicative needs in L2 argumentative writing. Conventional metaphors are more frequently used, which may be highly conventional, or involve positive L1 transfer and possible deliberateness. The less frequently unconventional metaphor use is further categorized into 3 subtypes: 1) creative metaphors (with positive L1 transfer and deliberateness); 2) novel metaphors with negative L1 transfer (and deliberateness) or communicatively less successful metaphor use; 3) Possible errors with simple translation. The guidelines obtained from prior literature on metaphor and L2 English are:

- 1) the metaphorical lexical unit is treated as conventional when its basic meaning and contextual meaning can be found in the standard English dictionaries used in the metaphor identification procedure;
- 2) novel metaphors in L2 has been demonstrated to be caused by negative L1 transfer, of which the “contextual meanings are not codified in standard English dictionaries” (Nacey, 2017, p. 509);
- 3) creative metaphors need to be both novel and meaningful, with possible deliberateness and extension;
- 4) possible deliberateness of conventional and unconventional metaphor use is determined by metaphor flags and evidence of learners’ explicit intentions reported in stimulated recall interviews;
- 5) referring to native English corpus, i.e., using the two-billion-word Oxford English Corpus (OECv2) to conduct concordance analysis of linguistic metaphors with the software Sketchengine (Kilgarriff et al., 2014), is helpful when deciding communicatively successful creative metaphors, novel metaphors and possible errors.

Here are two extracts taken from 2-S1-1’s writing sample “Increasing Money in is the Real Solution”, involving two instances of unconventional metaphor use (underlined):

Extract 3.1 [...] because no matter family or society it would spend a lot to fertilize a college student.

(2-S1-1, Increasing Money in is the Real Solution)

Extract 3.2 No matter what subjects or hobbies, more money can support college students to fertilize [subjects or hobbies].

(2-S1-1, Increasing Money in is the Real Solution)

Following MIP (Pragglejaz Group, 2007), the contextual meaning of the lexical unit “fertilize” used as a verb: nurturing a child, and cultivating one’s hobbies, in the context of Extract 3.1 and Extract 3.2 respectively cannot be found in standard English dictionaries. The use of concordance tool in Sketch Engine showed that there were 5662 citations of the verb “fertilize” in the native English corpus OECv2, including all its inflections, such as “fertilise” and “fertilised” (accessed in June 2018). The citations found from the random sample of 1000 citations based on 5662 citations in OECv2 indicated the basic use of the verb “fertilize”. By using the word sketch tool in SketchEngine to examine collations of the verb “fertilize” in OECv2, I found that it is very unlikely for the noun phrase “college student” and nouns like “subjects or hobbies” to occur next to the verb “fertilize”. I first used the filter tool to explore the lines that contain all the forms of both “fertilize” and “(college) students, both “fertilize” and “subjects/hobbies” in the concordance. The filter tool allows the researcher to specify constraints on the context of concordance, in order to retrieve a subset of concordance (Kilgarriff et al., 2014). I found 3 citations that could meet the searching criteria. The verb “fertilize” are all used in the basic meaning: “to add a natural or chemical substance to soil in order to help plants grow” (online Macmillan Dictionary, sense 2). I also found more than one citation where the verb “fertilize” is used metaphorically, in the random sample of 1000 citations based on 5662 citations. The three citations for exemplification purpose are:

Citation 1: Artistic liberation breathes new life, while long buried ideas fertilize to enrich and inform the new.

Citation 2: Taken by Hitler 's photographer Heinrich Hoffmann , it was captioned: “The Fuhrer before the bust of the German philosopher whose ideas have fertilized two great popular movements: the National Socialism of Germany and the Fascist movement of Italy”.

Citation 3: Healthy debate fertilizes a healthy democracy. But young people aren’t usually inclined to address the issues of

the day head-on by reading the editorial page of the New York Times.

In these three citations from the native English corpus, the verb “fertilize” is used metaphorically with the realization of the figurative contextual meaning codified in the online Oxford English Dictionary: “to render productive” (sense 1b). The abstract sense of generating productive ideas and facilitating new progress can be understood in terms of the physical action of adding a natural or chemical substance to soil in order to help plants grow. Nevertheless, the metaphorical comparison like this is different with what has been conveyed in 2-S1-1’s writing. The metaphorical expressions like “fertilize a college student” and “fertilize them (hobbies)” might indicate participant’s direct translation from his L1. I then categorized the two verbs “fertilize” in Extract 3.1 and Extract 3.2 as one subtype of unconventional metaphors, i.e., possible errors.

The framework and guidelines are followed consistently on categorizing conventional and unconventional metaphors in my written data. My participants’ intentions of producing metaphors are investigated and analysed in the stimulated recall interview process.

### **3.2.9 Finding systematic metaphors from extended metaphors**

Turning towards the research question 2: What are the communicative functions of extended metaphors in Chinese English majors’ argumentative writing? I focus on one particular type of metaphor cluster—extended metaphors, from which systematic relationships among related vehicle terms of linguistic metaphors can be identified out (Semino, 2008; Maslen, 2017). Following the literature in Chapter 2, the extension of linguistic metaphors involves “a single metaphoric idea over a long stretch of language” (Denroche, 2018, p.7) or systematic metaphors (Cameron et al., 2010). The “extension of (linguistic metaphors) is the occurrence of several metaphorical expressions evoking the same source domain and describing the same target domain in close proximity to one another in a text” (Semino, 2008, p.227). I use the term ‘extended metaphor’ “when at least two metaphorically used words belonging to different phrases describe the same target domain/scenario in terms of the same source domain/scenario” (Semino, 2008, p. 25). Here, as noted before,



terms of “topic” and “vehicle” are used for my basic descriptive reporting (Low et al., 2008; Hoang, 2015; Maslen, 2017). An example of extended metaphor is given in Extract 3.3, which is taken from 2-S5-1’s writing on the topic “The Reasons for College Students to Learn to Budget Their Money”:

Extract 3.3 Once we want to waste money, the beasts of desire in our chests are awakened, they yell and stamp their feet, trying to control our mind.

(2-S5-1, The Reasons for College Students to Learn to Budget Their Money)

In Extract 3.3, I have underlined the linguistic metaphors identified out by following the MIP procedure mentioned in **Section 3.2.5**. Here the desire of wasting money (topic domain) is described as a dangerous animal—beast (vehicle domain) via several different linguistic metaphors (underlined) in close proximity. Following Cameron et al.’s (2010) practice of grouping metaphor vehicles by using the Excel software, I use **Figure 3.1** to display metaphors identified in Extract 3.3 before vehicle grouping.

**Figure 3.1 Metaphors in an extended metaphor ready for vehicle grouping**

Vehicle group	Metaphor	Line	Participant	Text	Writing theme
	beasts	24	2-S5-1	Once we want to waste money, the <u>beasts</u> of desire	Spend and Save
	awakened	25	2-S5-1	in our chests are <u>awakened</u>	Spend and Save
	yell	25	2-S5-1	they <u>yell</u>	Spend and Save
	stamp	25	2-S5-1	and <u>stamp</u>	Spend and Save
	feet	25	2-S5-1	their <u>feet</u>	Spend and Save
	control	25	2-S5-1	trying to <u>control</u> our mind	Spend and Save

Linguistic metaphors are listed in column E. The immediate text context is in column H. Text line number is in column F. Column G is the anonymized label of participant. The writing theme of the text is in column I. Next step is to group the connected metaphor vehicles of linguistic metaphors together “on the basis of the semantics of the basic meaning of the metaphor vehicle and choose a label which generalizes as little as possible from the word or phrase used in the text or discourse” (Cameron et al., 2010, p.120).

### 3.2.9.1 Building vehicle groupings

“Grouping metaphor vehicles is interpretive, in that there is no single ‘right answer’ and in that the researcher must make judgements about how best to group the vehicles on the basis of available evidence” (Cameron et al., 2010, p.120). The interpretive process involves recursive work between my L2 English written data and the emerging categories of vehicle groupings. To avoid overgeneralization about writers’ conceptualization, “as would happen in an analysis based on Conceptual Metaphor Theory” (Cameron, 2010, p.12), I use the semantics of the basic meaning of the metaphor vehicles as the starting point to generalize grouping labels. To save time, I also use vehicle groupings obtained from text or discourse data in other studies (Cameron, 2007; Cameron et al., 2009; Cameron and Maslen, 2010; Maslen, 2017). As Cameron et al. (2010) advise, “if a grouping doesn’t feel like a good fit to the data, it shouldn’t be used”, and in the present investigation “some new metaphor vehicles are likely to be found that may require groupings to be adjusted” (Cameron et al., 2010, p.125). The risk of losing the characteristics of my collected written data can be guarded against by following these advice and practices, when using groupings for the events and contexts in other studies. **Table 3.9** shows 19 metaphor vehicle groupings emerged from Cameron and Maslen’s (2010) focus group data on their participants’ language use and perceptions about terrorism in reconciliation talk. **Table 3.9** is cited from Cameron and Maslen’s (2010) work.

**Table 3.9 Vehicle groupings for reconciliation metaphors**

(Cameron and Maslen, 2010, p.12)

---

*JOURNEY*  
*SEA/WATER*  
*DIMENSION*  
*SEEING*  
*CONNECTION/SEPERARTION*  
*VIOLENT OR NEGATIVE ACTION*  
*FICTION/PLAY/THEATRE*  
*MONEY/VALUE*  
*WORKING*  
*TEXTILES*  
*SCIENCE*  
*PARTS OF THE BODY*  
*LIVING WITH*  
*HEARING/SAYING*  
*COMPONETS PARTS*  
*THING*  
 Prepositions  
 Other

---

**Note:** Vehicle groupings built for finding systematic metaphors are also written in *SMALL ITALIC CAPITALS* to distinguish them from conceptual source domains in conceptual metaphors, e.g., the source domain “JOURNEY” in “LOVE IS A JOURNEY.”

Prepositions and Other are two groupings excluded from this present investigation. The 17 metaphor vehicle groupings in *SMALL ITALIC CAPITALS* function as a framework for reference when building my vehicle groupings.

**Figure 3.2 Basic meanings of metaphor vehicles in Excel**

F	G	H	I	J	K
Metaphor	Line	Participant	Text	Basic meaning	Writing theme
beasts	24	2-S5-1	Once we want to waste money, the <u>beasts</u> of desire	an animal, especially a dangerous or strange one	Spend and Save
awakened	25	2-S5-1	in our chests are <u>awakened</u>	to wake up, or to wake someone up	Spend and Save
yell	25	2-S5-1	they <u>yell</u>	to say something in a loud voice, or to make a loud noise because you are angry, afraid, excited, or in pain	Spend and Save
stamp	25	2-S5-1	and <u>stamp</u>	to put your foot down hard and noisily on someone or something	Spend and Save
feet	25	2-S5-1	their <u>feet</u>	the part of your body at the end of your leg, on which you stand	Spend and Save
control	25	2-S5-1	trying to <u>control</u> our mind	the power to make something such as a vehicle, machine, or animal do what you want	Spend and Save

**Figure 3.2** is an updated version of **Figure 3.1**, with the basic meanings of metaphor vehicles, i.e., metaphorical lexical units or linguistic metaphors,

added in column J. The initial coding and second possible coding of vehicle groupings are added in columns D and E in **Figure 3.3**.

**Figure 3.3 Possible groupings of metaphor vehicles in Extract 3.3**

	D	E	F	G	H	I	J	K
	Vehicle group	Vehicle group 2	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
1	BEAST	DANGEROUS ANIMAL*	beasts	24	2-S5-1	Once we want to waste money, the <u>beasts</u> of desire	an animal, especially a dangerous or strange one	Spend and Save
2	BODILY ACTION	BODILY ACTION	awakened	25	2-S5-1	in our chests are <u>awakened</u>	to wake up, or to wake someone up	Spend and Save
3	BODILY ACTION	BODILY ACTION	yell	25	2-S5-1	they <u>yell</u>	to say something in a loud voice, or to make a loud noise because you are angry, afraid, excited, or in pain	Spend and Save
4	BODILY ACTION	BODILY ACTION	stamp	25	2-S5-1	and <u>stamp</u>	to put your foot down hard and noisily on someone or something	Spend and Save
5	PARTS OF THE BODY	PARTS OF THE BODY	feet	25	2-S5-1	their <u>feet</u>	the part of your body at the end of your leg, on which you stand	Spend and Save
6	CONTROL	VIOLENT ACTION*	control	25	2-S5-1	trying to <u>control</u> our mind	the power to make something such as a vehicle, machine, or animal do what you want	Spend and Save
7		*Second possible coding						
8								
9								

As shown in **Figure 3.3**, “linguistic metaphors were gathered together in a list and then were grouped and organized according to the basic meanings of the vehicle terms” (Cameron, 2010, p.12). The grouping labelled *BODILY ACTION* included the linguistic metaphors “awakened”, “yell” and “stamp” as in Extract 3.3. The grouping labelled *BEAST* was first generalized from the explicit metaphorical expression “the beasts of desire” and then was further grouped into *DANGEROUS ANIMAL* in terms of the basic meaning of “beast”: “an animal, especially a dangerous or strange one”. So, at the very beginning, the “labels for groupings were often taken from the actual words that appear in the written data” (Cameron et al., 2010, p.119) and the words that appear in the basic meanings of metaphor vehicles. This process “contracts with Conceptual Metaphor Theory which aims to generalize labels as much as possible in order to posit universals in human conceptualizing” (Cameron et al., 2010, p.119).

Following Cameron and Maslen’s (2010) work, the second possible grouping labelled *VIOLENT ACTION* was one of the two subdivisions of the *PHYSICAL ACTION* grouping. The *PHYSICAL ACTION* metaphor vehicles can be further divided into *PHYSICAL ACTION* and *VIOLENT ACTION* in terms of “those actions which are neutral and those which express an element of violence” (Cameron et al., 2010, p.123). Based on the immediate text context in the Extract 3.3, and the basic meanings of collected metaphor vehicles—“beasts”, “yell” and “stamp”, the grouping labelled *CONTROL* was further generalized as *VIOLENT*

*ACTION*. The grouping *PARTS OF THE BODY* was quickly built by referring to both the basic meaning of “feet”, and the grouping *PARTS OF THE BODY* in Cameron and Maslen’s (2010) work, as shown in **Table 3.9**. Following the similar practice, the possible groupings of metaphor vehicles in Extract 3.4, where an extended metaphor was identified out on the writing theme of “Campus Love”, are presented in **Figure 3.4**.

Extract 3.4 Basically, love is the invisible power. It has the driving force which can encourage people to achieve some goals. [...] It is the love for families, soul mates and parents that push them struggle against difficulties. In this way, love is like the petrol to a car, the battery to a player.

(2-S4-4, More Than Love)

In Extract 3.4, love (topic domain) is described as physical strength/force (vehicle domain) via several different linguistic metaphors in close proximity. The expressions—“power” and “force” are linguistic metaphors that are clearly to do with physical strength/force; “driving”, “push”, “struggle” and “against” are expressions suggesting physical actions and movements that can make the invisible physical strength/force noticeable; and “petrol”, “car”, “battery” and “player” are related to vehicles and machines that are controlled by physical actions and strength/force. It is safe to say that the metaphorical expression “invisible power” in the first sentence of Extract 3.4 “facilitates a metaphor analysis in which all these expressions are part of a single metaphorical idea of *LOVE IS PHYSICAL STRENGTH/FORCE* (Denroche, 2018).

The linguistic metaphors—“has”, “goals”, “in” and “way” are unrelated to the extended metaphor *LOVE IS PHYSICAL STRENGTH/FORCE*. Following the literature in Chapter 2, the extended metaphors and systematic metaphors emerged from naturally occurring language data are written in *SMALL ITALIC CAPITALS* to distinguish them from invented conceptual metaphors. Extract 3.4 “can in fact be seen as an example of a cluster which includes an extended metaphor alongside other non-extended metaphors” (Semino, 2008, p.26). **Figure 3.4** shows the possible groupings of metaphor vehicles within the extended metaphor emerged in Extract 3.4.

**Figure 3.4 Possible groupings of metaphor vehicles in Extract 3.4**

	D	E	F	G	H	I	J	K
1	Vehicle group	Vehicle group 2	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	SEEING	SEEING	invisible	7	2-S4-4	Basically, love is the <u>invisible</u> .	something that is invisible cannot be seen	Campus Love
3	PHYSICAL FORCE/STRENGTH	PHYSICAL FORCE/STRENGTH	power	7	2-S4-4	<u>power</u>	physical force or strength	Campus Love
4	CONTROL	PHYSICAL ACTION*	driving	7	2-S4-4	It has the <u>driving</u> .	to control a vehicle so that it moves somewhere	Campus Love
5	PHYSICAL FORCE/STRENGTH	PHYSICAL FORCE/STRENGTH	force	7	2-S4-4	<u>force</u> which can encourage people to achieve some goals	physical strength, or violence	Campus Love
6	MOVEMENT	PHYSICAL ACTION*	push	13	2-S4-4	It is the love for families, soul mates and parents that <u>push</u> them	to move someone or something away from you, or from their previous position, using part of your body, especially your hands	Campus Love
7	FIGHT	PHYSICAL ACTION*	struggle	14	2-S4-4	<u>struggle</u>	to use your strength to fight against someone or something	Campus Love
8	MOVEMENT	MOVEMENT	against	14	2-S4-4	<u>against</u> difficulties	if someone or something moves against the wind, the current etc, they face it and move in the opposite direction	Campus Love
9	ENERGY	VEHICLE*	petrol	14	2-S4-4	In this way, love is like the <u>petrol</u> .	a liquid used as fuel for cars and other vehicles	Campus Love
10	VEHICEL	VEHICLE	car	15	2-S4-4	to a <u>car</u>	a road vehicle for one driver and a few passengers	Campus Love
11	ENERGY	VEHICLE*	battery	15	2-S4-4	the <u>battery</u>	an object that fits into something such as a radio, clock, or car and supplies it with electricity	Campus Love
12	DIGITAL DEVICE	MACHINE*	palyer	15	2-S4-4	to a <u>player</u>	a piece of equipment used for playing musics, etc	Campus Love
13		*Second possible coding						
14								

As shown in **Figure 3.4**, the groupings labelled *SEEING*, *PHYSICAL FORCE/STRENGTH*, *PHYSICAL ACTION* and *MOVEMENT* were easy to be generalized and built by referring to the literature mentioned above and the basic meanings of metaphor vehicles. The groupings labelled *VEHICLE* and *MACHINE* were decisions made collaboratively by discussion with my co-rater, and by referring to the regular comments given by my primary supervisor on my written work. The co-rater involved in the process of coding vehicle groupings is the same metaphor researcher who has helped me check the reliability of my metaphor identification results. **Appendix 15** shows the screenshots of related collaborative work done in Word and Excel software.

### 3.2.9.2 Proposing systematic metaphors based on vehicle groupings

Following the literature, “a systematic metaphor” is a set of linguistic metaphors in which connected vehicle words are used metaphorically about a particular topic” (Cameron et al., 2010, p.127). In my written data, such as in Extract 3.3 and Extract 3.4, it was easy to find the particular topics based on the immediate writing contexts and the writing themes. For example, in the *DANGEROUS ANIMAL* grouping in Extract 3.3, a subset of metaphor vehicles which were used to talk about the desire of wasting money were connected and grouped together as the systematic metaphor:

*DESIRE OF WASTING MONEY IS A DANGEROUS ANIMAL WITH  
VIOLENT BODILY ACTION*

In the *PHYSICAL FORCE/STRENGTH* grouping in Extract 3.4, the connected metaphor vehicles which were used to talk about the power of love were grouped together as the systematic metaphor:

*LOVE IS PHYSICAL FORCE DRIVING VEHICLES AND MACHINES*

The procedure of finding systematic metaphors from vehicle groupings generalized in single extended stretches of written texts focuses on how my participants use metaphors to achieve communicative goals (Deignan, 2017a). These systematic metaphors established in my written data serve both as evidence for ideas, attitudes and values which may not be directly expressed in the texts, and as a starting point for the further exploration of functions of metaphor clusters (Cameron et al., 2010, p.116). Halliday and Matthiessen's (2004) framework of three metafunctions of language: ideational, interpersonal, and textual, is the theoretical guide.

In the example analysis of Extract 3.3 and Extract 3.4, the textual function of extended metaphors, such as "creating internal coherence" (Koller, 2003, p.120), can be realized by the connected metaphor vehicles that can be summarized by the metaphorical expressions—"beasts of desire" and "invisible power" in the very beginning of the two extracts respectively (Cameron and Low, 2004). The three systematic metaphors mentioned above all contribute to the internal coherence of the written texts. In line with Semino's (2008) view, the connected metaphor vehicles attracted by the metaphorical expressions—"beasts of desire" and "invisible power", are different in terms of their conventionality and in terms of the strength of their association with "beasts of desire" and "invisible power", respectively. The metaphorical expression "driving force" are highly conventional, and "love is like petrol to a car" is creative and possibly deliberate.

The new representations of desire of wasting money in terms of a dangerous animal, and love in terms of physical strength/force are evidence of the ideational functions of extended metaphors (Corts and Pollio, 1999; Goatly, 2011; Kathpalia and Carmel, 2011). The systematic metaphor *DESIRE OF WASTING MONEY IS A DANGEROUS ANIMAL WITH VIOLENT BODILY ACTION*

not only contributes to building a coherent argument (textual function) but also a persuasive one (interpersonal function) in 2-S5-1's writing sample. The participant personifies the desire to waste money as a horrible beast which can be awakened and cause a physical action, violently threatening our way of life. The *BEAST* metaphor is also used to describe crime in Thibodeau's (2011) research. In Extract 3.3, the systematic metaphor highlights the negative elements and deemphasize the positive ones contained in the topic domain *DESIRE OF WASTING MONEY* (Thibodeau, 2017), to affect readers' concerns and beliefs and to encourage them to take specific actions (interpersonal function).

Similarly, the systematic metaphor established from Extract 3.4: *LOVE IS PHYSICAL FORCE DRIVING VEHICLES AND MACHINES* can contribute to building a coherent argument (textual function) but also a persuasive one (interpersonal function). 2-S4-4 creatively used novel metaphors to increase comprehensibility and to highlight the positive role of campus love as *PHYSICAL FORCE/STRENGTH* (ideational function), which were possible attempts made to persuade the readership to accept the writer's viewpoint (interpersonal function) (Hyland, 1990; Paquot, 2010; Cameron and Maslen, 2010; Goatly, 2011; Littlemore et al., 2014; Yang et al., 2014; Thibodeau, 2017). The vehicle groupings and systematic metaphors were built and established based on my written data by following the procedure explained above, to answer my second research question. Supporting evidence of possible deliberateness of the systematic metaphor use is hoping to be found in the SRI data.

### **3.2.9.3 Inter-rater reliability of vehicle groupings**

The process of building vehicle groupings is interpretive, which involves recursive work and collaborative decisions. Cameron et al. (2009) write:

Although we strive for as much rigor as possible, the vehicle grouping process is hermeneutic and involves imagination and creativity in describing how metaphors best fit together. Because of this and because of the dynamic nature of language in use, the vehicle groupings that we construct will inevitably have blurred boundaries and a degree of overlap

(Cameron et al., 2009, p.24).



“The group you begin with is not necessarily the one you end up with” (Maslen, 2017, p.94). To make the decisions about groupings as reliable as possible, I first made sure that the grouping labels were all grounded on my writing data and avoided making “language-wide generalizations” (Deignan, 2017a, p.103). “The vehicle grouping procedure works inductively from the data, rather than starting from assumptions about what will be found” (Cameron et al., 2009, p.118). When referring to groupings in other studies, the good fitness to my writing data was always taken into consideration. The vehicle groupings built in my research were checked with the same metaphor researcher, who is bilingual in Chinese and English and has been involved in the co-rating procedure of my metaphor identification results, by way of independent coding in Excel and collaborative discussions. In total, 89 of the 99 metaphor vehicles were cross checked with my co-rater. Before discussion, grouping labels of 75 metaphor vehicles were agreed, which indicates an acceptable agreement rate (84%). All disagreements, including 11 grouping labels agreed after discussion and 3 borderline cases, between my co-rater and I were resolved by voice-call discussions before establishing systematic metaphors for further function analysis.

There were situations where one metaphor vehicle could be grouped into different vehicle groupings. Collaborative decisions were made to group one metaphor vehicle into one most appropriate vehicle grouping for the ease of categorization (Cameron et al., 2010). The metaphor vehicles “petrol” and “battery” in Extract 3.4, for example, first were grouped as *ENERGY* because of the words like “fuel” and “electricity” in the basic meanings of metaphor vehicles. With the help of my supervisor’s regular comments on my work and the discussion with my co-rater, the group was then recoded and broadened to *VEHICLE* by including metaphorically used words—“car” and “player” representing vehicles and machines in the physical world. The metaphor vehicle “control” in Extract 3.3 were grouped as *VIOLENT ACTION* by following Cameron and Maslen’s (2010) two subdivisions of the *PHYSICAL ACTION* grouping. The rationale is that the context of beast metaphor may convey sense of violence. Borderline cases about the metaphor vehicle “control”, which can be grouped into *VIOLENT ACTION* or *PHYSICAL ACTION* depending on writing

contexts were agreed after discussion. The bilingual background of my co-rater and I, and our familiarity with Chinese intermediate learners' L2 English writing were helpful in capturing accurate generalizations of the metaphor vehicles and the corresponding topics to which my participants had written in my written data. The trustworthiness of my vehicle groupings can be maximized by "keeping with the 'principled flexibility' that has informed the process throughout" (Cameron et al., 2010, p.126). As shown in **Appendix 15**, notes of decisions on less straightforward cases were kept in Word and Excel software for the purpose of keeping consistency. There are screenshots of the Word and Excel worksheets for the cross-check of vehicle groupings in **Appendix 15**.

### **3.3 A demonstration of analyzing stimulated recall interview (SRI) data**

#### **3.3.1 Procedure of analyzing SRI data**

Stimulated recall interview data were collected and analysed to answer my third research question (RQ 3): How do Chinese English majors report their thinking processes around their use of metaphors in L2 writing?

As explained in **Section 3.1.2**, the major challenges I met when collecting the SRI data were as follows. First, the interviews should be conducted within 48 hours after the submission of students' writing samples by strictly following my ethical approval. This meant that though some writing samples contained very interesting metaphors, I was not allowed to interview the writer if the writer was unwilling to participate in the follow-up interview or the writer just did not have time to do that within the next two days. The interviews need to be completely voluntary. Second, the time limit does not allow me to ask about all identified linguistic metaphors in the interview procedure. The conventional and unconventional metaphors asked in the interview process were randomly chosen as mentioned in **Section 3.1.2.3**: Pilot testing of the interview protocol. Third, in order to minimize the researcher's interference and participants' preference of speaking favourably in the interview process, I refined and finalized my interview protocol by piloting the interview with five of my targeted participants. I used related writing samples as prompts and prepared interview instructions for both the researcher and the participants. The challenges and

limitations of the stimulated recall methodology could be offset by useful insights generated from the SRI data.

### 3.3.1.1 Transcribing audio-recorded SRI data into text data

“The first step to any adequate analysis of interview data must be transcription” (Richards, 2003, p.81; Stuckey, 2014). The transcription process “involves close observation of data through repeated careful listening and this familiarity with data and attention to what is actually there rather than what is expected can facilitate realizations or ideas which emerge during analysis” (Bailey, 2008, p.129). As Gass and Mackey (2017) write,

the first step (transcribing and laying out the data) involves deciding how much or how many of the recalls need to be analyzed. For example, it is not uncommon in the L2 research field to analyze a subset of an interview, such as the middle 10 minutes of a 30-minute interview. Transcribing, coding, and analyzing all 30 minutes is time-consuming

Gass and Mackey (2017, p.98).

To answer RQ 3: how my participants reported their thinking processes behind some linguistic metaphors, I focused on the transcribing, coding, and analysing of recall data related to my key interview questions. The three key interview questions mentioned in the interview protocol (see **Appendix 13**) are:

1. When writing words or phrases like this, what were you thinking about at that particular time?
2. Why did you use this/these particular word/words or phrases, what were you thinking about then?
3. Could you tell me why you use this/these particular word/words or phrases during your writing processes? Can you still remember thinking anything at that particular time?

The key questions asked in the 21 actual stimulated recall interviews might not be completely the same as the three planned key interview questions but were centred around the three key interview questions mentioned above. I transcribed the audio-recorded verbal reports related to key questions on participants’ metaphor use in the writing processes.

### Extract 3.5 Interview transcript of 2-S1-1 with key interview questions

Utterance #	Speaker and talk
15	<b>R:</b> Ok, good, let's take a look at your essay. The first point that I am interested in is (...) Please have a look at the second sentence in your essay. I noticed that you used the expression "healing financial disease".
16	<b>S:</b> En.
17	<b>R:</b> What I want to ask is, when you were writing this essay, have you thought differently by writing this expression?
18	<b>S:</b> It was (...), because I thought that it was a common problem in terms of the budgeting of college students. Then every college student hoped to solve this problem as soon as possible. So I compared the problem to a kind of disease at that time and thought that it might be more vivid. This is what I thought personally.
19	<b>R:</b> Ok, good, is this your thought at that particular time?
20	<b>S:</b> Yes.
21	<b>R:</b> So you wrote this expression.
22	<b>S:</b> En.
23	<b>R:</b> Did you think more about the vividness of the expression at that time?
24	<b>S:</b> Yes, I did, (...) in fact, at the very beginning, I thought about the simplest way to express the meaning of solving problems, which equals to the meaning of "healing disease". But I still felt that there had been no good solution to explain that how to help college students to solve this problem.
25	<b>R:</b> Explain?
26	<b>S:</b> Which is to tell.
27	<b>R:</b> Yes, yes.
28	<b>S:</b> So, (...) I wanted to say that "increasing money in" was in fact a very effective solution to solve this problem rather than other methods offered by other academic articles. I just thought that "increasing money in" was the only and necessary solution, just like a disease that could only be cured by it. If you did not cure a disease, you would have no way to solve it. So I thought that it might be more visualized. Besides, I used the word "disease" might extend the financial problem. In other words, the problem had been very severe in fact. The word "healing" might be more able to attract people's attention at the beginning of my essay. It likes a hook.

Extract 3.5 shows a sample interview transcript of the interview conducted with 2-S1-1. Answers to the getting-ready questions for participants settling down and getting comfortable, and to the closing questions for finishing the interviews were not the focus of my transcription. The transcription conventions (see **Appendix 16**) were cited and adapted from the conventions in the research of Richards (2003, pp.80-81), Watanabe and Swain (2007, p.140) and Bailey (2008, p.131). The conventions were followed strictly to capture the full picture of my interview data. My participants' recall comments concerning some of their metaphors were translated from Chinese into English manually in a verbatim manner. The recall comments verbalized by 2-S1-1, concerning the use of

metaphorical expression “healing financial disease”, with utterances numbers, are presented in Extract 3.5. As noted in **Table 3.5**, the interview with 2-S1-1 was conducted on 23/03/2018, in Chinese, and lasted about 18 minutes. The linguistic metaphors identified in 2-S1-1’s writing sample has been presented in **Table 3.7** as mentioned above.

Among the 21 participants who have also been involved in the stimulated recall interviews, 2-S1-1 is the only one who has added some recall comments at the closing stage of the interview about his thinking processes behind the use of metaphorical language in the writing process. Extract 3.6 below shows the sample transcript about 2-S1-1’s added recall comments.

### **Extract 3.6 Interview transcript about 2-S1-1’s added recall comments**

Utterance #	Speaker and talk
67	<b>R:</b> Ok, good, the above are all my key questions concerning what was in your mind when you were choosing certain words or phrases during your writing. Now, let’s move on to the fourth part. On the basis of your essay and this interview, do you have any questions or would you like to add anything about your thinking at that time?
68	<b>S:</b> Um. (...)
69	<b>R:</b> The key questions have already been asked. If you have anything to add or ask, concerning your thinking, the topic or the word choice, you can feel free to talk.
70	<b>R &amp; S:</b> (.....)
71	<b>S:</b> In fact, when I was writing this essay at the beginning, during which I only had a rough outline in my mind, some of the words in this essay had already been written. The words were simple and there might not so many modifiers in it. But when I modified it at the last stage, I would change the word “aspect” into “field” and the “deal with” with “heal”. I thought in a simple and direct way at the beginning. Maybe it was influenced by L1 transfer. But later on, in order to write in a better way, I would change some words and phrases purposely.
72	<b>R:</b> So, why did you change like that, such as change “deal with/ solve” into “heal” and “aspect” into “field”? What kind of thinking processes made you change words and phrases in that way?
73	<b>S:</b> It was because, to be frankly, in the British literature class lectured by Mr. Yang, including the poems and essays we are learning currently, I can see those famous authors can use some native and artistic expressions. I mean they will not to express a thing in a very simple way, though the thing itself is very simple.
74	<b>R:</b> So, when you were modifying them, why did you think the words and phrases you were writing finally might be artistic as you said?
75	<b>S:</b> Because I did not express directly concerning some things, instead, the meanings were expresses in a roundabout way. Alternatively, a more vivid expression was used instead of talking about a concept directly. Possibly, on the basis of the characteristics of a thing, the rhetoric devices such as metaphor and symbolism were used, which could make a simple thing very interesting.
76	<b>R:</b> Ok, good, do you still have any questions? You can ask anything you want. Now it is about to come to the end of our interview.

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77	[SOUND] [...]
82	<b>S:</b> No.
83	<b>R:</b> Ok, here comes to the end of our interview today. Thank you very much.

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### 3.3.1.2 Coding SRI data

To demonstrate the coding process, I work through the transcription sample related to 2-S1-1's recall comments. The reason why I chose 2-S1-1's interview transcription sample for demonstration purpose is that 2-S1-1 was the only one who reported his metaphor knowledge clearly during the interview process. His interview sample could cover the units of meaning as many as possible for demonstration purpose. New units of meaning will be found and coded as the other 20 interview samples being involved in the coding process. I chose participants' clear utterances about the use of particular metaphorical expressions as units of meaning, or units of analysis (Jamieson, 2016, p.8), considering my RQ 3 on the underlying factors triggering learners' metaphorical production in L2 writing. Participants' responses to the key interview, such as "I forgot" (2-S5-1) and "I did not think the explanations on this word at that time" (2-S9-1) were ignored in my process of coding and grouping interview data.

I coded the interview data on a line-by-line basis (Richards, 2003). Working within the grounded theory framework, I did not pre-determine the codes and categories of recall comments in terms of my targeted research question (Gass and Mackey, 2017). The codes, categories, or themes for developing the coding scheme were emerged from my raw interview data. In my research, "code is a label or tag that relates to a particular theme (otherwise called a category); a code therefore ascribes meaning to the coded text" (Jamieson, 2016, p.8). **Table 3.10** is a sample working sheet for coding the interview data in 2-S1-1's interview sample.

**Table 3.10 Sample working sheet for coding SRI data**

<b>Metaphorical expressions</b>	<b>2-S1-1's stimulated recall comments (units of meaning are underlined)</b>	<b>Stimulated recall type (codes: C#)</b>
healing financial disease	<p>1) <u>So I compared the problem to a kind of disease at that time and thought that it might be more vivid.</u> This is what I thought personally.</p> <p>2) in fact, at the very beginning, <u>I thought about the simplest way to express the meaning of solving problems, which equals to the meaning of "healing disease".</u></p> <p>3) In other words, the problem had been very severe in fact. <u>The word "healing" might be more able to attract people's attention at the beginning of my essay.</u> <u>It likes a hook.</u></p>	<p>C1: Compare one abstract concept to a more concrete one in order to achieve vividness</p> <p>C2: Compare one abstract concept to a more concrete one by looking for similarities</p> <p>C3: Attract readers' attention</p> <p>C2: Compare one abstract concept to a more concrete one by looking for similarities</p>
fertilize a college student	<p>1) <u>I remembered that teacher Wang said our English learners at university did not study or learn English in a simple way. The university did not educate students but fertilize.</u> It might often be used as fertilizing plants. In fact, in this process, I also used this word to express the meaning of training people, including the "family and society".</p> <p>2) I just used the word ("fertilize") for one time, so I may have the feeling to use it again. <u>When saying "培(pei)养(yang)" in Chinese, I came up with the word "fertilize".</u></p>	<p>C4: Use previously learned linguistic knowledge to facilitate a writing task</p> <p>C5: Use the first language as a base for understanding or producing the second language</p>
open eyesight	<p>1) We may see a lot but we may do not have a deep understanding of what we see. <u>So I thought that we should "open eyesight" at university and I put it as the first benefit in my essay.</u> As for the use of this phrase, I thought it might have relation with my personal campus life.</p>	<p>C4: Use previously learned linguistic knowledge to facilitate a writing task</p>
field	<p>1) Maybe, <u>"field" means a scope, and "career" can be a long period regarding time.</u> In this way, I could express both width and depth in a comprehensive way. This is what I thought at that time.</p>	<p>C4: Use previously learned linguistic knowledge to facilitate a writing task</p>

2-S1-1's added recall comments at the end of the interview	<p>1) [...] when I modified it at the last stage, I would change the word "aspect" into "field" and the "deal with" with "heal". I thought in a very simple and direct way at the beginning because of my L1. But later on, <u>in order to write in a better way, I would change some words and phrases purposely.</u></p> <p>2) It was because, to be frankly, in the British literature class lectured by Mr. Yang, including the poems and essays we are learning currently, <u>I can see those famous authors can use some native and artistic expressions.</u> I mean they will not to express a thing in a very simple way, though the thing itself is very simple.</p> <p>3) Alternatively, <u>a more vivid expression was used instead of talking about a concept directly. Possibly, on the basis of the characteristics of a thing, the rhetoric devices such as metaphor and symbolism were used, which could make a simple thing very interesting.</u></p>	<p>C6: Achieve better writing performance by revising</p> <p>C7: Achieve native and idiomatic expressions</p> <p>C8: Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing</p>
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### 3.3.1.3 Grouping codes into themes

The opening coding approach enabled me to constantly compare the similarities and differences among participants' comments on their metaphor use in argumentative writing during the whole process of coding recall data. So, I am able to group the explanations and comments that are similar at conceptual level into themes or categories by breaking down the interview data for analytical purpose (Corbin and Strauss, 1999; Chapman et. al, 2015).



**Table 3.11 Grouping codes into themes**

Groups of codes	From codes to themes at conceptual level (themes: T#)
C1: Compare one abstract concept to a more concrete one in order to achieve vividness C2: Compare one abstract concept to a more concrete one by looking for similarities	T1: Consciously thinking about metaphor in L1 (Littlemore and Low, 2006a)
C3: Attract readers' attention	T2: Communicative function of metaphor in argumentative writing (Hyland, 1999; Herrmann, 2013)
C4: Use previously learned linguistic knowledge to facilitate a writing task C5: Use the first language as a base for understanding or producing the second language	T3: L2 learning strategies (O'Malley and Chamot, 1990, p.120; Cohen, 2014)
C6: Achieve better writing performance by revising C7: Achieve native and idiomatic expressions	T4: Desire for a wider range of vocabulary and better writing performance in L2 (Hinkel, 2002; MacArthur, 2010; Hoang, 2015)
C8: Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing	T5: Metaphor awareness (Boers, 2000, 2004; Hoang, 2014)

**Table 3.11** shows how I applied this open coding approach to my research by further grouping similar codes in **Table 3.10** into conceptual themes or categories. In **Table 3.11**, five conceptual themes emerged from the 8 codes on recall comments given by 2-S1-1, in terms of the linguistic metaphors used in his writing sample "Increase Money in the Real Solution". Gass and Mackey (2017) writes, "in coding stimulated recall data, one often needs to be flexible, as the data can be unpredictable. Thus, coding schemes need to be prepared with the possibility of change and revision in mind" (Gass and Mackey, 2017, p.99).

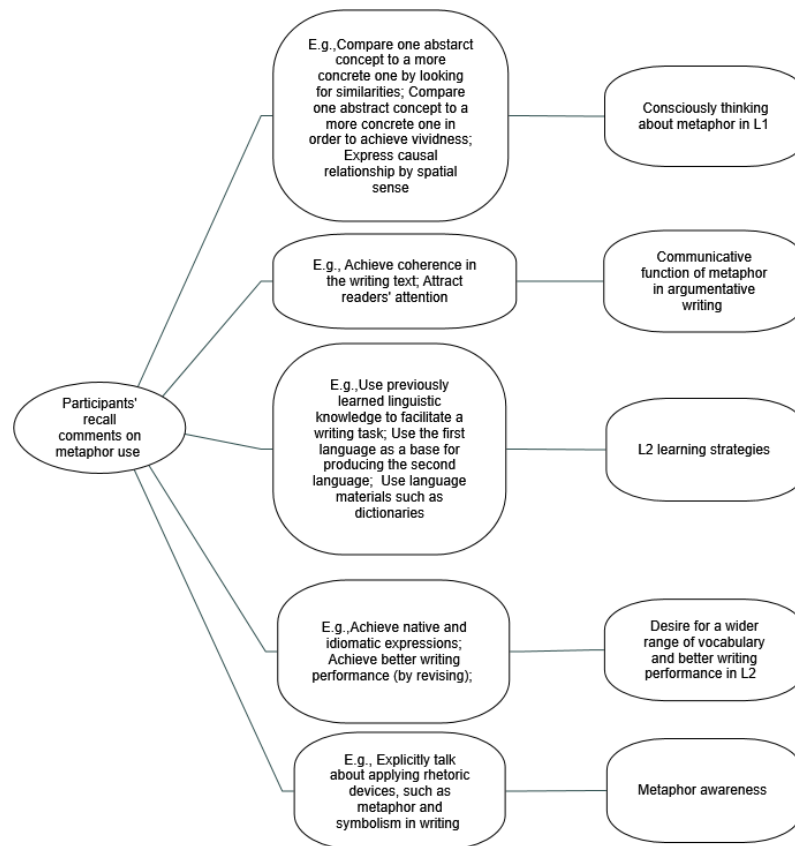
**Table 3.10** and **Table 3.11** demonstrate that participants could verbalize more than one recall comment related to different codes concerning one instance of linguistic metaphor, such as the two thought accounts on the use of "fertilize" and the three thought accounts on the use of metaphorical expression "healing"

financial disease". This enables me to code different thought accounts on one particular metaphorical expression into different codes and categories. The categories were not mutually exclusive, and my participants could cite more than one category of recall comments on one single metaphor use. For instance, the use of "healing financial disease" involves possible metaphoric thinking in L1, the communicative need of attracting readership's attention and the writer's metaphor awareness reflected in his added comments at the end of the interview. So, one thought account was assigned to one single code. Different thought accounts and codes on one single metaphor use might be assigned to different categories. Notes of decisions made were taken and recorded for keeping consistency and ensuring reliability of the coding process. In this data-driven coding process, some labels for codes and categories are still influenced by, as Clarke et al. (2015) argue, "a researcher's theoretical assumptions, disciplinary knowledge, prior research experience, and personal and political standpoints" (Clarke et al., 2015, p.83).

#### **3.3.1.4 Developing coding scheme**

I then piloted these codes and themes with the recall data in another four interview transcripts collected during the first round of interview data collection on 22/03/2018 and 23/03/2018, aiming at developing a more inclusive and representative categorization scheme. Only when the pilot with more interview samples had been completed, revised decisions about categorization could be made (Richards, 2003). I was able to develop a coding scheme by involving recall comments in another four interview transcripts. I tabulated participants' recall comments in a word document, and "wrote the codes and the rationale for the coding decision in adjacent columns" (Jamieson, 2016, p.8). Thought accounts in transcript extracts "were highlighted in different colours to illustrate related themes visually" (Jamieson, 2016, p.8). Both the Microsoft Word software and the Nvivo 12 Plus software were used in the coding and analysing process, for the convenience of revisiting SRI data, refining codes and themes, and sorting recall comments into different codes and themes. The word document for sorting out recall comments was much helpful when unexpected issues happened to the NVivo 12 Plus software. **Appendix 17** lists the

screenshot of SRI data coded in NVivo12 Plus software. **Figure 3.5** shows the revised coding scheme.



**Figure 3.5: Revised coding scheme for analysing SRI data**

The five conceptual themes emerged from 2-S1-1's interview sample:

1. Consciously thinking about metaphor in L1 (Littlemore and Low, 2006a)
2. Communicative function of metaphor in argumentative writing (Hyland, 1999; Herrmann, 2013)
3. L2 learning strategies (O'Malley and Chamot, 1990, p.120; Cohen, 2014)
4. Desire for a wider range of vocabulary and better writing performance in L2 (Hinkel, 2002; MacArthur, 2010; Hoang, 2015)
5. Metaphor awareness (Boers, 2000)

were demonstrated to be able to cover the new recall comments and new codes emerged from another four interview samples with four participants labelled as 1-S1-1, 2-S5-1, 2-S9-1, 2-S1-1, and 1-S12-1. To summarize, the procedure of analysing interview data is, first, the recall comments in 2-S1-1's interview transcript were examined thoroughly and then the explanations assigned to 8 codes were grouped into 5 themes by looking for similarities; second, the preliminary coding scheme developed based on these codes and themes were

piloted with another four interview transcripts with 1-S1-1, 1-S12-1, 2-S5-1 and 2-S9-1 to develop an inclusive coding scheme; third, the revised coding scheme (see **Figure 3.5**) was developed and then used to code the remaining part of interview data. This opening and flexible approach is grounded on the interview data and can enable new recall data to be grouped into possible new codes and themes, which avoids missing data and introducing bias (Jamieson, 2016; Taylor et al., 2015).

### **3.3.2 Trustworthiness and inter-rater reliability**

As noted in **Section 3.1.2**, during the process of collecting SRI data, I controlled the time interval between the recall and event as practical as possible and used the students' original writing copies as prompts and stimulus during the interview sessions. I also used the prepared interview protocol to keep all the interviews on the right track. After the first round of both text and interview data collection, I noted ways to reduce the distractions for interviewees during the interview. The interviewees were not interviewed more than once to avoid purposeful recall comments for my research purpose. My participants did not get any extra credits to their academic performance during the whole semester. I did not give the names of the students who had participated in my research to their teachers. In this way, the possibility that the students might have tried to please me because of academic pressure could be minimized. All participation was voluntary, including offering e-copies of writing samples and participating in the follow-up interviews.

Reliability was considered throughout: "the issue of inter-rater reliability must be considered in relation to the transcription and coding data obtained through the stimulated recall" (Gass and Mackey, 2017, p. 77). The interview samples were transcribed verbatim, both from audio-recorded data to text data and from Chinese to English, and with consistent conventions as shown in **Appendix 16**. After I finished the coding of recall patterns and categories in the 21 interview transcripts, I followed Gass and Mackey (2017)'s practice by inviting another Chinese PhD researcher in my department who is experienced in coding interview data to act as an independent co-rater and to check the reliability of my coding scheme. My colleague had not been present during my interview

sessions and has background knowledge of Chinese English learners by graduating from the Beijing Language and Culture University as an English major. She is a different co-rater from the one who helped identify metaphors in my research.

As shown in **Appendix 18**, the recall comments were tabulated in an excel document, with writing topic, participants' label, related linguistic metaphors, recall comments and possible codes and categories in adjacent columns. My third research question and the initial coding scheme for my co-rater's reference are presented in **Appendix 19**. My co-rater worked independently on categorizing 24 instances of recall comments produced by 8 participants involved in SRI data collection procedure. Before discussion, 19 out of the 24 recall comments were agreed, indicating an acceptable agreement rate at 79%. Voice calls were held between us to achieve agreements on controversially cases. In this way, a triangulation can be provided for my interview data analysis.

My co-rater held different opinions on the conceptual theme "L2 learning objectives" in my initial coding. On the basis of her research interests in assessment, she thought that the concept of learning objectives has a broader sense including language skills like listening, speaking, reading, and writing. The recall comments related to codes like "achieve better writing performance (by revising)" and "achieve native and idiomatic expressions" could also be put into the category of communication needs. To avoid overlapping and clear puzzles, I refined the theme "L2 learning objectives" as "Desire for wider a range of vocabulary and better writing performance in L2" on the basis of the SRI data. After discussion, the controversial cases were agreed. "Desire for a wider range of vocabulary and better writing performance in L2" and "Communicative functions of metaphor in argumentative writing" were classified as two independent themes. For instance, 2-S1-1's utterance "But later on, in order to write in a better way, I would change some words and phrases purposely" was added to the theme of "Desire for a wider range of vocabulary and better writing performance in L2". The theme of "Communicative functions of metaphor in argumentative writing" which is about arousing attention, achieving coherence, summarizing, and evaluating is related to the literature

on functions of metaphor explained in Chapter two: Literature review. The agreed and revised coding scheme has been presented in **Figure 3.5**. My co-rater helped to ensure that my own interests did not bias my transcription and interpretation, and to make the category labels as accurate as possible.

### **3.3.3 Ethical considerations**

All the electronic data in my research including the electronic copies of argumentative writing data, the audio-recorded interview data, the confirmation letter for the permission to reach my participants, the email exchanges for recruiting interview participants and the consent forms signed by my participants were sorted in a safe place for research purpose only. The personal information of my participants, such as their real names and age, is not used for recognizing participants' identities but for generating specific background information about participants for my research. The real names and identities of my participants will not be released to anyone else unless they indicated on the consent forms that they are willing to be recognized. As described in the above data collection sections, my participants only need to offer the e-copies of their writing assignments and spare some of their leisure time to participate in a not very long interview. My research does not have any influence on, and therefore could not harm, my participants' academic future.

### **3.4 Summary**

In this chapter, I described my data collection procedure and the methods for analysing written texts data and the stimulated recall interview data, with detailed demonstrations showing how these methods can be applied practically to my research data. The challenges, trustworthiness, and adjustments that I had made during the data collection and analysis procedure are also explained. Some of the preliminary results generated from the demonstration procedure, such as the conventional and unconventional metaphor use, the functions of metaphor clusters by establishing possible systematic metaphors, and participants' explicit metaphor awareness reported in the stimulated recall interviews, have shown that the research design and corresponding methods are workable for tackling my research questions and generating useful

pedagogical implications. In the following chapters, the findings from my writing data and interview data will be presented. In Chapter 4, the metaphor use and functions in my participants' English writing will be described at length; and the participants' perceptions of their metaphor use during the writing process will be presented in Chapter 5.

## Chapter 4 Findings from metaphor analysis of written texts

This chapter presents the findings from metaphor analysis of written texts, concerning my first research question (RQ 1): In what ways do Chinese English majors use metaphors in their argumentative writing? and second research question (RQ 2): What are the communicative functions of extended metaphors in Chinese English majors' argumentative writing?

### 4.1 The use of linguistic metaphors in argumentative texts

#### 4.1.1 Quantitative evidence of linguistic metaphors

**Section 4.1.1** presents the results on metaphorical density in my written data in terms of different writing topics, which answers RQ 1a: How frequently do Chinese English majors use linguistic metaphors in their argumentative writing? As mentioned in Chapter 3, I collected 134 argumentative writing samples from my 39 participants on four different dates. I would like to repeat **Table 3.3** here, for the ease of your reading.

**Table 3.3 Argumentative writing samples collected and analyzed**

Topics	Number of texts	Number of words	Average word length
<b>Writing themes taken from the writing textbook used in Teacher A's module</b>			
Spend and Save	38	13,532	356
Campus Love—Pros and Cons	34	13,511	397
Pop Icons and Heroes	26	11,688	450
<b>Writing theme in Teacher B's TEM-4 writing training session</b>			
Will Online Medical Treatment Bans help?	36	8,958	249
<b>Total</b>	<b>134</b>	<b>47,689</b>	<b>356</b>

Of the 47,689 words, a total number of 4,768 metaphorically used words were identified from my written data concerning four writing topics, which contributed to contributed to the realization of 4,706 instances of linguistic metaphors. I



summarize the number of identified linguistic metaphors and the metaphorical density in **Table 4.1**.

**Table 4.1 Metaphor density in the written data**

Writing topics	Number of linguistic metaphors	Number of metaphorically used words	Total word length	% of total words
Spend and Save	1,174	1,191	13,532	8.88
Campus Love—Pros and Cons	1,563	1,591	13,511	11.77
Pop Icons and Heroes	1,198	1,211	11,688	10.36
Will Online Medical Treatment Bans help?	770	775	8,958	8.65
<b>In total</b>	<b>4,706</b>	<b>4,768</b>	<b>47,689</b>	<b>10.00</b>

The reason why the word count of metaphorically used words (4,768) is higher than the count of linguistic metaphors (4,706) is that some of the linguistic metaphors were multiword metaphors. Examples of multiword metaphors including phrasal verbs, polywords and spaced compounds will be given in **Section 4.1.2: Grammatical categories of linguistic metaphors**. **Table 4.1** shows that the overall metaphor density was about 10%. This means that the overall metaphor density in writing produced by my group of intermediate Chinese EFL learners is somewhat lower than prior research on metaphor use in learners' written texts noted in Chapter 2: Literature review. For instance, Chapetón (2010) gives a figure of 18% for the metaphor density in Spanish EFL learners' writing. Nacey (2013) found 18% for the metaphor density in higher intermediate and advanced Norwegian EFL learners' writing and 16.7% in British native English learners' writing. Hoang (2015) found 13.15% in Vietnam EFL learners' writing. Meanwhile, the overall metaphor density (10%) is somewhat in between those in Level B2 Greek EFL learners' writing (9.9%) and in Level B2 German EFL learners' writing (11.62%) under the English language proficiency levels described by the Common European Framework of Reference for Languages (Littlemore et al., 2014). This rough comparison with the findings from previous investigations on metaphor use in learners' L2 writing

shows that my research is comparable to prior research to some extent. However, metaphor counts can vary because the methods of identifying metaphors may differ.

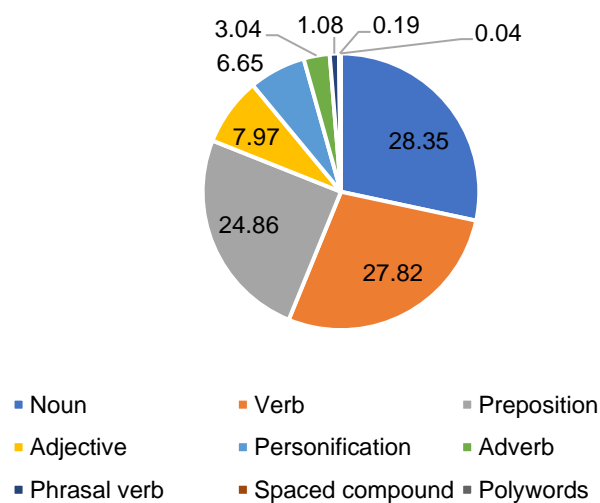
The density of linguistic metaphors identified from writing samples on the topic “Will Online Medical Treatment Bans help?” were the lowest (8.65%). The possible reasons are: first, this set of text data were written and collected in class and the writing time had been strictly controlled, leaving less time for consideration and rewording. Second this topic on whether online medical treatment bans will be helpful for people and society may be less familiar to students compared with the other three topics such as love, money, and icon worship. Also, as young adults, they may have stronger feelings about the other three topics, which perhaps touch their lives more immediately than online medical treatments.

#### **4.1.2 Grammatical categories of linguistic metaphors**

Linguistic metaphors were further analyzed into grammatical categories, according to the way a linguistic metaphor was used in a sentence (Goatly, 2011; Chapetón-Castro and Verdaguer-Clavera, 2012; Krennmayr, 2017). This answers RQ 1b: What are the grammatical categories of linguistic metaphors in terms of word class and linguistic form? The 4,706 instances of linguistic metaphors were classified as: 1) single word instances of linguistic metaphors “according to the word class to which the vehicle terms belong” (Goatly, 2011, p.80), including noun, verb, adjective, preposition and adverb; 2) multiword instances of linguistic metaphors according to particular “linguistic forms arise from the metaphor identification procedure” (Pragglejaz Group, 2007, p.25), including phrasal verbs, polywords and spaced compounds. Some of the verbs and nouns that personify the non-human concepts into human ones were categorized as personification metaphors for the ease of metaphor identification and categorization. The results of grammatical categories of linguistic metaphors are shown in **Table 4.2**.

**Table 4.2 Grammatical categories of linguistic metaphors**

Grammatical category	Number	% of total metaphors
<b>Single word</b>		
Noun	1,334	28.35
Verb	1,309	27.82
Preposition	1,170	24.86
Adjective	375	7.97
Adverb	143	3.04
Personification	313	6.65
<b>Multiword</b>		
Phrasal verb	51	1.08
Spaced compound	10	0.21
Ploywords	1	0.02
<b>In total</b>	<b>N=4,706</b>	<b>100</b>

**Figure 4.1 Distribution of linguistic metaphors**

**Figure 4.1** gives a more visualized illustration of the general distribution of linguistic metaphors across grammatical categories. **Table 4.2** and **Figure 4.1** shows that nouns (28.35%), verbs (27.82%), and prepositions (24.86%) were the most frequent grammatical categories through which linguistic metaphors were expressed and realized. This is in line with the results obtained from some prior metaphor research, in which the orders of these three major word classes

may differ because of different metaphor identification methods and frequencies (Chapetón, 2010; Krennmayr, 2011; Dorst, 2011; Herrmann, 2013). The possible reason was that nouns and verbs are content words and easier to trigger imaginable and more concrete images than other word classes (Pragglejaz Group, 2007; Goatly, 2011); and the spatial sense of the prepositions (e.g., in, on) are highly conventionalized in English language (Cameron, 2003; Nacey, 2013).

I also used Sketch Engine to build my 47,689-word text corpus. I directly pasted my 134 argumentative writing texts into Sketch Engine. After all the written data have been uploaded, all the words can be automatically tagged for part of speech. As mentioned in **Section 3.2.7**, among the seven major word classes, conjunctions and determiners are ignored in terms of my current research focus. Numbers of the five major word class, i.e., parts of speech, in the corpus of argumentative writing by Chinese English majors are 11,980 nouns, 8,530 verbs, 5,573 prepositions, 4,900 adjectives and 3,374 adverbs, by using the 'Wordlist' function in Sketch Engine. The proportions of how often each part of speech is used in metaphorical expression are shown in **Table 4.3**.

**Table 4.3 Proportions of metaphorically used words within each word class in Chinese English learners' argumentative writing**

Word class	Numbers in total	Numbers of metaphorically used ones	% of total numbers
Noun	11,980	1,334	11.13
Verb	8,530	1,309	15.34
Preposition	5,573	1,170	20.99
Adjective	4,900	375	7.65
Adverb	3,374	143	4.23

Figures in **Table 4.3** show that the distribution of metaphorically used words varies among word classes. This is consistent with what Herrmann (2013) and Nacey (2013) have found in English texts produced by both native English speakers and non-native English speakers, and across different registers (e.g., in academic texts, news, fiction and conversation). Similar to Nacey's (2013)

findings from written texts produced by advanced Norwegian learners of English, prepositions (20.99%) are also the most likely to be used metaphorically by my participants, concerning the total number of prepositions (5,573) and the number of metaphorically used prepositions (1,170) in my text corpus. As Nacey (2013) writes, “abstract relations are frequently expressed through mappings from the source domain of space” (Nacey, 2013, p.147). Examples are ‘in’ in “in other words (1-S1-1)” and ‘from’ in “from two different aspects (1-S7-2)”. Verbs (15.34%) are the second most metaphorical word class in my corpus of Chinese English majors’ argumentative writing.

**Table 4.2** shows that among all the identified linguistic metaphors, noun metaphors (28.35%) have the highest proportion. As shown in **Table 4.3**, nouns (11.13%) are not the word class, which is most likely to be used metaphorically, concerning the total number of nouns (11,980) and the number of metaphorically used nouns (1,334) in my text corpus. This finding is largely different with my initial assumption that nouns are the most likely to be used as metaphorical by my participants in their L2 writing. Following nouns (11.13%), adjectives (7.65%) are the fourth most metaphorical word class, and adverbs (4.23%) are the fifth. In the following paragraphs, type-token ratios across the five major word classes, type-token ratios across word classes and writing topics, and examples of linguistic metaphors expressed through the five major word classes are illustrated for further describing the grammatical categories of linguistic metaphors in my written data.

To examine to what extent linguistic metaphors were used repeatedly, metaphoric lexical variation was measured by calculating type-token ratios (TTR) (Biber, 1988; Williamson, 2009). The 314 instances of the delexical verb metaphors (e.g., having romantic love, making a romantic relationship) were omitted from the verb category (1,309 instances). The reason is that compared with content words, delexical verbs are less relevant to my research focus. “Metaphoric type-token ratio—mTTR” (Koller 2006; Chapetón-Castro and Verdaguer-Clavera, 2012, p.166) across the five major word classes: noun, verb, preposition, adjective and adverb, is summarized in **Table 4.4**.

**Table 4.4 Type-token ratios across major word classes**

<b>Word class</b>	<b>Noun</b>	<b>Verb (excluding delexical verbs)</b>	<b>Preposition</b>	<b>Adjective</b>	<b>Adverb</b>	<b>Total</b>
Metaphor types	256	277	20	111	15	679
Metaphor tokens	1,334	995	1,170	375	143	4,017
mTTR (%)	19.19	27.84	1.71	29.60	10.49	16.90

**Note:** The relationship between the number of metaphor types and the number of metaphor tokens is known as the mTTR.  $mTTR = (\text{number of metaphor types} / \text{number of metaphor tokens}) * 100$

As listed in **Table 4.4**, by dividing metaphor tokens into the same metaphor type within each word class, the overall metaphoric type-token ratio is calculated as 16.90%. This indicates lower lexical variation concerning linguistic metaphors used by my participants, compared with that of 38% in Chapetón-Castro and Verdaguer-Clavera's (2012) research on metaphors in 5601-word of 11 argumentative texts produced by upper-intermediate Spanish EFL learners, extracted from the International Corpus of Learner English (ICLE). By now, there is no fully comparable research in this regard. My hypothesis is that the lower metaphoric lexical variation may be influenced by participants' relatively restricted vocabulary in L2, their metaphor awareness and the writing topics. I have no evidence in support of this hypothesis, which would need further research to investigate. The metaphoric type-token ratios across both major word classes and writing topics are summarized in **Table 4.5**.

**Table 4.5 Type-token ratios across writing topics and word classes**

		Word classes				
		Noun	Verb	Preposition	Adjective	Adverb
<b>Writing topics</b>						
Spend and Save	Metaphor types	101	106	18	30	11
	Metaphor tokens	308	248	299	75	35
	mTTR (%)	32.79	42.74	6.02	40	31.42
Campus Love—Pros and Cons	Metaphor types	134	208	16	71	9
	Metaphor tokens	390	372	416	154	33
	mTTR (%)	34.36	55.91	3.85	52.99	27.27
Pop Icons and Heroes	Metaphor types	105	93	15	40	9
	Metaphor tokens	451	236	269	84	37
	mTTR (%)	23.28	39.40	5.58	47.62	24.32
Will Online Medical Treatment Bans help?	Metaphor types	59	54	16	32	4
	Metaphor tokens	185	139	186	62	38
	mTTR (%)	31.89	38.85	8.60	51.61	10.53

In **Table 4.5**, metaphoric type-token ratios for noun metaphors, verbs metaphors, adjective metaphors, and adverb metaphors under the writing topic “Campus Love—Pros and Cons” are higher than most of those calculated under the other three topics. Biber (1988) writes, “a high type-token ratio results from the use of many different lexical items in a text, and this more varied vocabulary reflects extensive use of words that have very specific meanings” (Biber, 1988, p.104). It seems that the writing topic “Campus Love—Pros has the potential to trigger more varied metaphor use, with the realization of possible communicative functions in the argumentative writing as documented in Chapter 2: Literature review. The following are examples of linguistic metaphors (underlined), expressed through nouns, prepositions, verbs, adjectives, and adverbs extracted from my written data under different writing topics. Necessary discussions are provided.

## Noun

(1) Icon is like a drug; it only brings temporary happiness.

(2-S8-4, Icons Are Drugs)

(2) If life is compared to a war, saving money...

(1-S20-1, The Importance of Saving Money)

Similar to what has been found in news texts (Krennmayr, 2011, 2017) and academic texts (Herrmann, 2013), “metaphor is needed for information packaging of complex content, textual cohesion and organization of arguments” (Krennmayr, 2017, p.175) in Chinese EFL learners’ argumentative essays. In the contexts of examples (1) and (2), the metaphorical nouns “drug/drugs” and “war” have referential meanings where abstract concepts—“icons” and “life” are referred as more concrete ones—“drugs” and “war”, by way of direct comparisons. This kind of possible deliberate metaphors expressed through nouns have also be found in news texts (Krennmayr, 2011) and classroom talk (Cameron, 2008), which may be the supporting evidence of the relative force, ideational and evaluative function of noun metaphors in argumentative texts (Goatly, 1997, 2011; Deigan et al, 2013; Wagemans, 2016). Looking at the metaphorical nouns in my written data, the vague nouns “way/ways” are the most repeated nouns, occurring 104 times. In argumentative essays, the “way/ways” were often metaphorically used to organize and discuss arguments in different angles in terms of physical paths or directions, such as “two ways to analyse the reason” (1-S15-4), “the most practical way is to make a budget” (2-S3-2) and “the most effective way to fix a broken budget is...”(2-S7-1). Another type of frequently used vague nouns are “thing/things”, occurring 59 times, such as “breakup for a little thing” (1-S15-4), “love is one of the best things” (1-S20-2) and “do many meaningful things together” (2-S3-1). “Thing/thins” were metaphorically used to refer to abstract life in terms of concrete objects. Metaphorical vague nouns as such enabled my participants to convey general ideas and information when they “lacked more advanced and sophisticated vocabulary to express their ideas” (Hinkel, 2002, p.83). Hinkel has found that non-native English writers “used vague nouns practically two or three times more frequently than native English writers” (Hinkel, 2002, p.83). My participants did not use metaphorical vague nouns in writing as many as



what has been found by Hoang (2015) in her research. It is still a point that deserves my attention for future research since too many vague nouns in writing may make the writing informal (Hoang, 2015). The metaphorical nouns “icons/icon” (occurring 143 times), “idol/idols” (occurring 42 times) and “star/stars” (occurring 34 times) are three frequently reused nouns under the topic of “Pop Icons and Heroes”, leading to the lowest metaphorical type-token ratio concerning the use of metaphorical nouns across writing topics.

### Verb

(3) ...are the three important factors to push the economy forward...  
(2-S6-1, Spending Encouraged, Economy Boosted)

(4) ...plan for your future, and fight for it together.  
(1-S10-4, Campus Love)

In **Table 4.5**, the relatively high metaphoric type-token ratios of verbs across four writing topics indicated that varied metaphorical content verbs were used to refer abstract process in terms of physical acts (e.g., “push”, “boosted” and “fight” in examples 3 and 4) and events in my writing data. The more physical or tangible material process represented by the metaphorical content verbs may achieve possible persuasive power when “justifying an action or recommendation” (Goatly, 2011, p.158) in the argumentative texts. In my written data, metaphorical delexical verbs and personification accounted for a high proportion (620 out of 1309 instances) in the general calculation of the second highest frequency of metaphorical verbs in **Table 4.2**. Not all the personification metaphor were expressed through verbs. In total, 6 nouns and 1 adjective which had personified the non-human agents as human ones were identified as personification metaphor. As noted above, delexical verbs were ignored in my research in the analysis stage. Personification metaphors were grouped as an individual category. Examples of personification metaphors expressed through less typical verbs, nouns and adjective are “medical treatment bans will probably help people”(1-S8-1), “money is good servant” (1-S5-1) and “it is stupid of NHFPC to announce these bans” (1-S13-3). Among the 313 instances of personification, 107 instances were expressed through the verb “help”, which may be influenced by the writing topic “Will Online Medical

Treatment Bans help?”. The personification metaphors in students’ argumentative texts were often delexicalized (Krennmayr, 2017) and were intertwined with metonymy (Littlemore et al., 2014).

### Preposition

I found that metaphorically used preposition “in” is the most repeated metaphors, which occurred 561 times among the 4,706 instances of linguistic metaphors. This is consistent with the results reported by Cameron (2003) on metaphors in classroom talk and Chapetón-Castro and Verdaguer-Clavera (2012) on metaphors in native, non-native, and expert writing. The lowest metaphoric type-token ratios in **Table 4.4** (1.71%) and in **Table 4.5** (6.02%, 3.85%, 5.58%, 8.60%), realized by the least metaphor types within and across the four writing topics, also indicate little lexical variation concerning the highly conventional use of prepositions. In example (5) and (6), the prepositions “in” are underlined and used in metaphorical sense.

(5) ...budgeting money can be expressed in two different perspectives.

(1-S7-1, Money Management for Both Present and the Future)

(6) In many cases, college students who fall in love...

(1-S13-2, Campus Love: Romantic but Unnecessary)

Herrmann (2013) writes, “many prepositions with the prominent textual function, i.e., packaging information by connecting linguistic structures, in academic prose are not used in their spatial basic sense but in their metaphorical senses” (Herrmann, 2013, p.183). The use prepositions “in” in example (5) and (6) refers to the abstract concepts, such as cases or situations involving a person or thing, perspectives of thinking about somethings, and campus love, in terms of physical locations or containers. The metaphorical prepositions “in” highlight the aspects of outlining and developing arguments on certain grounds in terms of carrying out activities within a contained entity or physical location (Tyler and Evans, 2003). Conventional metaphorical prepositions in my written data also serve to achieve internal coherence and “integrate high amounts of information into a text” (Biber, 1988, p.104; Herrmann, 2013).

## Adjective and Adverb

- (7) ...people's awareness of the harms about online medical treatment is weak.  
(1-S5-3, Give the Bans Some Time)
- (8) ...get through the sticky patch as rapidly as possible...  
(1-S12-1, Financial Problems? Increase Money In)
- (9) ...sell some books for courses are far cheaper than others.  
(1-S8-2, Spending and Saving)
- (10) ...college students love blindly...  
(1-S4-4, Loss of Love—a special growth)

The general frequencies of metaphorical adjectives (375 instances) and adverbs (143 instances) calculated in my written data were much less compared with metaphorical nouns, verbs, and prepositions. The metaphoric type-token ratios of adjectives across the four writing topics indicated that metaphorical adjectives produced by my participants had great lexical variation. In examples (7) to (10) above, my participants were able to use metaphorical adjectives and adverbs to “highlight salience and write emotively about topics that they feel strongly about” (Littlemore et al., 2014, p.134). For instance, lacking awareness was referred to the lack of physical strength (example 7). Difficult financial situations were explained as sticky substances and objects (example 8). The abstract sense of degree was expressed through physical depth (example 9). The wrong ways of love were referred to the physical act of without noticing what is around people (example 10). The first and second most reused adverbs in my written data were “still” (occurring 50 times) and “far” (occurring 33 times). The metaphoricity of the adverb “still” was realized by comparing its contextual meaning as an adverb “emphasizing that a particular situation has not completely ended or changed” (sense 1a) to the more basic meaning when it is an adjective “not moving” (sense 1) codified in the online Macmillan Dictionary. By crossing word class, the adverb “still” was marked as metaphorical and agreed with my co-rater in the metaphor identification procedure, such as in the example “online medical treatments still enjoy popularity” (1-S2-3).

### Phrasal verbs, spaced compounds and polywords

As shown in **Table 4.2**, I also found 62 instances of multiword linguistic metaphors in my written data, which are phrasal verbs, spaced compounds and polywords. The following are examples of each grammatical category.

(11) ...avoid making wrong decisions and build up a good habit  
(2-S13-1, Budget is Necessary for college Students)

(12) ...college students who are in the turning point of their lives  
(1-S1-2, Campus Love Plays a Positive Role on Campus)

(13) Many a little makes a mickle.  
(2-S9-1, Thrift Never Out of Date)

Similar to what have been noted about nouns and verbs above, metaphorical phrasal verbs, spaced compounds and polywords were often used in referential senses in students' argumentative essays, to achieve possible ideational and textual functions in texts. In example (11), the material process of "making a machine, vehicle, or other structure by putting its parts together" (online Macmillan Dictionary, sense 1) was triggered to understand the abstract process of developing a habit. In example (12), the spaced compound noun "turning point" was used metaphorically by referring an abstract critical point in people's life to the physical direction of motion. Example (13) is the only one instance of metaphorical polywords found in my research. As mentioned in **Section 3.2.3**, "a little" in the text metaphorically referred to physical actions that are not of great importance. The abstract degree of importance was understood in terms of more concrete quantity. The different grammatical categories of linguistic metaphors have served to achieve varied communicative functions in students' argumentative texts, including re-conceptualization, evaluation, persuasion, and textual cohesion. The communicative functions of linguistic metaphors when used in clusters in my written data will be presented and analysed in **Section 4.2**. Before moving onto the function analysis of extended metaphors, the degree of conventionality of linguistic metaphors is presented and discussed in **Section 4.1.3**.

### 4.1.3 Conventional and unconventional linguistic metaphors

The categorization of conventional and unconventional linguistic metaphors in my written data answers my RQ 1c: How do Chinese English majors use linguistic metaphors conventionally or unconventionally? As mentioned in Chapter 2: Literature review, L2 learners may produce both communicatively successful and communicatively less successful metaphors when fulfilling their communicative needs in English (MacArthur, 2010; Nacey, 2013; Xu and Tian, 2012; Littlemore et al., 2014; Wang and Wang, 2019). L1 influence, deliberateness and relatively restricted L2 vocabulary may trigger both conventional and unconventional metaphor use. The interaction of the five main parameters: conventionality, L1 influence, deliberateness, novelty, and creativity is considered when developing my operational typology of conventional and unconventional metaphors. I summarized 2 subcategories of conventional metaphors and 3 subcategories of unconventional metaphors by working within the framework developed from literature (shown in **Table 2.1**), and following the procedure demonstrated in **Section 3.2.8**.

#### 1) Conventional metaphors occurred in ‘just the way to say it’

- (14) In my point of view, “A fool” here is not a person who is physically...  
(1-S18-1, Learning to Budget for College Students Benefits Their Future)
- (15) From my perspective, it is better for college students to...  
(1-S17-2, Waiting is Better than The Initiative)
- (16) At the same time, it takes the endeavour of...  
(2-S6-2, Say “No” to Campus Romances)
- (17) On one hand, your grades... On the other hand, if you are...  
(1-S9-4, Study Hard and Wait Patiently for the Right Person)

My participants can be treated as English learners who do not lack the knowledge of organizing a holistic and comprehensible argumentative text in L2. Important rhetorical moves, such as proposition in the thesis stage, claim and support in the argument stage, and consolidation in the conclusion stage, argued and illustrated by Hyland (1990) could be easily found in my participants’

writing samples (Hyland, 2004; Jiang and Hyland, 2017; Querol and Madrunio, 2020). In examples (14) to (17), my participants showed their ability to use highly conventional metaphors, or ‘just the way to say it’ (Cameron, 2003) metaphors, to introduce and support personal viewpoints and to wrap different arguments into a coherent whole (Semino, 2008; Shen, 2015; Gao, 2016). For example, “on one hand...on the other hand” in example (17) was used to link ideas and signpost the direction of argument.

## **2) Conventional metaphors with positive L1 transfer and deliberateness**

(18) College is an incubator where we nurture ourselves...  
(1-S12-1, Financial Problems? Increase Money In!)

(19) Their feelings will be a ticking time bomb which will lead to terrible consequences when it blows up. (2-S7-2, Campus Love)

(20) Love is like a fire...  
(2-S28-2, The Positive and Negative Effects of Love on Campus)

(21) ...the invisual [invisible] hand of the market.  
(1-S2-3, Online Medical Treatment Bans Are Helpful)

## **3) Creative metaphors with positive L1 transfer and deliberateness**

(22) If life is compared to a war, saving money is like to storage [store] bullets.  
(1-S20-1, The Importance of Saving Money)

(23) Pursuing romantic love is the instinct of human, just like hungry people find food. (2-S1-2, Wherever It Is, Love Is an Eternal Theme for Human)

(24) Love needs courage, I recommend all of my peer to pursue it bravely and actively. Only when flowers bloom will the bees come to gather honey.  
(2-S5-2, Make a Cross)

(25) ... love is like the petrol to a car, the battery to a player.  
(2-S4-4, More Than Love)

Despite those highly conventional metaphors, I found some metaphors that were deliberately used to “invite the readership to take a new perspective on

the target topic within specific communicative contexts” (Fedriani, 2020, p.33), “by making the readership look at the topic from a different conceptual domain or a different area of experience” (Steen, 2008, p.222; Deignan et al., 2013, p.22). Reijnerse (2017) argues, “deliberate metaphors are often signalled by textual markers, which explicitly index a comparison being drawn between two domains [the target domain and vehicle domain of a metaphor]” (Reijnerse, 2017, p.76; Reijnerse et al., 2018). For example, the textual markers “just like” an “is like” in examples (20), (22), (23) and (25) are metaphor signals or flags which set up similes. The “A=B” form in examples (18) and (19), and the semantic extension through metaphorical comparison in examples (21) and (24) are also useful criteria in deciding deliberateness (Krennmayr, 2011). Some deliberate metaphors are conventional, as in examples (18) to (21). In example (18), the target topic “college” was strategically compared to a more concrete “incubator”, which metaphorically refers to “a breeder where produces or originates” (online Oxford Dictionary, sense 4). In example (19), the target topic “feelings” was compared to a “ticking time bomb”, which metaphorically refers to “a thing regarded as likely to lead to or cause a sudden catastrophic event at some point in the future” (online Oxford Dictionary, sense 1b). This deliberateness realized by the “A=B” form and the semantic extension through metaphorical comparison may add evaluative power to the negative impact of campus love within the specific writing text. Example (20) is a conventional simile. Example (21) “invisible hand” is a fixed metaphorical expression from economic theory.

Some deliberate metaphors are creative (Reijnerse, 2017). Linguistic creativity involves “the creation of new linguistic forms and expressions or the use of existing forms and expressions in a non-conventional way” (Pitzl, 2018, p.34). A creative metaphor use may be recognized through novelty in linguistic forms of metaphors, the deliberateness of conceptual shift in perspective and the intended functions of metaphors in specific writing contexts (Kövecses, 2010b; Birdsell, 2018). For instance, by using the concordance tool in Sketch Engine, no citation of the metaphorical expression “store bullets” in example (22) could be found in the reference corpus OECv2. Taking the conventional deliberate metaphor “life is war” in the same sentence into consideration, the metaphorical

sense of “store bullets” could be understood: the target topic of saving money in life was expressed in terms of preparing bullets for a war. The conceptual shift in perspective by “thinking about the topic in terms of a different area of experience” (Deignan, et al., 2013, p.22) was thus achieved. The innovative and creative comparisons between “pursuing love” and “finding food” in example (23), “human beings” and “flowers and bees” in example (24), “love” and “petrol and battery” in example (25) were recognized and interpreted as deliberate metaphor use in the same way. The unconventional creative metaphors with signalled deliberateness found in my written data often appeared to rely on metaphorical analogies. Intended communicative function might be justifying arguments and achieving persuasive power in the writing contexts (Goatly, 1997, 2011). My participants’ intentions of using some conventional and unconventional deliberate metaphors are likely to be evident in the course of follow-up stimulated recall interviews. For instance, 2-S4-4 commented in the interview that the use of the simile “love is like the petrol to a car, the battery to a player” was for the purpose of supporting her viewpoint on the positive role of campus love in a more detailed way. More information about the findings of interviews is provided in Chapter 5.

Positive L1 transfer may also interact with the conventionality, creativity, and deliberateness of metaphors in my written data. The lexicalization of positive conceptual transfer (Nacey, 2013; Türker, 2016), which involves conceptual mapping is reflected in in both conventional and unconventional deliberate metaphors. For instance, the conceptual metaphors LOVE IS FIRE in example (20) and LOVE IS FOOD in example (23) are shared in both Chinese and English. Despite the cross-linguistic differences between Chinese and English, the positive conceptual transfer of L1 could be reflected in my written data. The “incubator” metaphor in example (18), “ticking time bomb” metaphor in example (19), and “hand” metaphor in example (21) are evidence of positive transfer of L1 involving both conceptual mapping and lexical correspondence between Chinese and English. Findings of my participants’ comments on L1 influence and possible metaphoric thinking in L1, which may contribute to creative metaphor use and possible errors, are provided in Chapter 5.



#### 4) Novel metaphors with negative L1 transfer (and deliberateness)

(26) ... three carriages of the economy are consumption, export and investment.  
(1-S1-1, Spending Should Be Encouraged)

(27) At this moment, deposit is really a [n] olive branch to the victim.  
(1-S20-1, The Importance of Saving Money)

(28) If you bloom, butterflies will come.  
(2-S12-2, Waiting for true love)

(29) ... a "single dog"...describes that a single person now is as poor as a dog.  
(1-S15-4, Three Steps for College Students to Face the Breakup)

Negative L1 transfer is easier to be figured out, compared with positive transfer of L1 which does not involve error in L2 (Nacey, 2013; Yu and Odlin, 2016). Negative L1 transfer may trigger novel metaphors. Examples (26) to (29) listed above are manifestations of negative L1 transfer realized by “the literal translation of a standard L1 expression into a non-standard target language term” (Nacey, 2013, p.192). The concordance search of “carriage” in example (26), “olive branch” in example (27), “butterflies” in example (28), and “single dog” in example (29) in the OECv2 corpus via Sketch Engine, showed that the metaphorical contextual senses of these expressions could not be found in the native English language corpus. For instance, the word “carriages” which is a direct translation of two Chinese characters “马(ma)车(che)”, referring to the factors that have power and capacity to carry forward the development of China’s economy. This metaphorical use was not found in the random sample of 1000 citations in OECv2. I also used the filter tool to search the lines that may contain both carriage and economy. No citations were found. The spaced compound “olive branch” in example (27), a direction translation of “橄(gan)榄(lan)枝(zhi)” in Chinese, which metaphorically refers providing assurance, was not the same as that found in OECv2 where “olive branch” is metaphorically used as an attempt to bring peace when there has been argument or conflict. The metaphorical meanings of “butterfly” in OECv2 are found as “the sense of nervousness or excitement” and “someone who keeps changing from one activity or person to another, and never stays long with any of them” (online

Macmillan Dictionary, sense 2). These are different with what my participants intended to say in example (28), a direction translation of “蝴(hu)蝶(die)” in Chinese, which metaphorically refers to someone’s Mr. or Mrs. Right in a romantic relationship. The expression “single dog” in example (29) is also a direct translation of “单(dan)身(shen)狗(dog)” in Chinese. The metaphorical contextual meaning might strategically highlight the empathy expressed for people who always have no boyfriend or girlfriend by evoking the image of a poor dog. I found 38 citations of the expression “single dog” in OECv2 by making a simple concordance search. None of them has the similar contextual meaning with that in example (29).

Direct translation from standard L1 expressions to non-standard L2 ones may trigger metaphor related errors in second language learners’ writing (Nacey, 2013; Littlemore et al., 2014). For the purpose of my current investigation, I found that some novel metaphors with negative L1 transfer, such as in examples (26) to (29), often occurred at the beginning or closing part of the texts, with possible rhetorical aims. This is based on the three-stage framework (thesis, argument, conclusion) on rhetorical structure of L2 argumentative text described by Hyland (1999) explained in Chapter 2: Literature review. For instance, “carriage” metaphor in example (26) and “single dog” metaphor in example (29) were used at the thesis stage of the writing text to achieve dramatic illustration and attract attention. The conventional verb metaphor “bloom” and the novel noun metaphor “butterflies” in example (28) were used at the conclusion stage of the writing text to achieve vivid consolidation and summarization. The “olive branch” metaphor in example (27) was used in the argument stage to support writer’s claim by comparing “deposit” with a relatively unfamiliar concept “olive branch” in a “A=B” form (Hyland, 1999; Querol and Madrunio, 2020). These innovative metaphor use, with possible deliberateness on part of the learners might be received as a mistake, which supports Steen’s (2011b) hypothesis: “a metaphor may be deliberately produced as a metaphor but not received as one” (Steen, 2011b, p. 85). Deliberate novel metaphors are treated as innovative metaphors, instead of simple errors.

## 5) Possible errors in metaphor use

(30) ... if we still have no idea about budgeting, then there is great chance for us to join in the “Moonlight”.

(2-S5-1, The Reasons for College Students to Learn to Budget Their Money)

(31) ...it is impossible for persons to over the proper method to use money.

(1-S20-1, The Importance of Saving Money)

(32) ... but also a scholar-tyrant from...Harvard University.

(1-S8-4, Screen Idols)

(33) ...icon worship helps us fertilize different interests.

(2-S1-4, If God Had an Icon, He Would Be Much Happier)

(34) ...how to spend their money on the edge of a knife...

(2-S12-1, Decreasing Money is Better)

Possible errors in metaphor use are exceptions to the four categories of metaphor use in terms of conventionality, deliberateness and L1 influence. Examples (30) to (33) are cases of apparent errors found in my written data. Errors are often due to learners' limited knowledge of the targeted language and L1 influence (Ellis, 1999; MacArthur, 2010; Littlemore et al., 2014). As demonstrated in **Section 3.2.8**, the verb “fertilize” had been repeated three times by 2-S1 in three writing samples on different topics to express the contextual meanings of “educating students” (in Extract 3.1) and “developing hobbies or interests” (in Extract 3.2 and example 33). 2-S1 used the verb “fertilize” inappropriately based on a direct translation from the Chinese verb “培(pei)养(yang)”. The verb “fertilize” are often metaphorically used with abstract concepts such as ideas and movements in standard English by referring to the native English corpus OECv2. The nouns “moonlight” (in example 30) or “moonlite” are metaphor tokens within the same metaphor type and had been used repeatedly by 5 participants (2-S5-1, 1-S10-2, 2-S12-1, 2-S18-2, 2-S13-1) in 5 samples on the topic “Spend and Save”. This unconventional metaphor use is due to a direct ‘borrowing’ from a Chinese pun “月(yue)光(guang)族(zu)”, which refers to someone who always use up their monthly salary before the end of each month. There are no English

counterparts at both linguistic and conceptual level. So, possible communication breakdown would occur to the readership who lacked the background knowledge of Chinese culture. The hypothesis on metaphor use and cross-culture difference would deserve further research to investigate, by involving larger group of Chinese EFL learners. The preposition “over” was used as a verb in example (31), referring to excessive way of spending money. This overgeneration of the spatial sense of preposition “over” was due to 1-S20-1’s limited knowledge of the targeted language. In example (32), “scholar-tyrant” was used to refer to someone who are top students at universities. This is also an inappropriate translation from a Chinese phrase “学(xue)霸(ba)” into the targeted language. Example (34) is another case of the verbatim translation of particular a Chinese proverb “好(hao)钢(gang)用(yong)在(zai)刀(dao)刃(ren)上(shang)” in the expression “how to spend their money on the edge of a knife” (2-S12-1). The English counterpart of this Chinese proverb is to “take the best steel for the blade”, which metaphorically means to use money/time/energy at the key point.

In total, I classified 6 creative metaphors, 10 innovative metaphors and 17 errors in metaphor use among the 33 instances of unconventional metaphors produced by 17 of my 39 participants. The remaining linguistic metaphors identified in my written data were classified as highly conventional ones and deliberate conventional ones with intended communicative functions (e.g., to represent, evaluate or persuade). Conventional metaphors and unconventional metaphors could be used interactively to achieve possible functions in argumentative texts. For instance, in example (22), the deliberateness was reflected by the “A=B” form and the metaphor signal “is like”. The mapping of life onto war is conventional. The mapping of money onto bullets and the choice of the verb “store” and its collocation with “bullets” are somewhat unconventional. Cases like these are classified as creative and are further examined in interviews with participants where possible. The investigation into deliberateness of metaphor use by way of textual analysis and interviews on learners’ intentions is helpful in distinguishing creative metaphors, innovative metaphors and possible errors in metaphor use in my written data (Nacey,

2017). In the following section, findings of metaphor functions were presented, with focusing on extended metaphors.

#### 4.2 Functions of extended metaphors in argumentative texts

Following the literature on functions of metaphors mentioned in Chapter 2 and the procedure of establishing systematic metaphors from extended metaphors demonstrated in Chapter 3, I move on to the findings concerning my RQ 2: What are the communicative functions of extended metaphors in Chinese English majors' argumentative writing?

Vehicle groupings have been coded for finding systematic metaphors. In total, 34 vehicle groupings were generated from the semantic coding of 99 metaphor vehicles identified from 14 single extended stretches of written texts, including Extract 3.3 and Extract 3.4 used in the methodology chapter for demonstration purpose.

**Table 4.6 Examples of vehicle groupings**

<b>Vehicle groupings</b>	<b>Examples of linguistic metaphors/ vehicles</b>
<i>MOVEMENT</i>	go; push; against; comes; from; moving; move
<i>BODILY ACTION</i>	awakened; yell; stamp; run; runs; push; face
<i>GAME/SPORTS</i>	goals; goal; targets; supporters; opponents; training; competition; sport; game
<i>PHYSICAL PAIN</i>	pain; suffer; painful; pains
<i>PHYSICAL FORCE</i>	power; force; forces; stronger; pressure
<i>VEHICLE</i>	troikas, driving ; petrol; car; battery
<i>FOOD</i>	dessert; honey; hungry; food
<i>FIGHT/WAR</i>	war; struggle; overcome; conflict
<i>ANIMAL</i>	beasts; wild; bees
<i>FIRE</i>	spark; fire; burn
<i>SUPPLY/RESERVATION</i>	store
<i>WEAPON</i>	bullets

**Table 4.6** shows examples of vehicle groupings that were built from frequently used conventional metaphors, such as “go” in *MOVEMENT*; and from less frequently used unconventional metaphors, such as “store” in

*SUPPLY/RESERVATION*. The procedure of building and grouping metaphor vehicles has been demonstrated in Chapter 3. The full list of 34 vehicle groupings is provided in **Appendix 20**. Topics which metaphor vehicles were used to talk about in my participants' topic-based writing are easy to be identified in terms of specific writing contexts. The four writing themes and sub-topics are listed in **Appendix 9**. **Table 4.7** presents the systematic metaphors established in my written data.

**Table 4.7 Systematic metaphors in topic-based argumentative writing**

Number	Systematic metaphors	Participants	Writing themes
1	<i>DESIRE OF WASTING MONEY IS A DANGEROUS ANIMAL WITH VIOLENT ACTION</i>	2-S5-1	MONEY
2	<i>MONEY WITHOUT CONTROL IS A WILD ANIMAL</i>	1-S9-2	MONEY
3	<i>MONEY IS A PERSON</i>	1-S5-1	MONEY
4	<i>SPENDING IS VEHICLE</i>	2-S6-1	MONEY
5	<i>SAVING MONEY IS RESERVING WEAPON</i>	1-S20-1	MONEY
6	<i>LOVE IS PHYSICAL FORCE DRIVING VEHICLES/MACHINES</i>	2-S4-4	LOVE
7	<i>LOVE IS A GAME</i>	1-S14-4	LOVE
8	<i>LOVE IS ILLNESS</i>	2-S8-2	LOVE
9	<i>LOVE IS FIRE</i>	2-S8-2	LOVE
10	<i>ARGUMENT IS A GAME</i>	2-S7-4	LOVE
11	<i>NEGATIVE EMOTION CAUSED BY BREAKUP IS A BOMB</i>	2-S7-4	LOVE
12	<i>LOVE IS FOOD BEARING PLEASANT FEELINGS</i>	2-S1-2	LOVE
13	<i>HUMAN BEINGS ARE PLANTS</i>	2-S5-2	LOVE
14	<i>LIFE IS A GAME/SPORTS</i>	2-S5-4	HEROES IN LIFE

Extended metaphors, from which systematic metaphors may be identified by establishing related vehicle groupings, are more likely to be found in my collected writing samples on the abstract writing themes of money and love. There is no instance of extended metaphor in writing samples on the topic of "Online Medical Treatment Bans". One systematic metaphor *LIFE IS A GAME/SPORTS* was found in one writing sample on the topic of icon worship.

In the following, I present some extracts from my written data that involve different vehicle terms from the same vehicle domain in close proximity, from which some systematic metaphors listed in **Table 4.7** may emerge. I exemplify the functions of extended metaphors on the basis of Halliday and Matthiessen's (2004) framework of three metafunctions of language: ideational, interpersonal, and textual, by taking the analysis of systematic metaphors as a starting point. The extended stretches of written texts are reproduced in single Excel worksheets for the ease of reading. Information about vehicle groupings, linguistic metaphors, line numbers in texts, participants' labels, original texts with underlined linguistic metaphors, basic meanings of linguistic metaphors, and writing themes are sorted out and provided in adjacent columns.

#### 4.2.1 Ideational and textual functions of extended metaphors

In this section, I presented an example of extended metaphor that is used to express a familiar topic from a new perspective and to achieve textual coherence simultaneously.

**Figure 4.2 Examples of linguistic metaphors contributing to the *FOOD* systematic metaphor**

	A	B	C	D	E	F	G
1	<b>Vehicle grouping</b>	<b>Metaphor</b>	<b>Line</b>	<b>Participant</b>	<b>Text</b>	<b>Basic meaning</b>	<b>Writing theme</b>
2	MOVEMENT	Pursuing	1	2-S1-2	<u>Pursuing</u> romantic love is the instinct of human, just like	to follow a course of activity	Campus Love
3	FOOD	hungry	2	2-S1-2	<u>hungry</u> people	without the food you need to stay strong and healthy	Campus Love
4	MOVEMENT	find	2	2-S1-2	<u>find</u> [finding]	to come across, meet with, light upon, discover	Campus Love
5	FOOD	food	2	2-S1-2	<u>food</u>	the things that people or animals eat a particular type of food	Campus Love
6	FOOD	dessert	18	2-S1-2	romantic love is mental <u>desert</u> [dessert]	sweet food that you eat after the main part of a meal	Campus Love
7	FOOD	dessert	20	2-S1-2	romantic love, just like <u>desert</u> [dessert]	sweet food that you eat after the main part of a meal	Campus Love
8	PLEASANT FEELINGS	warm	21	2-S1-2	can make the hearts <u>warm</u>	warm clothes and buildings keep heat in and prevent you from feeling cold	Campus Love
9	PLEASANT FEELINGS	happy	22	2-S1-2	and <u>happy</u> .	feeling pleased and satisfied	Campus Love
10							
11							

In **Figure 4.2**, love (topic domain) is described as food (vehicle domain) via three different linguistic metaphors (“hungry”, “food”, “dessert”) in two

sentences within the same text. The grouping label *FOOD* is taken from the actual words that appear in the written data or from the words that appear in the basic meanings of metaphor vehicles, which can avoid overgeneration about writers' conceptualizations (Cameron et al., 2010). The linguistic metaphors "pursuing" and "find", belonging to the grouping labelled as *MOVEMENT*, and "warm" and "happy", belonging to the grouping labelled as *PLEASANT FEELINGS*, associate less straightforwardly with the vehicle domain *FOOD*, but are also used with direct reference to the topic campus love. As noted in **Section 4.1.3**, the connection among these linguistic metaphors could be reflected in the metaphor flags "just like" in the extract reproduced in **Figure 4.2**. Semino (2008), based on her own data, argues that "extended metaphors often co-occur and interact with other metaphors [and there are situations where] a cluster includes an extended metaphor alongside other non-extended metaphors" (Semino, 2008, p.26). Here, this subset of metaphor vehicles, consisting of extended metaphor alongside other non-extended metaphors, is used to talk about love, can be expressed through the systematic metaphor: *LOVE IS FOOD BEARING PLEASANT FEELINGS*.

The new representation of the familiar topic "love" from a new perspective "food" or "sweet food" is the supporting evidence of ideational or representational functions of extended metaphors. The conventional concepts *LOVE IS FOOD* or *LOVE IS SWEET FOOD* were lexicalized by the creative and possibly deliberate comparisons between "pursing love" and "finding food", and between "love" and "dessert". The words in square brackets are some grammatical mistakes corrected by the researcher with participants' agreement. The linguistic metaphors "hungry" and "food" in the thesis stage give a focus to 2-S1-2's proposition, and "dessert", "warm" and "happy" in the argument stage reinforce 2-S1-2's claim (Hyland, 1990). These all contribute to the same systematic metaphor *LOVE IS FOOD BEARING PLEASANT FEELINGS*, or an organizing metaphor termed by Goatly (2011). So, clusters that include extended metaphors at different stages also can give internal coherence to an argumentative text, which is the textual function of extended metaphors. 2-S1-2's creative use of similes "love is just like food" and "love is just like dessert" can highlight the positive side of love, which might convey evaluative and



persuasive power. The following section gives a focus to the interpersonal and textual functions of extended metaphors.

#### 4.2.2 Interpersonal and textual functions of extended metaphors

In this section, I exemplify the functions of extended metaphors by using two one single extended stretch of written text extracted from 2-S8-2's writing sample. 2-S8-1 argues about the positive and negative effects of love.

**Figure 4.3 Examples of linguistic metaphors contributing to the *ILLNESS* systematic metaphor**

	A	B	C	D	E	F	G
1	Vehicle grouping	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	ILLNESS	medicine	16	2-S8-2	Love can be a good <u>medicine</u>	a substance that you take to treat an illness, especially a liquid that you drink	Campus Love
3	ILLNESS	poison	17	2-S8-2	or a <u>poison</u> .	a substance that can kill you or make you ill if you eat, drink, or breathe it	Campus Love
4	ILLNESS	failed	20	2-S8-2	...a <u>failed</u> love experience can be stressful	Decayed, worn out. Chiefly, of a person: Impaired in health or vigour; infirm	Campus Love
5	PHYSICAL PAIN	painful	21	2-S8-2	and <u>painful</u> .	if part of your body is painful, you feel pain there	Campus Love
6	ILLNESS	fragile	22	2-S8-2	...students is not perfect, and their spirit is more <u>fragile</u> .	not very strong or healthy	Campus Love
7	PHYSICAL FORCE	pressure	22	2-S8-2	The <u>pressure</u> of love can easily cause a lot of accidents	the amount of force that a gas or liquid produces in	Campus Love
8	PHYSICAL HARM	damage	23	2-S8-2	and some <u>damage</u> is even permanent.	physical harm caused to something so that it is broken, spoiled, or injured	Campus Love
9							
10							

In **Figure 4.3**, love (topic domain) is described in terms of illness (vehicle domain) via four different linguistic metaphors (“medicine”, “poison”, “failed”, “fragile”) which are clearly to do with illness and medical problem, at the argument stage of the text in close proximity. Other linguistic metaphors “painful” (labelled as *PHYSICAL PAIN*), “pressure” (labelled as *PHYSICAL FORCE*) and “damage” (labelled as *PHYSICAL HARM*) talking about love, are less close to the vehicle domain *ILLNESS*. The vehicle groupings *PHYSICAL PAIN* and *PHYSICAL HARM* can be regarded to have a loose connection with the vehicle domain *ILLNESS*, judging from the basic meanings of related metaphor vehicles about human body and injury. This extract is also an example of a cluster where an extended metaphor co-occurs with non-extended ones. The different metaphor vehicles talking about love in terms of illness contribute to the systematic

metaphor: *LOVE IS ILLNESS*, which conveys the negative effects of love. This extension in the claim and support move at the argument stage helps to build a coherent and persuasive argument. The interpersonal function of evaluating and persuading lies in the participant's emotional attitudes towards the illness, pain, and damage that love may trigger in life. The systematic metaphor *LOVE IS ILLNESS* in this metaphor cluster deemphasizes the positive side of love by reconceptualizing *LOVE* into *ILLNESS* and helps to achieve textual coherence and persuasive power in the writing context. Extended metaphors, where deliberate metaphor use could be identified via some similes, appear to serve ideational, interpersonal, and textual function simultaneously in participants' argumentative texts.

#### **4.2.3 Extended metaphors at strategic stages in L2 argumentative essay**

As demonstrated in **Section 3.2.9.2**, extended metaphors, from which systematic metaphors emerge, could coincide with the three key stages in argumentative texts. For example, the two systematic metaphors: *DESIRE OF WASTING MONEY IS A DANGEROUS ANIMAL WITH VIOLENT ACTION* and *LOVE IS PHYSICAL FORCE DRIVING VEHICLES/MACHINES* are at the argument stages in 2-S5-1's and 2-S4-4's texts, respectively. The *LOVE IS ILLNESS* metaphor in 2-S8-2's text also occurs at the argument stage. The *LOVE IS FOOD* metaphor in 2-S1-2's text occurs across the thesis and argument stages. The ideational, interpersonal, and textual functions of extended metaphors can coincide and interact with the rhetorical goals of each stage in an L2 argumentative essay. For instance, extended metaphors with the systematic metaphor *LOVE IS FOOD* at the very beginning of 2-S1-2's text can serve the function of reconceptualization (ideational) and the function of dramatic illustration for the central statement at the thesis stage simultaneously. The dramatic way of illustration at the beginning of text can attract attention and arouse interest for the readership. In this section, I presented examples of extended metaphors, which occur at the opening and closing parts of writing samples, on smaller scales. Hyland's (1990) three-stage framework of an L2 argumentative essay (thesis, argument, conclusion) is followed to analyse the specific functions of extended metaphors, when extended metaphors coincide with specific moves

and stages in an L2 argumentative essay.

#### Figure 4.4 Examples of linguistic metaphors contributing to the *VEHICLE* systematic metaphor

	A	B	C	D	E	F	G
1	Vehicle grouping	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	VEHICLE	troikas	1	2-S6-1	Have you ever heard of the three <u>troikas</u> of	a Russian vehicle pulled by three horses walking next to each other	Spend and Save
3	VEHICLE	driving	1	2-S6-1	<u>driving</u> the economy?	to control a vehicle so that it moves somewhere	Spend and Save
4	BODILY ACTION	push	3	2-S6-1	Actually, it means that investment, spending and net export are the three important factors to <u>push</u> .	to move someone or something away from you, or from their previous position, using part of your body, especially your hands	Spend and Save
5	MOVEMENT	forward	3	2-S6-1	the economy <u>forward</u> .	moving in the direction in front of you	Spend and Save
6							

In **Figure 4.4**, spending (topic domain) is described as vehicle (vehicle domain) via two metaphorically used words “troikas” and “driving” in the gambit move of the thesis stage in 2-S6-1’s writing text. This extension coincides with the gambit move in an argumentative essay where the writer’s purpose is to “capture the readers’ attention, rather than inform” (Hyland, 1990, p. 70) by way of dramatic illustration at the very beginning of the writing text. The vehicle groupings *VEHICLE* (“troikas”, “driving”), *BODILY ACTION* (“push”), and *MOVEMENT* (“forward”) are built from four linguistic metaphors in close proximity talking about the same topic of spending. These linguistic metaphors are related to a vehicle that can move forward. A systematic metaphor *SPENDING IS VEHICLE* can be formulated, offering the topic of spending a new representation and the text internal coherence. *SPENDING IS VEHICLE* used when introducing viewpoints on the positive side of spending can convey participant’s positive attitudes towards spending and then construct the evaluative function of metaphor (Goatly, 2011). Attempts contained in this systematic metaphor, such as dramatic illustration, coherence construction and evaluation, can be related to the three dimensions of functions of language: ideational, interpersonal, and textual.

**Figure 4.5 Examples of linguistic metaphors contributing to the *GAME* systematic metaphor**

	A	B	C	D	E	F	G
1	Vehicle grouping	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	GAME	supporters	2	2-S7-4	The <u>supporters</u> believe it saves both money and time...	someone who likes to watch a particular sports team and wants that team to win	Campus Love
3	GAME	opponents	4	2-S7-4	However, the <u>opponents</u> of the campus love argue that the campus love	a person who is in competition with another; a member of the opposite side or team	Campus Love
4	FIGHT/WAR	conflict	5	2-S7-4	will cause <u>conflict</u> .	fighting between countries or groups	Campus Love

In the opening part of 2-S7-4's writing sample, the words "supporters" and "opponents" are metaphorically used to talk about the controversial background (topic domain) where people hold opposite viewpoints on campus love in terms of a game (vehicle domain). In this particular extension, the two linguistic metaphors are used with direct reference to the description of a controversial situation, from which the systematic metaphor *ARGUMENT IS A GAME* could be formulated. The metaphorically word "conflict" is used to talk about the opposite opinion on campus love. Different with other systematic metaphors found in my written data, *ARGUMENT IS A GAME* metaphor is commonly used to structure the background context of the writer's proposition at the thesis stage into a coherent whole.

**Figure 4.6 Examples of linguistic metaphors contributing to the *SAVING MONEY IS RESERVING WEAPONS* systematic metaphor**

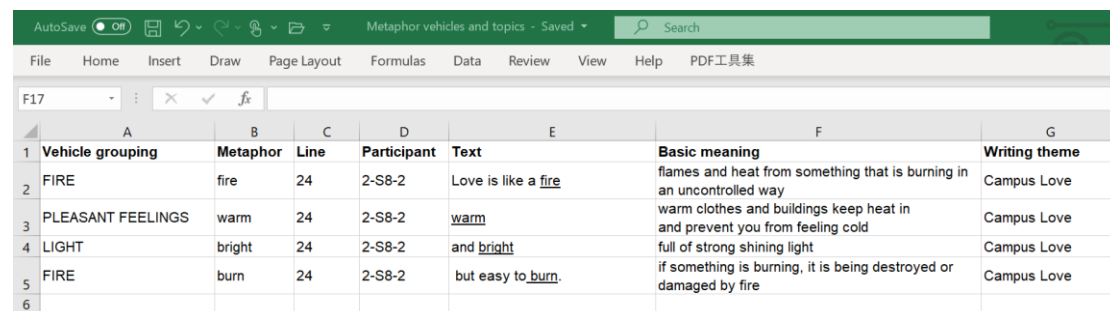
	A	B	C	D	E	F	G
1	Vehicle grouping	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	WAR	war	29	1-S20-1	If life is compared to a <u>war</u> ,	a particular period of fighting between countries or groups of people	Spend and Save
3	SUPPLY/RESERVATION	store	30	1-S20-1	saving money is like to <u>storage</u> [store]	To keep in store for future use; to collect and keep in reserve; to form a store, stock or supply of; to accumulate, hoard.	Spend and Save
4	WEAPON	gun	30	1-S20-1	<u>bullets</u> . With the help of deposit, it becomes easier to	a small piece of metal that is shot from a gun and causes serious damage to the person or thing it hits	Spend and Save
5	BODILY ACTION	face	31	1-S20-1	<u>face</u> the difficulties in life apparently and definitely.	to be opposite someone or something so that your face or front is towards them	Spend and Save
6							

In **Figure 4.6**, The extended metaphor in the closing parts, i.e., conclusion stages, of the writing text involves both conventionality and creativity. In the conclusion stage of 1-S20-1's writing text, linguistic metaphors "war", "store",

and “bullets” are used creatively used to talk about the topic of money (topic domain) in terms of weapon (vehicle domain). Bullets can be supplied or reserved and can be used for a war. A creative systematic metaphor therefore is formulated: *SAVING MONEY IS RESERVING WEAPONS*. The ideational, interpersonal, and textual function of this systematic metaphor is intertwined with the rhetorical goal of the conclusion stage, which is to summarize the argument section in a persuasive way, to provide a prospective focus for discussion, and to achieve vivid consolidation (Hyland, 1990; Querol and Madrunio, 2020). It seems that the conventional metaphoric idea *LIFE IS WAR* is compatible with creative systematic metaphor *SAVING MONEY IS RESERVING WEAPONS* because of the connection between war and weapon.

In **Figure 4.7**, the conventional systematic metaphor *LOVE IS FIRE* built from the extension at the conclusion stage of 2-S8-2’s writing text also can help to realize the persuasive power in the writing text in a coherent and dramatic way.

#### **Figure 4.7 Examples of linguistic metaphors contributing to the *FIRE* systematic metaphor**



	A	B	C	D	E	F	G
1	Vehicle grouping	Metaphor	Line	Participant	Text	Basic meaning	Writing theme
2	FIRE	fire	24	2-S8-2	Love is like a <u>fire</u>	flames and heat from something that is burning in an uncontrolled way	Campus Love
3	PLEASANT FEELINGS	warm	24	2-S8-2	<u>warm</u>	warm clothes and buildings keep heat in and prevent you from feeling cold	Campus Love
4	LIGHT	bright	24	2-S8-2	and <u>bright</u>	full of strong shining light	Campus Love
5	FIRE	burn	24	2-S8-2	but easy to <u>burn</u> .	if something is burning, it is being destroyed or damaged by fire	Campus Love
6							

The bottom-up analysis of systematic metaphors shows that extended metaphors are often found to build coherent and persuasive arguments in my participants’ written texts. Among the 14 instances of systematic metaphors, 10 occurred at the argument stage, 3 at thesis stage, and 2 at the conclusion stage. The *LOVE IS FOOD BEARING PLEASANT FEELINGS* metaphor is found at both the thesis and argument stage in 2-S1-2’s writing sample, contributing to the textual structuring function and ideational function simultaneously. The systematic metaphors built from extended metaphors at the very beginning of written texts often serve the function of attracting attention and arousing interest by

introducing a familiar topic from a new perspective, such as the *SPENDING IS VEHICLE* metaphor in 2-S7-1. Exception to this is the *ARGUMENT IS A GAME* metaphor at the very beginning of 2-S7-4's writing sample. This conventional systematic metaphor is often used to organizing arguments in a coherent way at the very beginning of argumentative texts.

The two systematic metaphors built at the conclusion stage of the writing samples can be sensed as deliberate and creative because of similes. The systematic metaphor *LOVE IS FIRE* in the close move in 2-S8-2's text coincides with the need for a vivid consolidation at the conclusion stage, which can reinforce the evaluative and persuasive power in the text. The systematic metaphor *SAVING MONEY IS RESERVING WEAPON* at the conclusion stage in 1-S20-1's text can convey writer's strong emotions towards the importance of saving money, which might encourage a change of perspective. I do not mean that these findings on functions of extended metaphors in L2 argumentative essays are typical of all Chinese English learners at tertiary level, since my written data had been collected from a narrow range of students who are intermediate learners. The function analysis focusing on extension and systematicity may generate insights on how Chinese English learners can use metaphors in clusters at strategic points in their argumentative writing.

### **4.3 Summary**

In this chapter, I present and illustrate the findings from my written data for answering my first two research questions. The findings obtained from the written texts data indicate that:

- Chinese English majors indeed produce metaphors when accomplishing their argumentative writing assignments. The overall metaphor density is 10%, which turns to be comparable with prior metaphor research in L2 writing. Some writing topics may trigger more metaphors. The metaphor density in writing samples on the topic of campus love (11.77%) is higher than those on the other three writing topics.
- Noun metaphors, verbs metaphors and prepositions metaphors are the three most frequent grammatical categories in my written data.

Preposition metaphors are the most frequently reused metaphors, which are highly conventional and are used for information packaging and textual cohesion. Prepositions are also the word class, which is most likely to be used metaphorically in my text corpus. Metaphor type-token ratios across five major word classes and the four writing topics show that metaphors (excluding de-lexical verb) on the topic of campus love have greater lexical variety. Metaphors across 9 grammatical categories in my written data can serve various communicative functions, i.e., ideational, interpersonal, and textual.

- The operational framework for classifying conventional and unconventional metaphors in my written data turns out to be workable. 33 instances of unconventional metaphors were found from the 4,706 instances of linguistic metaphors, which shows that my participants often use metaphors conventionally in their argumentative writing. The frequent occurrences of 'just the way to say it' metaphors could be evidence of participants' learned knowledge of L2. Positive L1 transfer can contribute to both deliberate conventional metaphors and deliberate creative metaphors. Deliberateness is helpful when distinguishing innovative metaphors from possible errors. My participants may use metaphors creatively, thoughtfully, or incorrectly.
- Extended metaphors can be found at different strategic points in written contexts. (Deliberate) conventional and creative systematic metaphors built from some extended stretches of written texts show that participants are able to use metaphors in clusters strategically to fulfill communicative functions. The three-dimensional functions (ideational, interpersonal, textual) of language often coincide with the rhetorical goals of an argumentative essay, such as dramatic illustration (ideational), developing coherent, evaluative, and persuasive argument (textual and interpersonal), achieving vivid consolidation (ideational, textual, interpersonal), and encouraging perspective shift or actual actions (interpersonal).

In the following chapter, findings from stimulated recall interviews will be presented and analysed, to explore participants' understanding and recall

comments on metaphor use during their writing processes. Deliberateness and L1 influence may be evident in the learner interviews, which can be supporting evidence for the metaphor analysis of written data.



## Chapter 5 Findings from interview data

In this chapter, I present the results obtained from the 21 stimulated recall interviews about my participants' recall comments on their metaphor use during the writing process, answering my third research question (RQ 3): How do Chinese English majors report their thinking processes around their metaphor use in argumentative writing?

### 5.1 Participants' recall comments on metaphor use

In total, 260 instances of thought reports on the use of 315 linguistic metaphors in 21 writing samples were coded and grouped by following the coding scheme developed in **Figure 3.5**. Codes and categories coded from the SRI data are summarized in **Table 5.1**.

**Table 5.1 Codes and categories emerged from SRI data**

Categories/themes	Codes	Number
L2 learning strategies	a) Use previously learned linguistic knowledge to facilitate a writing task b) Use the first language as a base for producing the second language c) Use language materials such as dictionaries	189
Consciously thinking about metaphor in L1	a) Compare one abstract concept to a more concrete one by looking for similarities b) Compare one abstract concept to a more concrete one to achieve vividness c) Express causal relationship by spatial sense d) Use personal life experience as a concrete basis to express abstract viewpoint	30
Desire for a wider range of vocabulary and better writing performance in L2	a) Achieve better writing performance (by revising) b) Achieve the diversity of vocabulary c) Achieve native and idiomatic expressions d) Desire to make writing different	23
Communicative functions of metaphor in argumentative writing	a) Introduce and arouse interest b) Attract readers' attention c) Convey emotion and evaluation on certain topics d) Achieve coherence in writing text e) Summarize viewpoints, introduce the topic, or support the viewpoint f) Increase comprehensibility and make oneself understood	18
Metaphor awareness	a) Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing	1
<b>In total</b>		<b>260</b>

As shown in **Table 5.1**, new codes were generated and were further grouped into the five conceptual categories when involving new SRI data. The codes and categories were identified based on the explicit meanings of interview data and some theoretical assumptions on learning strategies (O'Malley and Chamot, 1990, p.120; Cohen, 2014), grammatical choices made by L2 writers (Hinkel, 2002), rhetorical goals of argumentative writing (Hyland, 1990; Yang, et al., 2014), communicative functions of metaphor (Semino, 2008; Goatly, 2011; Herrmann, 2013), metaphoric thinking and metaphor awareness (Hoang, 2014).

Stimulated recall comments could be helpful for me to understand the thinking processes, intentions, and metaphor awareness behind participants' lexical choices during their topic based L2 writing. The analysis may provide the metaphor function analysis and possible deliberate metaphor use with supportive evidence. Recall comments related to codes and categories are exemplified below.

**(35) Use previously learned linguistic knowledge to facilitate a writing task**

**R:** Next, when you describe your personal life experience, you said that your other friends think that you are "not ripe enough". When you were using the adjective "ripe", what were you thinking?

**1-S17-2:** I did not think too much. Maybe it was because<the teacher had mentioned the expression> "the ripe apple" in one of our writing classes.

**(36) Use the first language as a base for producing the second language**

**R:** I am not sure whether you still remember, when you were using the expression "bad fruits" < in suffer bad fruits without careful thinking>, have you considered why you used this expression?

**1-S20-2:** In Chinese, "苦(ku)果(guo)" means bad fruits, I just translated from Chinese into English directly.

## (37) Use language materials such as dictionaries

**R:** Next, I noticed that after “eating disorder”, you used the expression “drown their sorrows in wine”. How about this? when you were using it at that particular time?

**1-S15-4:** ① At that time, what was in my mind was a Chinese phrase “借(jie)酒(jiu)浇(jiao)愁(chou)”.

**1-S15-4:** ② Then I searched this phrase <in dictionaries or other online resources> and found this English expression.

**R:** Anything else?

**1-S15-4:** Before I searched the English translation of this expression, I didn’t know this English phrase.

O’Malley and Chamot (1990) identified 7 cognitive strategies used by beginning and intermediate ESL students to accomplish classroom and non-classroom language tasks, from their investigation on a group of Spanish English learners’ learning strategies. My participants’ thought reports in examples (1) to (3) could be related to three of the cognitive strategies defined by O’Malley and Chamot (1990), which are:

- transfer—“using previous linguistic knowledge or prior skills to assist comprehension or production”.
- translation—“using the first language as a base for understanding and/or producing the second language”.
- resourcing—“using target language reference materials such as dictionaries, encyclopedias, or textbooks”

(O’Malley and Chamot, 1990, pp.119-120).

In example (35), the recall comment cited by 1-S17-2 about the “ripe apple” phrase learned in one previous writing class could be coded as using previously learned linguistic knowledge to facilitate a writing task. The conventional metaphor “ripe” refers the mature state of a human in terms of a ripe apple. In example (36), the direct translation from Chinese into English reported by 1-S20-2 was coded as using the first language as a base for producing the second language. The noun metaphor “fruits” was metaphorically used to refer the immaterial result or consequence. The two accounts of recall comments on “drown their sorrows in wine” in example (37) were coded differently. One is translation and the other is resourcing, which related to the same category of L2 learning strategies. The metaphorical expression “drown their sorrows in wine” refers the abstract concept of tackling sorrow in terms of covering

something concrete in a liquid. L2 learning strategies coded in my research on the use of conventional metaphors indicate that participants' one instance of metaphor production might involve more than one cognitive strategy used in combination. My participants' conventional or thoughtful metaphor use can be related to their previous linguistic knowledge and positive L1 transfer when there are no cross-culture differences between Chinese and English.

**(38) Compare one abstract concept to a more concrete one by looking for similarities**

**R:** When you chose the word "sorrow", "recover from the sorrow", what were you thinking at that time?

**1-S18-2:** Since his heart is hurt badly by the breakup of a romantic relationship, and this kind of problems just like a wound.

**R:** Wound?

**1-S18-2:** Yes. It also likes a progress that one heals.

**(39) Compare one abstract concept to a more concrete one to achieve vividness**

**R:** Okay, how about this, I noticed the sentence "which make the customer culture deeply rooted in the hearts of consumers". Did you still remember why you used the expression "deeply rooted in" at that time ?

**1-S1-1:** Because this paragraph was about the impact of spending on culture. ① I then used the word "rooted" because "root" had the meaning of "growing roots" and the past participle of "root" could indicate growing roots deeply in people's hearts.

**1-S1-1:** ② I would like to write <the impact> in a more vivid way. "Growing roots deeply in people's hearts" was the vividness.

**(40) Express causal relationship by spatial sense**

**R:** How about the next phrase ? <financial problems >"arising from"< poverty-stricken family >?

**1-S12-1:** What was in my mind at that time was, some people might encounter financial problems. These problems might be caused by poverty and their excessive consumption. I did not know how to describe the poor economic conditions in families properly. I just said that financial problems came out from and were caused by <these factors>.

**(41) Use personal life experience as a concrete basis to express abstract viewpoint**

**R:** Now, let's look at the next line, you said < love > "push them struggle against" <difficulties>. So, why you used this verb phrases at that time?

**2-S4-4:** ① Because when I was writing this, there were some plots appearing in my mind. I thought it was influenced by some movies, TV series or the literary works I had seen and read.

**2-S4-4:** ② I thought love was kind of power, which not only helped people face difficulties, but also survive in more dangerous situations, for the person they loved. I thought the word "struggle" was more powerful.

As noted in Chapter 2: Literature review, learners' consciously thinking about metaphor in L1, as a consequence of conceptual L1 transfer, could contribute to creativity in L2 English writing (Xu and Tian, 2012). Hints of this metaphoric thinking process could be captured in the learners' recall comments where there was, as Littlemore and Low (2006a) suggest, a comparison between the incongruous topic domain and vehicle domain. The metaphoric thinking process could involve the activation of a conceptual mapping from a vehicle domain that learners are more familiar with, as Sanchez-Ruiz et al. (2013) argues, to a less familiar topic domain.

In example (38), breakup in a romantic relationship was compared to a physical wound by way of simile. In example (39), the impact of spending on customer culture was compared to "growing roots deeply in people's hearts" for vividness. This might indicate that 1-S1-1 deliberately used the metaphorical expression with the desire for vividness in writing. Hints of metaphoric thinking process in examples (40) to (41) were less straightforward. In example (40), 1-S12-1's recall comment cited her thought about the metaphorical spatial sense of the preposition "from" when factors that could cause financial problems were understood as a physical location or container. In example (41), 2-S4-4 verbalized about her personal life experience as the rationale for her comparison between love and physical power. So, her thought reports on "push them struggle against" could also be regarded as hints of metaphoric thinking.

Metaphoric thinking has often been investigated as a strategy to help language learners interpret and comprehend meanings from some novel metaphors

encountered in the targeted language. Here, the focus is on possible thinking processes behind learners' production of both conventional and unconventional metaphors. The explicit and implicit comparisons cited in my participants' recall comments might show participants' familiarity with those metaphorical vehicles in L1. Participants' consciously thinking about metaphor in L1 might also be helpful to their metaphor production in L2.

**(42) Achieve better writing performance (by revising)**

**2-S1-1's added recall comments on metaphors asked**

**2-S1-1:** But later on, in order to write in a better way, I would change some words and phrases purposely.

**2-S5-1's added recall comments on metaphors asked**

**2-S5-1:** There was another key reason. In this semester, I wanted to improve my writing performance a little bit. In fact, when I was writing <the beasts of desire>, I drafted and revised it several times. I had considered it carefully. I might not write some expressions like these if I were in an exam. But for this piece of writing, I had drafted it carefully. Some ideas were just for a very few moments in my mind. I might not express it clearly, but it just occurred.

**(43) Achieve native and idiomatic expressions**

**R:** Okay, good, so when you were writing <get through the sticky patch>, what were you thinking?

**1-S12-1:** The language could be more idiomatic.

**(44) Achieve the diversity of vocabulary**

**R:** How about "boost" <the economic development>? When you were choosing this word, what were you thinking? How did you think about it?

**1-S1-1:** Because I had used words like "increase", "improve" and "promote" before in my writing. I thought these words had the similar meaning of facilitating, so I chose "boost" to avoid repetition.

**(45) Desire to make writing different**

**R:** Okay, next, you wrote “time eats everything”. So, as for this expression, how did you think about this, especially the verb “eats”?

**1-S7-2:** Because if I wrote “time will change everything”, that would be too common. So, I didn’t want to write like that. I would like to write it differently.

**R:** Okay, good, did you still remember anything else?

**1-S7-2:** No.

Participants cited their desire to improve writing performance in L2, to use more varied and idiomatic vocabulary, and to make the writing different (or creative) in recall comments in examples (42) to (45). This shows that metaphor could be a powerful tool for my participants who might lack more advanced knowledge of English, as MacArthur (2010) suggest in her research on metaphors in Spanish English learners’ writing, “to make meanings from many everyday, highly familiar words” (MacArthur, 2010, p.159). Participants’ desire for idiomatic language use and better writing performance with careful revisions cited in example (42) and (43) show that metaphors could be considered in developing learners’ lexical and metaphorical competence in L2 (Littlemore and Low, 2006b, Nacey, 2019). Codes emerged from recall comments in examples (42) to (45) were related to the category of desire for a wider range of vocabulary and better writing performance in L2.

**(46) Introduce and arouse interest**

**R:** Um, if my understanding is correct, you were introducing the topic <by using “single dog”>?

**1-S15-4:** Yes, I also wanted to arouse interest and I felt it was interesting.

**(47) Attract readers’ attention**

**R:** Okay, my question is when you used the word, when you used this quotation, what were you thinking about at that time? When you were writing “painful”, “tired”, to describe love, why did you use this quotation? Do you know quotation?

**1-S18-2:** Yeah, do you mean the purpose of using this quotation, or just the words?

**R:** What were you thinking?

**1-S18-2:** Because this quotation is involved with the breakup of a romantic relationship. To some extent, since it’s involved with the breakup of a romantic relationship, so this may be an attraction to the readers’ interest.

**(48) Convey emotion and evaluation on certain topics**

**R:** Okay, so how about the next expression “in the world full of thistles and thorns”? When using “the world full of thistles and thorns”, what were you thinking

**1-S20-2:** This was to emphasize the difficulties and obstacles in the world, so every person needed love.

**(49) Achieve coherence in writing text**

**R:** Next you wrote “so that our economy can have a sustainable and powerful driving force”. How about “driving force”? what were you thinking at that time?

**1-S1-1:** ① I wanted to echo the meaning of three horse-driven vehicles at the very beginning of the text.

**1-S1-1:** ② The three horse-driven vehicles could symbolize three driving forces.

**1-S1-1:** ③ At the end of the text, I would like to mention the role of driving force, but using the different expression, so I wrote “driving force”.

**(50) Summarize viewpoints, introduce the topic, or support the viewpoint**

**R:** So, <love is petrol to a car, battery to a player> was similar to the meaning of the first sentence of this paragraph?

**2-S4-4:** This was to summarize my topic <love is the invisible power>.

**(51) Increase comprehensibility and make oneself understood**

**R:** Okay, how about the expression in the end of this paragraph, you said “petrol to a car, battery to a player”, could you please think about what you were thinking at that time by using the expression like this?

**2-S4-4:** It was, when I was using English to express myself, I often worried that the readership might not understand my intended meaning.

Participants’ recall comments cited in examples (46) to (51) could be supporting evidence to the textual analysis about (deliberate) metaphors and communicative functions of metaphor use in Chapter 4. These recall comments indicated that learners could use metaphors with intended communicative functions such as arousing interest, attracting attention, constructing textual coherence, writing emotionally, introducing, and organizing ideas, and increase comprehensibility in L2 argumentative writing. In example (49), the three thought reports could be related to three different categories. The first one could be directly coded as achieving coherence. Second one is a lexical realization of consciously thinking about metaphor in L1. The third one is the desire for a



wider range of vocabulary. Recall comments on the use metaphorical expression “driving force” involved multiple conceptual categories. More cases are explained in **Section 5.2**.

**(52) Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing**

**2-S1-1's added recall comments on metaphors asked**

**2-S1-1:** Alternatively, a more vivid expression was used instead of talking about a concept directly. Possibly, on the basis of the characteristics of a thing, the rhetoric devices such as metaphor and symbolism were used, which could make a simple thing very interesting.

Metaphor awareness can be captured from learners' ability to:

- recognize metaphors as a common ingredient of everyday language
- recognize metaphoric themes behind many figurative expressions
- recognize the non-arbitrary nature of many figurative expressions
- recognize possible cross-cultural differences in metaphoric themes
- recognize possible cross-linguistic variety in figurative expressions

(Boers, 2000, p.566)

There is one participant, as demonstrated in Chapter 3 and shown in example (52) here, who has reported his knowledge of metaphor as an ornamental tool in English. My assumption on my participants' metaphor awareness is that though they could report confidently about the thinking processes behind some of their metaphor use in writing, they had relatively limited metaphor knowledge in L2. Much of their metaphorical reporting comes from their familiarity with the metaphorical comparisons in L1. I would not say my participants' metaphor awareness was low just because only 1 of the 21 participants had reported his metaphor knowledge clearly. The role of metaphor awareness-raising activities in Chinese English learners' L2 writing teaching and learning, deserves further investigation, when more participants are involved.

## 5.2 Possible reasons behind conventional and unconventional metaphors

A simple calculation of the number of recall comments on creative metaphors (e.g., “beast”), innovative metaphors (e.g., “single dog”) and possible errors (e.g., “fertilize”) shows 15 instances of thought reports. The majority of recall comments (245 out of 260 instances) are on conventional metaphor use. The recall comments related to L2 learning strategies account for a large proportion of all the recall comments (189 out of 260 instances). As noted in the above exemplification, previous linguistic knowledge and positive L1 transfer, are the major triggers to participants’ conventional metaphor production. Below are examples of participants’ recall comments concerning both conventional and unconventional metaphors, with reproduced extracts from interview transcripts. Deliberate conventional, innovative, and creative metaphors were more likely to involve thought reports that could be related to multiple categories.

### 5.2.1 Recall comments on conventional metaphors

(53) one door closes for us, another door will open

**R:** Okay, let’s move onto the last question, which is also somewhat funny. When you wrote the expression “when one door close for us, another door will open”, what were you thinking and considering at that moment?

**1-S4-4:** Perhaps I did not know whether break-up was good or not, so I wrote the last sentence, which is “loss of love is in fact for better growth”. It might have two meanings. First, you might find the person was not suitable for you in the romantic relationship. Second, you could still learn a lot from the breakup.

**R:** So, you used “one door, another door”, what were you thinking about?

**1-S4-4:** If one door is closed, there must be another window open for you. ① There are similar sentences in Chinese.

**R:** So, relating to your viewpoint?

**1-S4-4:** ② It might be opportunities, the opportunities for better growth.

In example (53), the recall comments showed that 1-S4-4 had written down the conventional metaphorical expression “one door closes for us, another door will open” during the writing process because of the Chinese equivalent. This conventional metaphor use is comprehensible since there is no cross-cultural difference between Chinese and English concerning the comparison between

the concrete object door and the abstract concept opportunity. 1-S4-4's understanding of the door in terms of opportunities in her recall comments also indicates possible consciously thinking about metaphor in L1. The conventional door metaphor used in the writing sample could be described as a positive transfer from L1 to L2.

(54) that kind of culture is a mirror of the time

**R:** Next, you used the expression “a mirror of the time”. So, what were you thinking about when you were writing this expression?

**1-S11-4:①** It could be a transition to move to my next two examples, which is make the writing coherent. I had written the expressions like “symbolize” and “reflect our culture”, so I used “a mirror of the time”. I wanted to express that culture is a mirror of time, which could be consistent with the meaning of “symbolize” and “reflect”. It could symbolize and reflect culture. So, I thought it was suitable. It was the word.

**R:** So, you came up with this word very naturally, or?

**1-S11-4:②** It was also because in our Chinese way of thinking, we often said that a mirror could reflect what a person looks like. Regarding the cultural icons as a mirror, it could also reflect a kind a social phenomenon. So, I used this word.

Example (54) is about the participant's recall comments on the use of the conventional metaphorical expression “a mirror of the time”. It seemed to be the supporting evidence about the fact that students could write metaphorically to achieve internal coherence: “I had written the expressions like ‘symbolize’ and ‘reflect our culture’, so I used ‘a mirror of the time’. I wanted to express that culture is a mirror of time, which could be consistent with the meaning of ‘symbolize’ and ‘reflect’” (1-S11-4). 1-S11-4 regarded mirror as something that matches or expresses the qualities, features, or feelings of another person. This conventional metaphor use was also motivated by the participant's consciously thinking about metaphor in L1. The metaphorical sense of “mirror” is the same in both Chinese and English culture, making this an example of positive transfer from L1 to L2.

(55) visual [visible] hand of government...invisual [invisible] hand of the market

R: Good, how about the use of “visual hand” and “invisual <invisible> hand”?

1-S2-3: At that time?

R: Yes. How about the use of “hand”? What were you thinking at that particular moment?

1-S2-3: It was just visual hand and invisible hand. “hand” here is “hand”, but what I was thinking at that moment was not the literal meaning of hand, but the meaning of controlling and regulating.

R: Okay, anything else? In your mind?

1-S2-3: No, it was mainly based on the politics knowledge that I learned in senior high school, then I just applied it to my English writing in a verbatim manner.

Recall comments on the use of conventional hand metaphor in example (55) also showed the influence of participant’s L1 knowledge. 1-S2-3 reported she had learned the fixed expressions “visual hand” and “invisible hand” in senior high school from some classes on political theories. 1-S2-3 was familiar with both the literal and metaphorical meanings of “hand”. There is a direct equivalent about the metaphorical use of “hand” in Chinese when “hand” is metaphorically associated with “control and regulate”. 1-S2-3’s consciously thinking about metaphor in L1 cited in her recall comments showed that she had used metaphor thoughtfully by referring to metaphor knowledge in L1 when writing in L2.

Recall comments cited in examples (56) and (57) also involved multiple categories. The deliberate and thoughtful conventional metaphors were the results of intended communicative function of textual structuring, consciously thinking about metaphor in L1 and the use of some cognitive strategies in second language learning.

### 5.2.2 Recall comments on creative metaphors

The following examples (56) to (57) are about participants’ recall comments on creative metaphor use.

(56) the beats of desire in our chest are awakened

**R:** Yeah, you used “Once we want to waste money”, you wrote, “the beasts of desire in our chest are awakened”, so why you expressed like this at that particular time?

**2-S5-1:** ① I wanted to be more vivid. ② I just wanted to stress again that our desire, the importance of controlling that kind of desire. ③ Because what I wanted to say was that that desire was like a dreadful monster. If it were awakened, you would be out of control.

**R:** Okay.

**<2-S5-1 added some comments on the beast metaphor>**

**2-S5-1:** There was another key reason. ④ In this semester, I wanted to improve my writing performance a little bit. In fact, when I was writing <the beasts of desire>, I drafted and revised it several times. I had considered it carefully.

2-S5-1 showed her willingness and capability of discussing her intentions on using the beast metaphor to describe the negative effects of wasting money at the time of writing. Her thought reports reflected her deliberate metaphor choice based on her familiarity with the vehicle term “beasts”. With this deliberate and creative metaphor use, 2-S5-1 was intended to make the writing more vivid, to emphasize and argue on the importance of controlling desire and to achieve better writing performance in L2. The recall comments cited by 2-S5-1 further supported the function analysis of the systematic metaphor *DESIRE OF WASTING MONEY IS A DANGEROUS ANIMAL WITH VIOLENT ACTION* established from the linguistic metaphors contributing to a single metaphorical idea in 2-S5-1’s writing sample.

(57) love is like petrol to a car, battery to a player

**R:** Okay, how about the expression in the end of this paragraph, you said “petrol to a car, battery to a player”, could you still remember what you were thinking at that time by using the expression like this?

**2-S4-4:** It was, when I was using English to express myself, ① I worried that the readership might not understand my intended meaning. Maybe there was some of my own subjective understanding in it. ② I just wanted to mean that love is a strength that can move things forward, just like the function of petrol to a car and the batteries in a player. ③ The strength was dominating because it could make you alive and give you energy, and make you operate and work. This is what I was thinking.

**R:** So, <love is petrol to a car, battery to a player> was similar to the meaning of the first sentence of this paragraph?

**2-S4-4:** This was to summarize my topic <love is the invisible power>.

2-S4-4 reported about her focus of making herself understood by purposely referring the topic love to some familiar and concrete metaphor vehicles such as “car” and “player” via possible metaphoric thinking process in L1. The systematic metaphor *LOVE IS PHYSICAL FORCE DRIVING VEHICLES/MACHINES* establish from 2-S4-4’s extended metaphor use could achieve the persuasive power by emphasizing on the powerful strength of love. The metaphorical idea could also summarize the argument in a persuasive manner.

Participants’ thought reports in examples (56) and (57) showed that the desire to make the writing more vivid, to make oneself understood, to generate more emphasis and emotions, to persuade and the metaphorical thinking in Chinese were all factors that could trigger creative metaphorical language in L2 English writing. Recall comments on creative metaphors could invite various categories and provide evidence on my participants’ deliberate metaphor use. The comments like “I just wanted to mean that love is a strength that can move things forward, just like the function of petrol to a car and the batteries in a player” in example (57) showed 2-S4-4’s consciously thinking about metaphor in L1. 2-S5-1’s comments:

“I wanted to be more vivid. I just wanted to stress again that our desire, the importance of controlling that kind of desire. Because what I wanted to say was that that desire was like a dreadful monster. If it were awakened, you would be out of control”

in example (56) could support the function analysis that my participant could use extended and systematic metaphors to stress their viewpoints, to evaluate and to persuade, with deliberateness and possible metaphoric thinking in Chinese (see **Section 4.2**). The comments like “when I was using English to express myself, I worried that the readership might not understand my intended meaning” in example (57) showed that my participant might have made a conscious decision to use some metaphors, which were often in the form of similes, to make herself understood, and to persuade in the topic-based writing.

### 5.2.3 Recall comments on innovative metaphors and possible errors

In this section, I present examples of recall comments that could be related to the supporting evidence about the classification between innovative metaphors and possible errors, as explained in **Section 4.1.3**.

(58) single dog

**R:** In the first paragraph, you used “single dog” and you explained that you used it to describe a single person as poor as a dog. My question is when you were using an expression like this, what were you thinking about?

**2-S15-4:** You mean the expression “single dog”?

**R:** Yes, explain the expression “single dog” first.

**2-S15-4:** ① Firstly, I wrote according to the procedure of writing an argumentative essay, so I wanted to use an up-to-date and controversial issue to introduce my topic. Since the topic is breakup, ②so I thought about people often talk about somebody who does not has a girlfriend/boyfriend as “single (单身) dog (狗)”. And the clubs and societies in university often use it in the banners as a gimmick for publicity purpose. It seems to be a common phenomenon in China, So I used it here.

**R:** Um, if my understanding is correct, you were introducing the topic?

**2-S15-4:** Yes, ③I also wanted to arouse interest and I felt it was interesting.

**R:** So, based on your explanation, what were you thinking when you wrote “as poor as a dog”, to describe a person?

**2-S15-4:** ④When I wrote it, I was thinking for those people who are not Chinese, they might not understand the meaning of “single dog”. But I did not want my beginning paragraph to be a very long one. Because if I wanted to explain it in detail, I could use longer sentences. So, I thought that the expression “single dog” could refer to the fact that Chinese people often feel sorry for a person who always does not have a girlfriend/boyfriend and it was a simplest expression.

In example (58), the recall comments showed that the participant had the desire to try to make good use of L1 knowledge to convey intended meanings. With realizing the one-to-one translation from Chinese to English may cause confusion against the native English norms, the participant still chose to use the expression “single dog” for the purpose of attracting readers’ attention and arousing interest by using this simple and interesting expression at the very beginning of the essay. It is safe to say that my participants sometimes chose

metaphors because they thought expressions like these were the best way of describing something. 2-S15-4 also cited that she had extended the meaning of the Chinese metaphorical expression “单(dan)身(shen)狗(gou)” to its word-for-word translation in English—“single dog”, to achieve communicative functions at the thesis stage of the argumentative writing. The metaphor function of attracting attention and arousing interest had coincided with the rhetorical goal of introducing the topic at the very beginning of the text in a dramatic way. The deliberateness of metaphor use could be evident in 2-S15-4’s conscious reflection on her metaphor choice of “single dog”. In this case, my participant had been able to deliberately find the best way to convey meanings via attention/interest-arousing and novel expression, though which might be received as a mistake. So, “single dog”, which involved multiple categories of intended communicative functions and metaphorical thinking in Chinese, was regarded as a deliberate and innovative metaphor.

(59) three carriages of economy

**R:** I noticed that you used the expression “three carriages of economy”, when you were using the word “carriages”, what were you thinking about?

**1-S1-1:** Because what I was thinking at that moment was that the topic was economy and spending, and then ① I came up with the same Chinese expression that I learned in senior high school. I was a student of liberal arts when in senior high, ② so I recited the knowledge point in the politics class saying that the three carriages <horse-drawn vehicles> that can pull economy forward are consumption, export and investment, so I wrote this word <carriages>.

Similar with the recall comments in example (58), the recall comments on three “carriages of economy” indicated a word-for-word translation of L1, with consciously thinking about metaphor in L1. Consumption, export and investment were compared as the three horse-driven vehicles that could pull economy forward. Both 1-S1-1 and 2-S15-1 had cited the influence of metaphorical expressions they were familiar with in L1. My participants’ deliberate use of metaphors that borrowed from their L1 at the strategic stages in their argument writing, such as introducing the topic in an attractive and memorable way (58) and presenting the background for discussion in a dramatic way (59), could be regarded as innovative ones. These deliberate



innovative metaphors could be evidence of participants' awareness and desire for more memorable and interesting vocabulary in L2 by referring to their L1.

Below are two examples of recall comments on possible errors.

(60) moonlight

**R:** Okay, let's move on to the word "moonlight".

**R & S:** Hhhhh

**R:** Why did you use this word?

**2-S5-1:** ① Firstly, this essay reminds me of the word in Chinese “月(yue)光(guang)族(zu)”, so ② I baidu it. Hhhhh

**R:** Baidu, so you searched it online?

**2-S5-1:** Yeah.

**Note:** “Baidu” is a search engine used in mainland China, similar to “Google”.

(61) fertilize

**R:** Okay, next, you used the word “fertilize” again, when you used it for the second time, what were you thinking about?

**2-S1-1:** When I was drafting this essay, I did not think much in detail. I just used the word (“fertilize”) for one time, so I may have the feeling to use it again. When saying “培(pei)养(yang)” in Chinese, I came up with the word “fertilize”.

In examples (60) and (61), my participants reported that they just directly translated the Chinese expressions into English. 2-S5-1 had used language reference materials such as dictionaries or, as O'Malley and Chamot (1990) write about learners' cognitive strategies, “used the first language as a base for producing the second language (O'Malley and Chamot, 1990, p.120). Recall comments like these showed that negative L1 transfer, reflected as simple direct translation without much thinking, could result in some communication breakdowns. As discussed in **Section 4.1.3**, the incorrect use of “moonlight” had been repeated 6 times by 5 of my participants, and the incorrect use of “fertilize” had been reused 3 times by 2-S1 in three different writing samples. Teachers' feedback could be helpful when learners repeatedly producing metaphor-related errors. Instances of metaphor-related errors were not

common in my data. In these cases, my participants might overgeneralize the meanings of certain words and break the grammatical rules about certain collocations because of their limited language knowledge in L2.

The self-reports discussed above showed that my participants were able to articulate their thinking processes during their writing at length and they were willing to discuss their thoughts with researcher. I did not get the impression from the way they spoke, and for the amount of time and thought that they contributed, that they were simply trying to please me. Participants' deliberateness of metaphor use can be captured when they were reflecting on some of creative or innovative metaphors.

### 5.3 Teachers' perceptions on students' metaphor use

As mentioned in Chapter 3, I have interviewed two of my participants' English teachers: Teacher A and Teacher B, to obtain some background information for my research (see **Appendix 3**). In response to the interview questions on marking criteria and on metaphor use in students' topic-based argumentative writing, Teacher A and Teacher B had talked about their preferences on sentence structure, word choices and grammar rules. Teacher A said:

**Teacher A:** My evaluation form used in writing is broken down in five parts. [...] Content, sentences in paragraph, grammar and spelling, format and capitalization and punctuation, and those are the five areas, and they can gain, let's say, 20 points in each area, 100 points. [...] The most important part, I probably write here, sentence structure and word choice.

**Teacher A:** To be completely honest with you, to me, it <metaphor> makes very interesting reading, sometimes when I read something like these, I will smile about it, but I don't pay a lot of attention to it. [...] you know, I focus more on the grammar side, since there a huge gap in that part of English. Even though they know the grammar rules, but they are easy to translate. [...] you know, we had a unit, we just talked about different parts of speech, and of course, metaphors, the figure of speech and we talk about that, use some, good, but never grading on that kind of thing.

Teacher B said:

**Teacher B:** First is the structure of an argumentative essay, including how many paragraphs should be involved and which words should be used in different paragraphs. Second is the central viewpoint and argument, concise but profound. Third is the grammar rules, etc.

**Teacher B:** Right. I do not pay attention to metaphor. In literature works, there may be more metaphors. But in argumentative writing, you need to express their viewpoints objectively and persuasively. [...] As for the use of some metaphorical expressions, if they are not Chinglish and can show the language variety and proficiency level, which is good, I think. But if they are just non-native-like word-for-word translations from Chinese to English, that will be a weak point.

As noted in Chapter 3, Teacher A is a native speaking English teacher from America, who was responsible for the teaching of academic writing module to my participants. Teacher B is a non-native speaking English teacher from mainland China, who was just responsible for the two TEM-4 writing training sessions for my participants' high-stake exams preparation. Teacher B said that he was less experienced in English writing teaching. It seemed that both of the two teachers did not pay attention to metaphors in students' argumentative writing. They focused more on the grammar side in their teaching and grading process. Metaphor was not included in their marking criteria. The background information provided by the two teachers showed that my participants were not taught or trained to use metaphors when they were participating in my research. Teacher A mentioned about one unit on figure of speech in his academic writing module, but he said:

**Teacher A:** I understand the need to expose them to different ideas and different philosophies and different ways of teaching. I get that. [...] We just run out of time, there is so much material to cover, you have to choose, where do you need to focus your time on, so time is just limited.

It could be found that, as what MacArthur (2010) has found in her research with Spanish university advanced learners of English, my participants had received somewhat limited knowledge about metaphor and other figures of speech when they attended the writing module and TEM-4 writing training session and wrote the written texts which might be collected as my written data.

## 5.4 Summary

The findings of written data in Chapter 4, and the results of students' SRI interview analysis showed that my participants could produce conventional, creative, innovative metaphors with possible deliberateness, and some errors in argumentative essays. Possible reasons that might trigger learners' metaphor use in second language writing are:

- Participants' metaphor awareness
- Cognitive strategies in second language learning
- Consciously thinking about metaphor in L1
- Desire for better writing performance, native and artistic expressions, and varied vocabulary
- Various intended communicative purposes such as attention/interest arousing, introducing viewpoints, evaluating, and developing comprehensible, coherent and persuasive arguments

Participants' conscious reflections on metaphor use cited in their recall comments demonstrated that my participants were capable of discussing their (metaphorical) thought reports fluently and using metaphor knowledge in L1 to facilitate a writing task. The results of interview data analysis also provided some of corresponding supporting evidence to the metaphor analysis in Chapter 4, such as the role of deliberateness in distinguishing innovative metaphors from errors. The results of interview analysis also showed that students may have more awareness than most teachers realize in terms of metaphor use. The background information generated from two interviews with teachers could offer some insights about what teachers think about the role of metaphor in second language teaching and learning. My participants' metaphor use with possible deliberateness or errors are likely to be overlooked by teachers.

My interview analysis might indicate students' metaphor knowledge and metaphor awareness to some extent. But I could not say that the 21 students I interviewed have had a special interest in metaphor use, based on this present investigation. The reasons are, first, when visiting classrooms and doing paperwork, I had tried to avoid mentioning too much information about

metaphor, for the purpose of avoiding invented favorable answers which are not the students' online thinking about their writing processes. Second, when recruiting volunteers, I did not tell students what I would focus on during the interview processes. All the students needed to do was to tell me about their free time in the emails for sending their e-copies, if they were willing to participate in the following-up interviews and to talk about something about their writing. In **Appendix 21**, I listed 3 emails that my students had responded freely to me with their free time and willingness, or unwillingness, for participating in stimulated recall interviews. The three emails had been sent from 2-S17-1, 2-S5-1, and 2-S12-2. I had translated some contents expressed in Chinese into English. Students' real names and email addresses had been anonymized for ethical considerations. My interviewees did not express their special interest in metaphor use in email exchanges, nor did they express the special interest during the interviews.

In the following chapter, discussions on findings from metaphor analysis and interview analysis will be presented.

## Chapter 6 Discussion

In this chapter, I discuss five points on the basis of the findings obtained from my written data and interview data. These are: 1) metaphors and parts of speech; 2) novelty, creativity, deliberateness and L1 influence in metaphors; 3) Communicative functions of extended metaphors; 4) The role of stimulated recall interviews; and 5) Chinese English majors' metaphoric competence in L2.

### 6.1 Metaphors and parts of speech

Noun metaphors, verb metaphors and preposition metaphors are the three most frequent parts of speech in the metaphors identified in my written data. These three are discussed in previous metaphor research (e.g., Chapetón-Castro and Verdaguer-Clavera, 2012; Nacey, 2013). Metaphors are also lexicalized through adjectives, adverbs, and multiword units such as phrasal verbs, spaced compounds and polywords. Minor parts of speech, such as determiners, conjunctions, and pronouns, were ignored in my metaphor identification and analysis in terms of my research focus, but this does not mean that metaphors are not expressed through them. Metaphor density and metaphorical units for further analysis will differ because of different methods of metaphor identification and different research purposes.

The quick comparison of metaphor density across the four writing topics indicated that the topic of campus love triggered more linguistic metaphors than the others. Metaphor type-token ratios calculated across four writing topics and five major word classes have further indicated that noun metaphors, verb metaphors and adjective metaphors used under the topic of campus love have greater lexical variety. The most reused metaphorical nouns—"icons", and the most reused personification metaphors realized through the verb "help", were triggered by the writing topics "Pop Icons and Heroes and Will Online Medical Treatment Bans Help", respectively. Metaphor density and the lexical variety of metaphorically used words in texts may both depend on writing topics. Nacey (2020) found that "some topics may also trigger more metaphor than others [...]"

this would be true particularly when the topic is abstract” (Nacey, 2020, p.296).

The communicative functions of metaphors: ideational, interpersonal, and textual are evident in my written data in terms of nouns, verbs, prepositions, adjectives, adverbs, phrasal verbs, and spaced compounds. Preposition metaphor “in” is the most reused one. The preposition metaphors show the lowest lexical variety in all written data, suggesting that preposition metaphors are often highly conventional; this is also a consequence of prepositions being a closed word class (Littlemore, et al., 2014). In an argumentative essay, various nouns and verbs are more likely to be metaphorically used for expressing and supporting viewpoints. Vague nouns such as “way/ways” are the second most reused noun metaphors, which are common and conventional in argumentative writing, usually for discussing claims and supports from different perspectives.

## **6.2 Novelty, creativity, deliberateness and L1 influence in metaphors**

### **6.2.1 Conventional metaphors, L1 influence and deliberateness**

Linguistic metaphors have been further classified as conventional and unconventional by involving five parameters, which are conventionality, L1 influence, deliberateness, novelty and creativity. Conventional metaphors are identified when both the basic meanings and contextual meanings of lexical units can be found in standard English dictionaries used in this current investigation. My participants have shown their ability to produce conventional metaphors, sometimes with possible deliberateness, to convey meanings and structure textual coherence in topic-based argumentative writing. Conventional metaphors account for the majority of linguistic metaphors identified (4,672 out of 4,706 instances) in my written data. The metaphorical force of highly conventional metaphors is often not as noticeable as those conventional metaphors with possible deliberateness. Highly conventional metaphors, such as “in my point of view” (1-S18-1) and “from my perspective” (1-S17-2), also contribute to packaging information and structuring cohesion in written texts.

The deliberateness in metaphor use, identified through “A=B” forms, metaphor flags, and the thought reports cited in learners’ recall comments, shows that

positive conceptual transfers from L1 to L2 are often involved when conventional metaphors are used to serve intended communicative functions. Conventional semantic extensions, such as “financial problems are physical diseases” (2-S1-1), “pop icons are drugs” (2-S8-4), “life is war” (1-S20-1), “love is fire” (2-S8-2), often occurred at the strategic stages in argumentative texts. These deliberate and conventional metaphors, as suggested by some metaphor researchers (e.g., Moon, 1998; Semino, 2008; Goatly, 2011; Philip, 2017) based on their data, often carry out various communicative functions within the texts (e.g., to re-conceptualize, evaluate and persuade). Deliberateness found in my written data is also dependent on the specific contexts in the writing samples (Nacey, 2013).

Participants’ recall comments on the use of conventional metaphors, such as “door”, “mirror” and “hand”, analysed in Chapter 5, indicate that the positive transfer from L1 to L2, when there are no cross-culture differences between L1 and L2, is a major source for the realization of conventional metaphors. Participants’ consciously thinking about metaphor in L1, such as viewing doors as opportunities, cultural icons as mirrors, hand as physical action of controlling, and love as fire, could contribute to the intended communicative functions of metaphor: ideational, interpersonal, and textual, in the argumentative texts.

### **6.2.2 Metaphorical creativity, L1 influence and deliberateness**

Results from written data and interview data indicate that creative metaphors are situations where my participants consciously refer to a Chinese expression and a metaphorical concept in Chinese to purposefully convey meanings or serve a range of communicative functions in strategic stages of an argumentative text. Creative metaphors often involve extended metaphors, from which systematic metaphors can be established. The novelty of corresponding lexicalizations of certain metaphorical concepts and the deliberateness reflected by metaphor flags or learners’ intentions cited in the thought reports are also criteria for deciding a creative metaphor use. For instance, in example (25), the lexicalization of the systematic metaphor *LOVE IS PHYSICAL FORCE DRIVING VEHICLES/MACHINES*: “love is like the petrol to a car, battery to a player” is decided as new and creative by using the



concordance tool and searching to see whether previous examples can be found in a large corpus via Sketch Engine. The deliberateness of this creative metaphor is straightforward because of the form of a simile. Moreover, as shown in example (58), 2-S4-4 cited her conscious thinking of “love is a strength that can move things forward, just like the function of petrol to a car and the batteries in a player” in Chinese, and her purpose to emphasize and summarize the viewpoint on the positive side of love at the end of the argument stage in the text, i.e., “love is the invisible power” (2-S4-4). My participants’ creative metaphor use involves novelty, deliberateness, extension, and the manipulation of existing everyday words in unconventional ways, for conveying meanings confidently and serving intended communicative functions.

In contrast with Nacey’s (2013) findings on the correlation between L1 transfer and deliberate metaphor use, based on her written texts produced by a group of advanced Norwegian learners of English, I found that my participants seem able to consciously manipulate their L1 knowledge, to reconceptualize, evaluate and to persuade in their L2 argumentative writing. Both my text analysis and interview analysis have indicated my participants’ metaphoric competence in L2. The positive conceptual transfer from L1 to L2 can trigger both conventional and creative metaphors. The interview analysis can be a useful tool to know more about learners’ intentions and purposes when writing certain words and phrases. The correlation between L1 transfer and deliberateness found in my research can indicate my participants’ cognitive strategies, metaphoric thinking in L1, and efforts made for all possible means of expressing meanings and creating effects in L2 writing, which contributes to the knowledge of metaphor production in L2.

### **6.2.3 Innovative metaphors, errors, L1 influence, and deliberateness**

As noted above, normally, metaphors used in written texts may trigger meaningful figurative mappings and fulfill communicative functions in texts, especially for those conventional and creative ones. Innovative metaphors and possible errors may occur when my participants had tried to translate directly from Chinese into English. This does not mean that all the direct translations from Chinese into English will be received as mistakes. For example, the

expression “drown one’s sorrow in wine” in example (37) was a direct translation from Chinese to English, on the basis of 1-S15-4’s thought reports on translation and resourcing, and it seems to be comprehensible to English speakers, who have the related expression “drown your sorrows”. Here, the role of dictionaries and other resources in learners’ metaphorical production and language learning process, may deserve attention and further investigation. Novelty and deliberateness do not seem to play any role in this example.

As suggested by Nacey (2013, 2017), the notion of deliberateness can help in distinguishing creative metaphors from errors. I found deliberateness is also helpful in distinguishing the fuzzy between novelty and errors in my participants’ written texts. To be specific, my participants’ innovative metaphors often involve consciously thinking about metaphor in L1 and seem to purposefully serve intended communicative functions at strategic stages in texts. “Single dog” used in examples (59) and “three carriages of economy” used in example (60) are two word-for-word translations from Chinese into English. The deliberateness of these two metaphorical expressions can be sensed from the “A=B” form and participants’ thought reports on their thinking of a metaphorical idea in Chinese. They also have reported some intended communicative functions, such as attracting attention and arousing interest by using “single dog” and introducing the positive side of spending by using “carriages” at the very beginning of the argumentative texts. Teacher A, who had reflected on some of the students’ metaphor use in the follow-up interview, including one possible novel metaphor and an error, said:

**Teacher A:** Look at this, “the three carriages of economy are consumption, export and investment”, okay. You know, just taking into that context like this, I don’t necessarily say anything <about the expression “three carriages of economy”>.[...] “The three carriages of economy”, to me, what carriages our economy, what moves our economy forward.

**Teacher A:** well, let’s say, look at [...] “to fertilize a college student”. [...] I understand what they want to say, but that’s the wrong word to use.

It is clear that Teacher A’s perceptions cannot represent what all English teachers will think. But his responses are useful for me to know more about teachers’ awareness and understandings towards students’ metaphor use in

my fieldwork. His perceptions on the use of “carriages” are not the decisive reasons for me to distinguish novelty from errors in L2 learners’ texts. In my research, the decision about how to identify novel or innovative metaphors was made with reference to possible deliberateness, metaphoric thinking in Chinese, and intended communicative functions. Word-for-word translation from L1 to L2 does not always result in errors, since participants are active in using learning resources and they were also able to purposefully using L1 to facilitate L2 production. Learners’ efforts made in the process of learning should be acknowledged for better teaching and learning, though some metaphors deliberately used by them will be received as mistakes on part of the readership.

Typical examples of errors are the verb metaphor “fertilize”, and the noun metaphor “moonlight” explained in the two finding chapters. The participants’ recall comments obtained from the stimulated recall interviews showed that simple word-for-word translation from L1 into L2 without much thinking was the major source of this kind of metaphor-related errors. The participants did not pay much attention to possible different cultural connotations or collocation patterns between L1 and L2 language (Liu, 2019), and they also did not intend to achieve particular effects when they chose certain words or expressions. They just directly translated and wrote down during their writing processes. It is likely that errors influenced by L1 can cause communication breakdowns for the targeted readership. It seems that L1 influence, positive or not, can make great contributions to learners’ production of both conventional and unconventional metaphors.

Metaphor has been a powerful tool for communication (Steen, 2008). Background information from teachers’ interviews shows that my participants’ metaphor use in L2 English writing is not the result of a pedagogical focus on metaphor, but a natural response to writing tasks. Deliberate conventional, creative, and innovative metaphors described in this investigation indeed helped the learners to convey their meanings to some degree when my participants lacked more complicated vocabulary under certain communication needs. Possible errors, which are not common in my written data, deserve both teachers’ and students’ attention. For instance, 2-S1’s repeated errors about

the verb “fertilize” in three different writing samples could indicate the need for teachers’ feedback.

### **6.3 Communicative functions of extended metaphors**

It is common to encounter some stretches in authentic texts containing a cluster of linguistic metaphors in close proximity, often talking about the same topic. “Metaphor clusters often stand out and draw attention to themselves because they are used in strategic positions which can be related to specific rhetorical aims” (Dorst, 2017, p.181). One particular type of metaphor clusters is focused on, which is the extended metaphor, involving “a single metaphoric idea across a substantial portion of text, or even an entire text” (Denroche, 2018, p.6).

In this investigation, functions of extended metaphors are analysed by taking the strategic moves and stages of an L2 argumentative essay (Hyland, 1990) into consideration. Similar to what Koller (2003) has found, on the basis of analysing metaphor clusters in magazine texts on marketing, I found that extended metaphors in the mid-texts, i.e., the argument stages, often serve the interpersonal function, such as developing persuasive arguments. The extended metaphors at the beginning, and at the end of participants’ argumentative texts, often occur on smaller scales compared to those in the middle parts. The bottom-up analysis of systematic metaphors built from extended metaphors, indicates that communicative functions of extended metaphors at the beginning of written texts often coincide with the rhetorical aims of the thesis stage, such as achieving a dramatic illustration and attracting readership’s attention, which are the ideational and interpersonal function. Extended metaphors in the end of texts can help participants to reinforce the proposition by “providing a prospective focus and widening the context” (Hyland, 1990, p.74). Participants can “drive the point home to the readership” (Koller, 2003, p.120) and achieve textual cohesion and persuasive power.

I also identified a number of examples of extended metaphors which appear to be deliberate. More than one systematic and metaphoric ideas can be found within the same text. For instance, in 2-S8-2’s writing sample, the systematic metaphor *LOVE IS ILLNESS* can be established from the extended metaphors

used at the argument stage for presenting and supporting standpoints. The systematic metaphor *LOVE IS FIRE* can be built from the conclusion stage to reinforce the central viewpoint and widen the context for evaluation and persuasion. This indicates that 2-S8-2 is able to deploy and develop different vehicle terms and metaphoric ideas to talk about the topic domain at different stages of the text, with stronger emotions and persuasive power. The *LOVE IS FOOD* metaphor across the thesis and argument stages of 2-S1-2's can also show a degree of participants' fluent metaphoric competence in L2 English (Danesi, 1992). Different systematic metaphors built from different texts also show participants' ability to facilitate change in perspectives on part of the readership, by directing the readership's attention and understanding to a different area of experience (Deignan et al., 2013). The function analysis of extended metaphors, on the basis of establishing systematic metaphors, provides more evidence about learners' metaphoric competence in L2, at both conceptual and linguistic level of metaphor (Littlemore, 2010; Nacey, 2013).

#### **6.4 The role of stimulated recall interviews: reasons behind metaphor use**

As discussed above, the stimulated recall interviews provided my participants opportunities to talk about their L1 influence during their writing processes, and other thinking processes that may result in conventional and unconventional metaphors. My participants' recall comments on conventional, creative, innovative, and potential errors, suggest that they are confident about their word choices during their writing processes, no matter whether the words and expressions are deliberately used to be metaphorical or not. My participants were able to report clearly about the efforts they had made to express their meanings during the writing, such as directly applying the metaphorical comparison from L1 to L2, using reference dictionaries and previous linguistic knowledge learned from teachers and classes, attracting reader's attention, and by consciously thinking about metaphor knowledge as a rhetoric device. For those innovative metaphors, it is reasonable to say that my participants do not anticipate their word choices will be received as errors during their writing. So, when my participant overgeneralized the meaning of a lexical word in Chinese to English without careful thinking, teachers' explicit feedbacks and

learners' metaphor awareness may be useful in developing lexical competence and the metaphoric competence in L2 (MacArthur, 2010).

The stimulated recall methodology has its limitations, but it is believed to be enough for this current investigation to ask participants in a face-to-face manner to know more about their thinking processes behind their writing. Useful pedagogical implications can be obtained. There are situations where a student may consciously decide to use metaphorical expressions to achieve communicative functions. Now that evidence has shown that metaphorical expressions, in forms of conventional, creative, innovative, and errors, are inevitable for students to meet the communicative needs in writing, it is necessary for teachers to realize this and offer corresponding feedback. The interesting insights obtained from the analysis of SRI data can offset the limitations of the stimulated recall methodology. My participants' thought reports cited in some recall comments on their metaphor use may also provide supporting evidence to the possible presence of certain metaphorical ideas in L1 or L2, such as "cultural icons as a mirror" (1-S11-4) and "desire was like a dreadful monster" (2-S5-1), in the writers' minds when they wrote certain words and expressions during their writing processes. This may contribute to, as Littlemore (2009) suggests, the implications of CMT in second language teaching and learning. L1 influence on L2 metaphor production and possible errors, is not "simply lexical interference from the L1, or as the result of a knowledge gap in the use of L2 idiomatic language" (Danesi, 2016), but also may be the result of conceptual transfers from L1 to L2 (Nacey, 2013).

### **6.5 Chinese English majors' metaphoric competence in L2 English**

I have discussed conventional and unconventional metaphors, various functions that metaphors can serve in L2 learners' argumentative writing, and participants' recall comments on their metaphor use during the writing processes. The discussion of findings from my research shows that metaphors are pervasive in intermediate Chinese English majors' second language writing. The ideational function, persuasive interpersonal function, and textual function of metaphors are often achieved, when metaphors are lexicalized in forms of

creative similes and extended metaphors at the thesis, argument, and conclusion stages of argumentative texts.

The findings about participants' creative metaphor production, deliberate or not, can be related to learners' ability of producing innovative and meaningful metaphors, which is one of the four dimensions for describing metaphoric competence (Littlemore, 2001b). The findings about some novel metaphors have shown that my participants may use metaphors that are not congruent with the culture of English language, though they may have the ability to think metaphorically in L1. This can be related to Danesi's (1992, 2016) claim about the conceptual fluency of L2 classroom learners, which is the process where my participants tend to think in Chinese as they write in English. Danesi (1992) suggested, based on his own research,

“students typically use target language words and structures as ‘carriers’ of their own native language concepts. When these coincide with the ways in which concepts are structured in the target language, then the student texts coincide serendipitously with culturally appropriate texts; when they do not, the student texts manifest an asymmetry between language form and conceptual content. What student discourse typically lacks, in other words, is conceptual fluency”

(Danesi, 1992, p.490).

Conceptual fluency and metaphoric competence are two pedagogical notions derived from CMT, which has attracted language educators to incorporate the notion of conceptual metaphor in SLA and the notion of metaphoric competence in L2 pedagogy (Danesi, 2016). Research on the actual teachability of conceptual metaphors and metaphoric competence in L2 classrooms has highlighted the importance of conceptual fluency and metaphoric competence in L2 learners' overall communicative competence (Li, 2009; Philip, 2010; Sabet and Tavakoli, 2016). Low (1988) suggests, in order to be seen as a competent language user, learners need to develop their metaphoric competence in the targeted language.

The findings from this current investigation show that my participants have been able to refer to some metaphorical concepts in their L1 to produce innovative

and creative metaphors in L2 for achieving expressive power. But participants' ability to write metaphorically in their targeted language, and sometimes report metaphorically about their writing processes, is still not recognized as a crucial ability to be developed in their L2 classrooms. The two teachers' responses in the interviews have shown that it is very likely that my participants' ability to creatively use metaphor for fulfilling communication needs in L2, will be neglected, because their traditional English curriculum for writing teaching does not include the metaphor knowledge as a cognitive tool for teaching and learning. My participants have also reported their desire for "native and artistic expressions" (2-S1-2) in L2 writing. As Littlemore and Low (2006b) writes, "control over metaphor is one of the essential tools for empowering learners to cope successfully with native speakers" (Littlemore and Low, 2006b, p.22). It is reasonable to constantly draw both teachers', learners', and policy makers' attention to the exposure of metaphor knowledge in L2 classrooms at tertiary level (Shirazi and Talebinezhad, 2013). The reinforcement of metaphor awareness, metaphoric thinking and cross-cultural awareness is essential in developing Chinese English learners' metaphoric competence and overall communicative competence in the targeted language.



## Chapter 7 Conclusion and implications

### 7.1 Summary of the research

This investigation on use, function and understanding of metaphors in Chinese university students' English writing, here, argumentative writing samples, is motivated by the fact that Chinese English majors have the need to learn to write argumentative writing, and to prepare themselves for writing in high-stakes language exams, or for further their studies in an English-speaking environment. Metaphors may present both opportunities and challenges for L2 learners (MacArthur, 2010; Littlemore et al., 2014).

The first research question was asked: In what ways do Chinese English majors use metaphors in their argumentative writing? Regarding this question, linguistic metaphors has been defined as words and phrases which are used to indirectly talk about the more abstract topic-related information in a more concrete sense by following the metaphor identification procedure developed by Pragglejaz Group (2007). In total, 4,768 words are identified as metaphorical from the 47,689 words in the 134 argumentative texts, which made up of 10% of the writing texts. Multi-word expressions: phrasal verbs, spaced compounds, and polywords, are treated as single lexical unit. In total, 4,706 linguistic metaphors were identified. The writing topic of campus love seems to trigger more metaphors, with more varied lexical variety. Noun metaphors, verb metaphors and preposition metaphors are more often found in my written data in terms of parts of speech focused on in this present investigation.

My operational typology of classifying conventional and unconventional metaphors offers five categories of metaphor use, by taking conventionality, novelty, creativity, deliberateness, L1 influence and possible errors into consideration. The five categories are: highly conventional metaphors, deliberate conventional metaphors, deliberate creative metaphors, deliberate innovative metaphors, and possible errors. Deliberateness has helped in distinguishing innovative metaphors from errors, and in determining creative metaphors in my written data. Creative metaphors often involve a cluster of

metaphors in close proximity, talking about a same topic in a text, which can distinguish innovative metaphors from creative ones. L1 influence seems to trigger both conventional and unconventional metaphors during the writing processes.

Turning towards the second research question: What are the functions of extended metaphors in Chinese English majors' argumentative writing?

Extended metaphors in argumentative texts are used:

- 1) to represent some relatively abstract concepts (e.g., love), in terms of metaphor vehicles which are more familiar or more concrete to the readership;
- 2) to re-conceptualize the topic by providing the readership with a different area of experience;
- 3) to convey evaluative emotions by highlighting or deemphasizing;
- 4) to persuade the readership to accept viewpoints or take actions by using "A=B" or "A is like B" comparisons at strategic stages (thesis, argument, conclusion) of an argumentative essay;
- 5) to structure coherence at certain stages of the argumentative text or throughout the whole text.

These five communicative functions can also be understood as ideational (1, 2), interpersonal (3, 4), and textual (5) function by using Halliday and Matthiessen's (2004) model of functions of language. Systematic metaphors identified from extended metaphors could be conventional (e.g., *LOVE IS FIRE*) or unconventional (e.g., *SAVING MONEY IS RESERVING WEAPON*). Extended metaphors may occur at different stages of an argumentative writing and coincide with the rhetorical goals of certain moves and stages, contributing to the cohesion and persuasive power of the writing text as a whole. Extended metaphors have not been found to be in every writing sample because of individual differences and the impact of different writing topics. The conventional, creative, and innovative metaphors, with intended communicative functions, can indicate my participants' metaphoric competence in L2.

Stimulated recall interviews are conducted to answer my third research question: How do Chinese English majors report their thinking processes behind their metaphor use in argumentative writing? The interviews have been carried out within two days after the submission of writing samples on each writing topic, to ensure participants' recall accuracy as much as possible. In

total, 21 participants were asked in the interview processes in terms of their willingness and leisure time for participating in the individual face-to-face interviews. The recall comments on my participants' understanding of their metaphor use during the writing processes indicate that L2 learning strategies, such as using L1 as a base to facilitate L2 production, and referring to learning resources like dictionaries, are the major triggers for both conventional, and unconventional metaphors. My participants' thought reports cited in their recall comments indicate that they have been able to consciously think about metaphor in Chinese and to purposefully meet communicative needs in L2 writing. The deliberateness in metaphor use, and the function analysis of metaphors based on written data, can both be evident in recall comments on corresponding metaphor use.

My participants are able to speak confidently and fluently in Chinese, and sometimes in English, about their thinking processes behind word choices, such as their cognitive strategies, metaphoric thinking in L1, and their desire for achieving communication goals in argumentative writing texts. 1 out of the 21 students who has participated in the interview process speaks clearly about his metaphor knowledge of using metaphor as a rhetoric device in writing.

The background information obtained from the follow-up interviews with Teacher A and Teacher B indicates that metaphor is not the focus for writing teaching and grading in their classrooms. It seems that students have more awareness than teachers concerning the manipulation of metaphors in topic-based English writing. The two teachers had paid very limited attention to metaphors in their teaching practices.

It has been found that metaphor is pervasive and Chinese university students may consciously use metaphor (as a rhetoric tool) to persuading the readership, such as re-conceptualize ideas, attracting attention, conveying evaluations, and encouraging practical actions. My participants were not taught and trained to produce metaphors when they were participating in my research. Still, they have showed their ability to produce some interesting metaphors to fulfill their communication needs in argumentative essays. Errors are also inevitable.

## 7.2 Contributions of the research

The first contribution of this descriptive research is to use stimulated recall methodology to ask learners' thinking processes behind their metaphor use during their writing processes, which can further support the text analysis of metaphor use and metaphor functions. Deliberateness in metaphors identified in text data can be evident in learners' recall comments on some of their metaphor use. The communicative functions of metaphors analyzed from text data can also be supported by learners' intentions verbalized through recall comments. To date, there has been limited number of metaphor researchers that have been able to ask L2 learners about their thinking processes behind metaphor use. Little research has adopted stimulated recall methodology to examine Chinese English learners' thought reports around their conventional and unconventional metaphor use in L2 writing. My way of using stimulated recall interviews can fill this gap and leave enough room for participants to talk about their intentions and desires on metaphor use in topic-based English writing. With reflecting on their metaphor use in writing, participants will know more about their L1 influence on L2 metaphor production, and the role of cognitive strategies in L2 learning. The stimulated recall sessions may be awareness raising (Lindgren and Sullivan, 2003) and provide students with opportunities to notice their conventional and unconventional language use and corresponding effects in the targeted texts.

Second, interviews about learners' intentions can also be a useful tool for exploring the deliberate metaphors used in L2 learners' texts, such as the correlation between deliberateness and L1 influence, and the functions of deliberate metaphors used in L2 English. In addition, participants' recall comments may provide proof that some metaphorical ideas are not only in the researcher's analysis, but also may present in the participants' minds (e.g., *LIFE IS WAR*). This may contribute to the rationale for incorporating CMT and the notion of metaphoric competence in L2 pedagogy and in communicative competence pedagogy (Littlemore, 2009; Danesi, 2016; Piquer-Píriz and Alejo-González, 2019).

Third, my proposed typology for looking into metaphors in Chinese English

learners', here, Chinese English majors', argumentative texts in terms of the interaction of five parameters: conventionality, L1 influence, deliberateness, creativity, and novelty, can contribute to the growing body of knowledge about how metaphors are used in L2 learners' English writing. One of the contributions of my research is to show that some word-for-word translations in metaphors produced by my participants are better understood as innovative and meaningful metaphors, by acknowledging participants' efforts consciously made for finding the best way of expressing meanings during the writing processes. Deliberate innovative metaphors, instead of errors, indicate participants awareness of creating new meanings from existing common words, with possible conceptual transfers, which can be an important step, or strategy, in L2 learning. Investigation on possible deliberate metaphors via learner interviews may contribute to metaphor research in L2 learners' texts by involving a wider range of L2 writers and their verbalized intentions.

### **7.3 Implications of the research**

#### **7.3.1 Pedagogical implications**

My participants' recall comments on their conventional, creative, and innovative metaphor use, and possible metaphor-related errors, will enable teachers to know more about learners' real intentions of choosing some words and expressions during their writing processes. Chinese university students indeed have the tendency to consciously use metaphors to serve a range of communicative goals in their argumentative writing, such as making their writing more vivid, attracting attention, arousing interest, achieving idiomatic and artistic expressions, and achieve persuasive power. The situation where participants explicitly reported the metaphor knowledge, as a rhetoric tool, in the interview process is rare (1 out of the 21 interviewees). This does not mean that other students who did not report their metaphor awareness in the interviews, and who did not participate in the interview sessions, do not have awareness of using metaphors as a useful tool. The interviews with both students and teachers involved in my research have shown that teachers may not realize much about students' awareness concerning metaphor use in topic-based writing. Students' metaphor use in L2 should receive more attention.

When students have made conscious decisions to use words and expressions in order to achieve certain communicative needs in writing, it is important for teachers to realize this and offer corresponding feedback to facilitate appropriate metaphor use in specific writing context. As Littlemore et al. (2014) suggest, teachers' supporting feedback on L2 learners' metaphor use are needed, since errors may occur when learners try to use some words in new ways. It can be helpful when language educators are more tolerant of learners' innovative or creative metaphor use (Nacey, 2017). The reason is that learners may not recognize that some of metaphor use will be received as errors and they may just think confidently that what they have written is the best way of conveying their meanings and serve intended communicative needs. Teachers' feedback is essential to make the actual learning happen, especially when there are repeated errors.

The findings of this research are hoped to be applied into the practical writing teaching practices at tertiary level, and to help teachers, teaching material designers, and policy makers gain more insights about the importance of integrating explicit metaphor knowledge into writing teaching and writing textbooks. This is in line with Low's (1988, 2020) influential work on the importance of metaphor in language teaching, such as designing metaphor-related instructional programs and teaching materials.

Participants' desire for native/idiomatic/artistic language use cited in recall comments indicates that it can be helpful for teachers and policy makers to include metaphors in the marking criteria for both daily teaching and high-stakes language exams. It is also reasonable for teaching material designers to introduce metaphor theories to the mainstream English curriculum content design. Learners' metaphoric competence in L2 can be developed via various teaching practices, such as guiding students to use metaphors for organizing an argumentative writing text, to use metaphors to convey viewpoints dramatically and argue persuasively, and to correct metaphor-related errors via necessary feedback and metaphor-awareness raising activities. Metaphor is far more than a rhetoric tool. The development of learners' metaphoric competence in L2 is essential for learners' overall communicative competence in L2.

### **7.3.2 Implications for L2 learners**

Findings from this research may also generate useful implications for Chinese English learners to reflect more on what metaphor is and why metaphor matters in their language learning process. Metaphors have been challenges for L2 learners since they are not as competent as a native language user. The inspiring thing is my participants have demonstrated their ability to use metaphors creatively in their argumentative writing. It will be helpful for learners to reflect regularly about their metaphor use and avoid simple direct translation and repeated errors in the learning process.

L1 influence can be a useful strategy for facilitating creative and meaningful metaphors in L2. Learners' awareness in terms of cross-cultural differences should be improved, which is important to their conceptual fluency, metaphorical competence, and communicative competence in the targeted language. In terms of the role of learning resources in L2 metaphor production, such as the use of dictionaries, the monolingual dictionaries are preferred since Chinese may not always be translated into English evenly.

### **7.4 Limitations of the research**

This descriptive research is a relatively small-scale study. The text data and interview data collected by the researcher may not represent all Chinese university students' use, function and understanding of metaphors in L2 writing. But I believe that limitations like these are less important compared to the findings and insights gained from textual analysis and interview analysis.

The stimulated recall methodology also has its limitations. First, the researcher found that there were students who were somewhat shy and did not get used to expressing what in their minds verbally. Second, the participants' might speak favorably for pleasing the researcher or just articulate something that did not belong to their thinking during that particular moment of the writing processes, i.e., inaccurate reporting on the part of participants (Gass and Mackey, 2000, p.84). To minimize the limitations of stimulated recall, the time interval between the writing task and interviews have been controlled within two days to ensure the recall accuracy to an acceptable degree. The interviews have been kept on

track by strictly following the interview protocol for stimulated recall interviews.

This research focuses on the intermediate Chinese English learners' metaphor use in written texts, and not all the 39 participants were asked in the following stimulated recall interviews because of the restriction of some objective conditions. It is reasonable to say that when more learners at different proficiency levels are involved, more inspiring cases of metaphor use and recall comments on thinking processes can be obtained. In addition to extended metaphors, the investigation on metaphor clusters in Chinese English learners' written texts can be explored in a more comprehensive way by using some up-to-date methods of identifying metaphor clusters (e.g., time series analysis).

### **7.5 Research directions for future research**

There are some recommendations for future research directions.

First, the findings from metaphor analysis and interview analysis have shown evidence of Chinese English majors' metaphoric competence in L2. Further research can be conducted on the correlation between students' metaphoric competence and their overall performance in their English writing, to further explore that to what extent the acquisition of metaphors in L2 can be actually achieved by incorporating CMT to Chinese English learners in tertiary classrooms. In addition, the comparative study on Chinese university students' metaphoric competence in L1 and L2 will also be helpful to know more about the correlation between L1 metaphor knowledge and L2 metaphor production.

Second, as noted above, the application of stimulated recall methodology in analyzing Chinese university students' metaphor use and corresponding functions can serve as a starting point to explore learners' perceptions on their metaphor use in L2 writing. Future research can use this methodology to dig out more about the psychological processes concerning learners' metaphoric thinking and metaphoric language use. Teachers, as well as researchers, can use this method to explore what kind of instructions, feedback, and assessment framework that students need, to improve their metaphoric competence and communicative competence in L2.

Third, the impact of cultural differences between Chinese and English language



on the appropriateness of metaphor use in English writing is also worth investigating. The word-for-word translations from Chinese into English concerning metaphor use sometimes may turn out to be problematic in comprehension for the targeted readership. The investigation on cross-cultural similarities and differences on metaphor use in Chinese university students' writing may also contribute to the development of learners' conceptual fluency, metaphoric competence, and their overall communicative competence in the targeted language.

More attention can also be given to teachers' metaphor awareness and their perceptions on L2 learners' metaphor use, to explore the current status of metaphor in English teaching at Chinese universities. It seems that students' metaphor use in the targeted language for communicative purposes has not received enough attention from some English teachers. These teachers often traditionally focus on the lexical and grammatical dimensions of second language teaching and learning, and who do not recognize their students' conceptual fluency and metaphoric competence.

## **7.6 Concluding remarks**

My personal learning experience as an English major in China has motivated me a lot in this investigation viewing metaphor as both a powerful tool and challenges to L2 learners. This project provides me with great opportunities to look closely at metaphors used in Chinese English majors' argumentative writing, and also equips me with valuable knowledge and skills in doing metaphor research. Contemporary metaphor theories and reliable metaphor identification methods in authentic texts are of vital importance to my professional career. Useful insights from interviews have shown that L2 learners' efforts made for better communicative effects may result in conventional and unconventional metaphors. This may be overlooked by teachers, teaching material designers, policy makers and even learners themselves. Using stimulated recall interviews to talk with L2 learners about their thinking processes concerning metaphor use, this present investigation has aroused my great interest in becoming both a teacher and metaphor researcher in the near future.

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## Appendices

### A1. Ethical approval letter: the first application

The Secretariat  
Level 11, Worsley Building  
University of Leeds  
Leeds, LS2 9JT  
Tel. 0113 343 4873  
Email: [ResearchEthics@leeds.ac.uk](mailto:ResearchEthics@leeds.ac.uk)



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Qiuyun Lu  
School of Education  
University of Leeds  
Leeds, LS2 9JT

**ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee**  
**University of Leeds**

15 August 2017

Dear Qiuyun Lu

**Title of study:** The Usage and Function of Metaphor in Chinese English Majors' Argumentative Writing Genre  
**Ethics reference:** AREA 16-160

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 16-160 Research Ethics Application Form_Qiuyun_201030310.pdf	1	06/06/17
AREA 16-160 A5_Email_Seeking_Permission_from_Gatekeeper.docx	1	06/06/17
AREA 16-160 A6_Gatekeeper_Consent_Form.docx	1	06/06/17
AREA 16-160 A1_Research_Info_Sheet.docx	1	06/06/17
AREA 16-160 A2_Participant_Consent_Form.docx	1	06/06/17
AREA 16-160 A3_Participant_Consent_Form_for_Interview.docx	1	06/06/17
AREA 16-160 A4_Interview_Protocol.docx	1	06/06/17
AREA 16-160 Fieldwork_Assessment_Form_201030310_Qiuyun.pdf	1	06/06/17

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to [ResearchEthics@leeds.ac.uk](mailto:ResearchEthics@leeds.ac.uk).

Yours sincerely  
Jennifer Blaikie  
Senior Research Ethics Administrator, the Secretariat  
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

CC: Student's supervisor(s)



## A2. Ethical approval letter: the amendment application

The Secretariat  
University of Leeds  
Leeds, LS2 9JT  
Tel: 0113 343 4873  
Email: [ResearchEthics@leeds.ac.uk](mailto:ResearchEthics@leeds.ac.uk)



UNIVERSITY OF LEEDS

Qiuyun Lu  
School of Education  
University of Leeds  
Leeds, LS2 9JT

**ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee**  
University of Leeds

4 April 2018

Dear Qiuyun Lu

**Title of study:** The Usage and Function of Metaphor in Chinese English Majors' Argumentative Writing Genre  
**Ethics reference:** AREA 16-160 amendment March 2018

I am pleased to inform you that your amendment to the research application listed above has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 16-160 amendment March 2018 Amendment_form 20180319_Qiuyun Lu_201030310.doc	1	21/03/18
AREA 16-160 Research Ethics Application Form_Qiuyun_201030310.pdf	1	06/06/17
AREA 16-160 A5_Email_Seeking_Permission_from_Gatekeeper.docx	1	06/06/17
AREA 16-160 A6_Gatekeeper_Consent_Form.docx	1	06/06/17
AREA 16-160 A1_Research_Info_Sheet.docx	1	06/06/17
AREA 16-160 A2_Participant_Consent_Form.docx	1	06/06/17
AREA 16-160 A3_Participant_Consent_Form_for_Interview.docx	1	06/06/17
AREA 16-160 A4_Interview_Protocol.docx	1	06/06/17
AREA 16-160 Fieldwork_Assessment_Form_201030310_Qiuyun.pdf	1	06/06/17

Please notify the committee if you intend to make any further amendments to the original research as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to [ResearchEthics@leeds.ac.uk](mailto:ResearchEthics@leeds.ac.uk).

Yours sincerely

Jennifer Blaikie  
Senior Research Ethics Administrator, the Secretariat  
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

CC: Student's supervisor(s)

## A3. Sample interview questions for teachers



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### **Sample Interview Questions for Teachers**

The interviews will be conducted in either English or Chinese, which depends on the teachers' language preference. The sample questions for the researcher to ask teachers for more contextual information are as follows:

#### **Part 1: Getting ready**

1. Are you ready for the interview?
2. Do you have any questions?

#### **Part 2: Participant's information**

1. How old are you?
2. Where are you from?
3. How long have you been teaching Chinese English majors/ Chinese English learners English/English writing?

#### **Part 3: Sample interview questions**

1. How often do you give Chinese English majors who are in their fourth semester of undergraduate study argumentative writing assignments? In what way do they hand in their writing assignments?
2. Do you assign the argumentative writing tasks in accordance with the arrangements on the academic writing textbook? How many words do they need to write for each piece of argumentative writing?
3. How will you give feedbacks to Chinese English majors in terms of their argumentative writing assignments? When you grade those pieces of writing, what are the common criteria?
4. What is your opinion on the use of metaphorical language in argumentative writing?
5. What is your general impression on Chinese English majors' argumentative writing when taking the use of metaphorical language into consideration?

#### **Part 4: Closing questions/remarks**

1. Would you like to add anything?
2. Do you have any questions?

**Thank you very much for your help!**

## A4. Consent form for teacher's interview participation



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### Consent form for Teachers' Interview Participation

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** edql@leeds.ac.uk

**Thank you for reading the information sheet about the follow-up interview. If you are happy to participate then please complete and sign the form below. Please initial the boxes below to confirm that you agree with each statement:**

**Please  
Initial box:**

I confirm that I have read and understood the information sheet dated [21/03/2018] and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw of this project up to 21/06/2018 without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials, and will not be identified or identifiable in the report or reports that result from the research.

I agree for this interview to be audio-recorded. I understand that the audio recording made of this interview will be used only for analysis and that extracts from the interview, from which I would not be personally identified, may be used in any conference presentation, report or journal article developed as a result of the research. I understand that no other use will be made of the recording without my written permission, and that no one outside the research team will be allowed access to the original recording.

I agree that my anonymized data will be kept for future research purposes such as publications related to this study after the completion of the study.

I agree to take part in the follow-up interview. My email address is: \_\_\_\_\_

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Copies:** *Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, and the information sheet. A copy of the signed and dated consent form should be placed in the main project file which must be kept in a secure location.*

## A5. Sample email for seeking gatekeepers' permission



UNIVERSITY OF LEEDS

### Sample Email for Seeking Permission from the Gatekeeper

Date: XX, XX 2018

Dear Ms. XX/Mr. XX,

My name is Qiuyun Lu and I am currently doing a research project for accomplishing my PhD degree in the School of Education at University of Leeds. The project is funded by the University of Leeds and China Scholarship Council.

Subject to the approval given by the University of Leeds Ethics Committee, I will have the need to collect argumentative writing data from a number of Chinese English majors and will conduct interviews based on the collected writing data, aiming at providing an in-depth analysis about the students' common ways of using metaphors, the functions of metaphors in argumentative writing and students' awareness of using metaphors in argumentative writing.

I am writing to ask your permission to be allowed access to your department/your academic writing module to reach my potential participants for the purpose of giving out research information sheets, explaining my research to my participants and obtaining consents from my participants. This should not take a large amount of time and can be conducted at a convenient time and date to be arranged. All I will need is to arrange suitable time for me visit the two English classes in your department/ that are taught by you. I will need to visit each class for about three times in accordance with their timelines to hand in the hard copies of their argumentative writing assignments. During each visit, I will explain my research and seek for students' consent to offer me the electronic versions of their assignments and their willingness to participate in the follow-up interviews within the next two days.

All information from the writing data and interview data are kept strictly confidential and the data analysis results will be reported in my PhD thesis, academic journals or conference presentations, which will be available to all participants on completion.

My research findings obtained from the research data from the students' in your department/class will be fed back to you, which may generate implications for you to integrate proper metaphor knowledge into argumentative writing teaching, raise students' metaphor awareness and motivate students to consciously and effectively use metaphorical language in their argumentative writing.

If this is possible please could you E-mail me at [edql@leeds.ac.uk](mailto:edql@leeds.ac.uk) to confirm that you are willing to allow access to the English majors in your department/your academic writing class providing they agree to take part?


Yours sincerely,

Qiuyun Lu  
PhD candidate in the School of Education  
University of Leeds



## A6. University gatekeepers' consent forms

### A6-1. Head of the English Department



**UNIVERSITY OF LEEDS**

**University Gatekeepers Consent Form**

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** edql@leeds.ac.uk

Please tick to confirm your understanding of the study and that you are happy for your organization to take part and your facilities to be used to host parts of the project.

1. I, the Head of the English Department in NPU, confirm that I have read and understand the information provided for the above study on the participant information sheet. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organization and students/members in the research is voluntary and that they are free to withdraw up to 21/06/2018, without giving a reason and that this will not affect legal rights.
3. I understand that any personal information collected during the study will be anonymized and remain confidential.
4. I agree for our organization and students/members to take part in the above study.
5. I give permissions for the researcher to conduct research in certain classrooms with the consent of all students in the class.


---

Name of Gatekeeper: Tei ■ Date: 21.03/2018 Signature: Tei

Name of Researcher: Qiuyun Lu Date: 21/03/2018 Signature: Qiuyun Lu.

## A6-2. Teacher A's consent forms

### A6-2-1. Teacher A's consent form on 21/03/2018



**UNIVERSITY OF LEEDS**

**University Gatekeepers Consent Form**


**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** [edql@leeds.ac.uk](mailto:edql@leeds.ac.uk)


Please tick to confirm your understanding of the study and that you are happy for your organization to take part and your facilities to be used to host parts of the project.

1. I, the teacher of the academic writing module for fourth-semester English majors in NPU, confirm that I have read and understand the information provided for the above study on the participant information sheet. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organization and students in the research is voluntary and that they are free to withdraw up to 21/06/2018, without giving a reason and that this will not affect legal rights.
3. I understand that any personal information collected during the study will be anonymized and remain confidential.
4. I agree for our organization and students to take part in the above study.
5. I give permissions for the researcher to conduct research in my academic writing classrooms with the consent of all students in the class.

Name of Gatekeeper: W.L. Date: 3.21.2018 Signature: 

Name of Researcher: Qiuyun Lu Date: 03.21.2018 Signature: Qiuyun Lu.

## A6-2-2. Teacher A's consent form on 28/03/2018

  
**UNIVERSITY OF LEEDS**

**University Gatekeepers Consent Form**


**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** [edql@leeds.ac.uk](mailto:edql@leeds.ac.uk)

Please tick to confirm your understanding of the study and that you are happy for your organization to take part and your facilities to be used to host parts of the project.

1. I, the teacher of the academic writing module for fourth-semester English majors in NPU, confirm that I have read and understand the information provided for the above study on the participant information sheet. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organization and students in the research is voluntary and that they are free to withdraw up to 21/06/2018, without giving a reason and that this will not affect legal rights.
3. I understand that any personal information collected during the study will be anonymized and remain confidential.
4. I agree for our organization and students to take part in the above study.
5. I give permissions for the researcher to conduct research in my academic writing classrooms with the consent of all students in the class.

Name of Gatekeeper: D.L Date: 3-28-2018 Signature: 

Name of Researcher: Qiuyun Lu Date: 28.03.2018 Signature: Qiuyun Lu



## A6-2-3. Teacher A's consent form on 11/04/2018



UNIVERSITY OF LEEDS

### University Gatekeepers Consent Form

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** [edql@leeds.ac.uk](mailto:edql@leeds.ac.uk)

Please tick to confirm your understanding of the study and that you are happy for your organization to take part and your facilities to be used to host parts of the project.

1. I, the teacher of the academic writing module for fourth-semester English majors in NPU, confirm that I have read and understand the information provided for the above study on the participant information sheet. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organization and students in the research is voluntary and that they are free to withdraw up to 21/06/2018, without giving a reason and that this will not affect legal rights.
3. I understand that any personal information collected during the study will be anonymized and remain confidential.
4. I agree for our organization and students to take part in the above study.
5. I give permissions for the researcher to conduct research in my academic writing classrooms with the consent of all students in the class.

Name of Gatekeeper: W

Date: 4-11-2018

Signature: [Signature]

Name of Researcher: Qiuyun Lu

Date: 11/04/2018

Signature: Qiuyun Lu



## A6-3. Teacher B's consent form on 30/03/2018



UNIVERSITY OF LEEDS

**University Gatekeepers Consent Form**

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** [edql@leeds.ac.uk](mailto:edql@leeds.ac.uk)

Please tick to confirm your understanding of the study and that you are happy for your organization to take part and your facilities to be used to host parts of the project.

1. I, the teacher of the TEM-4 Writing Training session for fourth-semester English majors in NPU, confirm that I have read and understand the information provided for the above study on the participant information sheet. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organization and students in the research is voluntary and that they are free to withdraw up to 21/06/2018, without giving a reason and that this will not affect legal rights.
3. I understand that any personal information collected during the study will be anonymized and remain confidential.
4. I agree for our organization and students to take part in the above study.
5. I give permissions for the researcher to conduct research in my TEM-4 Writing Training session with the consent of all students in the class.

Name of Gatekeeper: Wan Date: 2018/3/30 Signature: Wan

Name of Researcher: Qiuyun Lu Date: 30/03/2018 Signature: Qiuyun Lu.

## A7. Research information sheet for Chinese English majors



UNIVERSITY OF LEEDS

### Research Information Sheet for Chinese English majors

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom Email contact: edql@leeds.ac.uk

#### Introduction

I am Qiuyun Lu, a PhD candidate from the School of Education, University of Leeds, in the UK. I would like to invite you to participate in my research project, which focuses on the language forms and language functions in your English argumentative writing and how you will reflect on certain specific expressions you have used in your writing. Before you give your consent to participate in my research which will be carried out in your university setting, it is important for you to fully understand the aim of my research and what my research will involve. Please take time to read the following information and feel free to raise any questions. Your participation in this project is not related to your academic future in your university. Take time to decide whether or not you wish to take part.

#### What is the purpose of the research?

My research aims to investigate how Chinese English majors use metaphorical language in their argument writing and how they report their thinking processes and awareness of using metaphorical language in their argumentative writing. My research will provide an in-depth analysis about the students' common ways of using metaphors, the functions of metaphors in argumentative writing and students' awareness of using metaphors in argumentative writing.

#### Why have I been chosen?

You have been selected to involve in this study because you are now in the fourth semester of your undergraduate study, which means that for the preparations of the TEM-4 national test in this semester, you will be given certain amount of argumentative writing tasks. For example, the teaching goal of the academic writing module you attend this semester is about argumentative writing. Your regular writing assignments will enable me to collect adequate argumentative writing data in an updated and natural way. In addition, the writing training module for TEM-4 test you will attend at the end of March 2018 will also provide you with one session for practicing argumentative writing.

#### Do I have to give consent?

Your participation in my research will be totally voluntary. If you decide to take part in my research, I will give you a hard copy of this research information sheet for your reference and ask you to sign your name on a participant consent form which will be regarded as evidence to show your willingness to participate in my research.

#### What will happen if I give consent?

If you give consent to participate in my research, first of all, you will need to send your electronic copies of your argumentative writing assignments to my email-box ([edql@leeds.ac.uk](mailto:edql@leeds.ac.uk)) each time you hand in the hard copies to your writing teacher before 5:00pm of that day. In addition, you also need to let me know whether you would like to participate the follow-up interviews within the next two days by emailing me before 5:00pm of that day. Then you will be randomly chosen to participate in the face-to-face interviews within the next two days. You are free to discuss with me via email exchanges to settle down the specific time for conducting interviews. You will be interviewed individually at each time in your university setting and the whole interviewing process will be audio-recorded and then transcribed into text data for further analysis. Each interview will last about 30-45 minutes.

The argumentative writing data will be used to investigate the usage and function of certain languages in argumentative writing and the interviewing data will be used to uncover your perceptions about your use of certain expressions in your writing. All the information obtained from you will be kept confidential and your real names will be anonymized. The data will be used ethically in my thesis, academic journals and conferences; and the data will be destroyed 3 years after the accomplishment of my PhD project. If you wish to withdraw from the study, you are free to do so until 21/06/2018. After this date, the data will be processed, and individual withdrawal will not be possible.

**Thank you very much for spending time on reading through the above information!**

## A8. Participant consent form



UNIVERSITY OF LEEDS

### Consent Form for Participation in Research

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** edql@leeds.ac.uk

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have understood the information and purpose about the project, as informed by the researcher on XX, XX 2018.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the project and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the project.	<input type="checkbox"/>
4.	I understand I can withdraw from the study up to XX, XX 2018 without giving reasons and that I will not be penalized for withdrawing nor will I be questioned on why I have withdrawn.	<input type="checkbox"/>
5.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymization of data, etc.) to me.	<input type="checkbox"/>
6.	If applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.	<input type="checkbox"/>
7.	The use of the data in research, publications, sharing and archiving has been explained to me.	<input type="checkbox"/>
8.	I understand that <b>no</b> other researchers will have access to the data I provided in the project.	<input type="checkbox"/>
9.	Select only <b>one</b> of the following: <ul style="list-style-type: none"> <li>• I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognized.</li> <li>• I do not want my name used in this project.</li> </ul>	<input type="checkbox"/>
		<input type="checkbox"/>
10.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

#### Participant:

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

#### Researcher:

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Signature

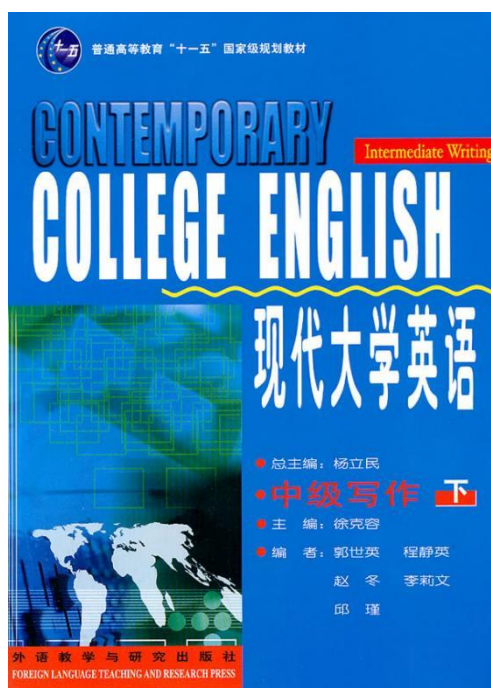
\_\_\_\_\_  
Date

**Copies:** Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, and the information sheet. A copy of the signed and dated consent form should be placed in the main project file which must be kept in a secure location.

## A9. Writing topics for argumentative writing assignments

### Writing topics in Teacher A's module based on the writing textbook

#### Textbook cover page



#### Table of contents for each unit

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### Suggested writing topics from Unit 1: Spend and Save

Writing an argumentative essay, in 350 to 400 words, on any of the following topics or one that you choose yourself but is related to the subject of the unit.

- 1) Should thrift be encouraged now that our personal income has considerably increased?
- 2) Should spending be encouraged to boost our economy?
- 3) To what extent should we encourage spending and saving?
- 4) Why is it necessary for college student to learn to budget their money?
- 5) Is it necessary for everyone even those in debt to save for the future?
- 6) To solve their money problem, what solution should college students chiefly

rely on? Increasing money in or decreasing money out?

Cited from the *Contemporary College English-Intermediate Writing* (Book Two), Yang, L. M. et al. (2014, pp:22-23)

### **Suggested writing topics from Unit 2: Campus Love—Pros and Cons**

Writing an argumentative essay, in about 400 words, on any of the following topics or one that you choose yourself but is related to the subject of the unit.

- 1) Should college students concentrate wholly on their studies and wait patiently for the right person to come into their lives? Or should they take the initiative and try to find “their significant other” on campus?
- 2) Does romantic love play a positive or negative role on campus?
- 3) Do the positive factors of campus love outweigh the negative ones, or the other way round?
- 4) How should college students face the breakup of a romantic relationship?
- 5) Why do tragic event, such as suicides, murders, violent acts, etc. resulting from unrequited love occur on campus?
- 6) What measures should be taken to prevent such tragic events?
- 7) Is it morally right to go out with several people at the same time?
- 8) Is it wise to fall in love at first sight?
- 9) Do you believe that you can only learn to love by loving?

Cited from the *Contemporary College English-Intermediate Writing* (Book Two), Yang, L. M. et al. (2014, pp:47-48)

### **Suggested writing topics from Unit 3: Pop Icons and Heroes**

- a) Write an essay about a controversial figure you admire (a hero/heroine, or a celebrity, or a pop icon you admire) in about 400 words.



Instructions:

- In the opening paragraph, name the person you admire or worship and briefly point out how opinions differ about him/her and your stand.
- In the body paragraphs, state the two or three reasons for your admiration in spite of the controversy.
- Support your reasons with evidence.

b) Write an essay in about 400 words, either to support or refute any one of the following statements.

1) The Cold War is over, and the world is by and large at peace. So in our age the ideal heroism is something of the past, and true heroes are hard to come by.

2) There is nothing to learn from cultural icons; therefore, it is stupid to admire or worship them.

3) Living as we are in an age of peace and economic growth, we get more inspiration from cultural icons than from combat heroes.

4) Sports stars don't deserve the pay and the admiration and they are getting

5) It is a shame for young Chinese to know the names of dozens of media icons but not to have any idea who Yang Zhenning is.

6) Icon worship does more harm than good.

7) Young people need role models, and the best ones for them are screen idols of their age.

8) Hero worship should be taken as an inherent feature in the growth of then teenagers.

9) Worship of heroes/heroines swordsmen novels by writers like Jing Yong, Gu Long or Liang Yusheng help cultivate heroism in young people.

10) Celebrity worship contributes to the stability and progress of society.

11) Lei Feng should no longer be listed among the fine examples of Chinese young people; in the new century they need new role models.

12) Copying the hairstyle and the way their pop icons are dressed only shows immaturity on the part of teenagers; therefore parents and teachers shouldn't be alarmed at such a trifle.

Cited from the *Contemporary College English-Intermediate Writing* (Book Two), Yang, L. M. et al. (2014, p.73)

### **Writing topic and instructions used by Teacher B**

#### **TEM-4 Training Course Writing Practice**

#### **Part VI Writing**

Read carefully the following excerpt and then write your response in **No Less Than 200** words, in which you should:

- Summarize the main message of the excerpt, and then
- Comment on whether the banning of online medical treatment helps people to get proper treatment

You can support yourself with information from the excerpt.

Marks will be awarded for content relevance, content sufficiency, organization and language quality. Failure to follow the above instructions may result in a loss of marks.

#### **Will Online Medical Treatment Bans Help?**

Nowadays, many people turn to the Internet to solve a multitude of medical quandaries, extending even to the matters of how to find a doctor and access medical treatment. With the prevalence of online health care services in China,

more and more cases have come to light concerning patients being defrauded of money and sometimes having their condition worsen owing to incorrect diagnoses.

The National Health and Family Planning Commission (NHFPC), the nation's health watchdog, has thus recently announced that medical diagnosis and treatment will be forbidden online, but that health consultation will remain legal. The hard stance taken by the NHFPC toward online hospitals has proved controversial. While the poor record of illegal hospitals with respect to diagnosis and treatment is an unavoidable fact, the popularity of using the Internet for medical treatment is also hard to ignore.



## A10. Examples of collected argumentative writing samples

### Sample collected in word format produced by Participant 2-S4-4

Participant: 2-S4-4

#### More Than Love

Because of the different personal experience, love is always a controversial topic. Some people admire it while others despise it. The word is literally explained as the feeling toward the one that you are romantically or sexually attracted to. Well, I personally do not deem that it provides people with only affection and enjoyment, for love exists anytime and anywhere. In other words, there may be something meaningful behind love.

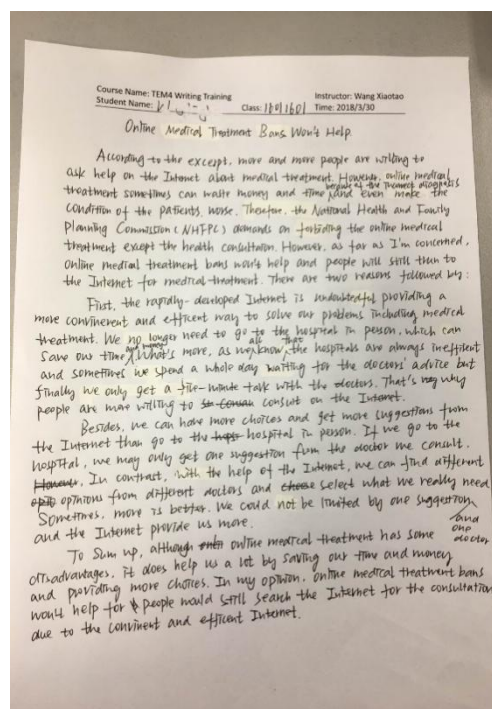
Basically, love is the invisible power. It has the driving force which can encourage people to achieve some goals. For example, there are young men who work hard to pursue the better life. A couple of amorous people would like to get rid of the bad habits that have existed for a long time in order to please each other. University students may try their best to study so that they could earn substantial salaries to pay back. All of these actions arise from love. It is the love for families, soul mates and parents that push them struggle against difficulties. In this way, love is like the petrol to a car, the battery to a player.

Moreover, love is a voiceless guide who teaches a person to consider others, care for others and devote himself maybe. A person who has never been loved can not realize the happiness. Once he has experienced the taste of it, like being forgiven and trusted, he would know the meaning of loving others. Equally, he may do the same thing in return. Those who look childish and selfish would also grow up and become considerate, during the process of being loved.

What is more? Love brings people warmth, confidence and hope. There is a type of people that always think they are inferior to others, or hold negative attitudes toward whatever around them. All these, somehow, are resulted from the lack of love. They do not feel the love from parents or friends, which they attribute to themselves. Is it because that they are not good enough to have attention? Actually not. People are supposed to express and accept love. It can make life bright and hopeful.

All in all, love is not only the instrument of marriage or something that belongs to couples. It is more significant than many people think. Being loved and loving others simultaneously, people may gain a lot unconsciously.

### Sample collected in JPG format produced by participant 1-S1-3



## A11. Originally refined interview protocol



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### Interviewing Protocol

(**Note:** This interview protocol is largely based on Gass and Mackey's (2000, pp.43-44) elaboration on how to use stimulated recall methodology to collect data and Hoang's (2015, pp.240-241) interview protocol used in her research)

*The interviews will be conducted in either English or Chinese, which depends on the participant's language preference. The instructions for the research participant will be printed out for him/her to read. The instructions for the researcher will be used as a guideline to keep the interview on track.*

#### **Instructions for the Research Participant**

*What we are going to do now is go through your argumentative writing that has been written by you in the fourth semester of your Bachelor's study. I am interested in what you were thinking **at the time you were writing**, especially when you used certain words or phrases. So I would like you to tell me what was **in your mind** while you were writing these words/phrases.*

*You can also tell me what you were thinking in other places in your writing. You can ask questions during the course of the interview.*

#### **Instructions for the Researcher**

##### **Part 1: Getting ready**

1. Are you ready for the interview?
2. Do you have any questions?

##### **Part 2: Participant's information**

1. How old are you?
2. What year of university are you in?
3. How long have you been learning English?

##### **Part 3: Key interview questions**

1. When writing words or phrases like this, what were you thinking about or how did you perceive it?
2. Why did you use this/these particular word/words or phrases, and what were you thinking about then?

##### **Part 4: Closing questions/remarks**

1. Would you like to add anything?
2. Do you have any questions?
3. Thank you very much for your help.

## A12. Consent form for individual interview participation



UNIVERSITY OF LEEDS

### Consent form for Individual Interview Participation

**Research Project Title:** Chinese English Majors' Argumentative Writing

**Researcher:** Qiuyun Lu, University of Leeds, United Kingdom

**Email contact:** edql@leeds.ac.uk

**Thank you for reading the information sheet about the follow-up interview. If you are happy to participate then please complete and sign the form below. Please initial the boxes below to confirm that you agree with each statement:**

**Please  
Initial box:**

I confirm that I have read and understood the information sheet dated [XX, XX 2018] and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw of this project up to XX, XX 2018 without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials, and will not be identified or identifiable in the report or reports that result from the research.

I agree for this interview to be audio-recorded. I understand that the audio recording made of this interview will be used only for analysis and that extracts from the interview, from which I would not be personally identified, may be used in any conference presentation, report or journal article developed as a result of the research. I understand that no other use will be made of the recording without my written permission, and that no one outside the research team will be allowed access to the original recording.

I agree that my anonymized data will be kept for future research purposes such as publications related to this study after the completion of the study.

I agree to take part in this interview.

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Copies:** Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, and the information sheet. A copy of the signed and dated consent form should be placed in the main project file which must be kept in a secure location.

## A13. Finalized interview protocol



UNIVERSITY OF LEEDS

### Finalized interview protocol

**(Note:** This interview protocol is largely based on Gass and Mackey's (2000, p.43-44) elaboration on how to use stimulated recall methodology to collect data and Hoang's (2015, p.240-241) interview protocol used in her research.)

*The interviews will be conducted in either English or Chinese, which depends on the participant's language preference. The instructions for the research participant will be printed out for him/her to read. The instructions for the researcher will be used as a guideline to keep the interview on track.*

#### **Instructions for the Research Participant**

*What we are going to do now is go through your argumentative writing that has been written by you in the fourth semester of your Bachelor's study. I am interested in what you were thinking at the time you were writing, especially when you used certain words or phrases. So I would like you to tell me what was in your mind while you were writing these words/phrases.*

*You can also tell me what you were thinking in other places in your writing at that particular time. You can ask questions during the course of the interview. The interview process will be audio-recorded.*

#### **Instructions for the Researcher**

##### *Part 1: Getting ready*

1. Are you ready for the interview?
2. Do you have any questions?

##### *Part 2: Participant's information*

1. How old are you?
2. What year of university are you in?
3. How long have you been learning English?

##### *Part 3: Key interview questions*

1. When writing words or phrases like this, what were you thinking about at that particular time?
2. Why did you use this/these particular word/words or phrases, what were you thinking about then?
3. Could you tell me why you use this/these particular word/words or phrases during your writing processes? Can you still remember thinking anything at that particular time?

**Important tips for the researcher:** 1) If the participant says "I don't remember." accept the comment and move on; 2) Concrete reactions to participants' responses should be

avoided. Backchannelling or non-responses such as "oh, mhm, I see, uh-huh and ok" are preferable (Gass and Mackey, 2000, p.44).

##### *Part 4: Closing questions/remarks*

1. Would you like to add anything?
2. Do you have any questions?
3. Thank you very much for your help.



## A14. Instructions of metaphor identification for co-rater

### Instructions of metaphor identification for co-rater

1. Single word unit: e.g., healing financial disease

2. Multiword unit:

a) **Phrasal verb**, e.g., break up, a verb and an adverbial particle (AVP), CLAWS

b) **Polywords**, e.g., a little, as long as, ..., BNC list of Multiwords and Associated Tags

c) **Compound noun**, e.g., rainy day, can be consulted in OED as individual word entry

d) **Proper nouns**, e.g., Elvis Presley, Su Daji....

Note: Idioms/proverbs, idiomatic prepositional phrases and verb phrase are analyzed word by word, e.g., many a little makes a mickle, on the other hand, make ends meet....

3. Personification metaphor

Verbs are identified as metaphorical when non-human agent is personified as a human agent, such as in the examples like “family or society it would spend a lot to fertilize a student”, “love will help students to learn....” and “college gives students opportunities”. Personification metaphor instead of metonymy. Metonymy, part-to-whole mapping, is not the research focus

4. **Delexical verbs** like “have” and “make” are identified as metaphorical when the basic meanings like physical possession and physical action can be found in specific contexts, such as in examples like “have many solutions” and “make a budget”; “take” is treated as non-metaphorical. Highly frequent verbs “do” and “get” are ignored in the metaphor identification procedure

5. **Basic meaning and contextual meaning**: decide basic meaning and contextual meaning in Macmillan; OED functions as a complementary tool in finding basic meaning and contextual meaning when decisions cannot be made with the aid of the online Macmillan Dictionary only

Note: 1) choose the more concrete meaning as a basic meaning; the sense 1 and 1a, 1b, 1c in dictionaries...are treated as different meanings, e.g., the sense 1 of “flaw” in Macmillan is *a mistake or fault in something that makes it useless or less effective*, sense 1a is *a mark or fault that spoils something and makes it less beautiful or perfect*, sense 1a is more concrete and thus to be chosen as the basic meaning of *flaw* in the writing context; 2) when compare the basic and contextual meanings, word class is crossed, such as the *dog* example when used as a noun and a verb

# A15. Notes of cross checks on grouping metaphor vehicles

## 1) Screenshot of regular comments given by my leading supervisor

Vehicle grouping	Metaphor vehicles	
BODILY ACTION	awakened, yell, stamp	
SEEING	invisible	
BODY PART/PARTS OF THE BODY	feet, hand, hearts	
DIGITAL DEVICE	player	MO Microsoft Office User Why not machine?
ENERGY	petrol, battery	MO Microsoft Office User Why not vehicle?
ILLNESS	disease, suffer	
INJURY	healing	MO Microsoft Office User Why separate illness/ injury? Why not put with human body?
SYSTEM	system	
CONNECTION	bridge	
COMPETITION	competition	
PHYSICAL FEELING	pains, painful, fragile	MO Microsoft Office User Not usually a feeling
HEAVY OBJECT	burden	
BENEFIT/ADVANTAGE	gains	
WAY	venues, way, track	
BUILDING	foundation	

## 2) Screenshot of individual coding and cross checks with co-rater

	C	D	E	F	G	H	I
23	Co-rater's coding: Vehicle group (Please write down your decision. Thank you for your cooperation )	Metaphor	Line	Participant	Text 4		Basic meaning
24	vehicle	troikas	1	2-S6-1	Have you ever heard of the three troikas of	AG	a Russian vehicle pulled by three horses walking next to each other
25	vehicle	driving	1	2-S6-1	driving the economy?	AG after discussion	to control a vehicle so that it moves somewhere
26	bodily action	push	3	2-S6-1	Actually, it means that investment, spending and net export are the three important factors to push.	AG	to move someone or something away from you, or from their previous position, using part of your body, especially your hands
27	movement	forward	3	2-S6-1	the economy forward	AG	moving in the direction in front of you
28	Co-rater's coding: Vehicle group (Please write down your decision. Thank you for your cooperation )	Metaphor	Line	Participant	Text 5		Basic meaning
29	fight/war	war	29	1-S20-1	If life is compared to a war.	AG	a particular period of fighting between countries or groups of people
30	storage/reserve	storage/store	30	1-S20-1	saving money is like to storage [store]	AG	To keep in store for future use; to collect and keep in reserve form a store, stock or supply of; to accumulate, hoard.
31	weapon	weapon	30	1-S20-1	bullets. With the help of deposit, it becomes easier to	AG	a small piece of metal that is shot from a gun and causes serious damage to the person or thing it to be opposite someone or something so that your face or towards them
32	bodily action	face	31	1-S20-1	face the difficulties in life apparently and definitely.	AG	
33	Co-rater's coding: Vehicle group (Please write down your decision. Thank you for your cooperation )	Metaphor	Line	Participant	Text 6		Basic meaning
34	Seeing	invisible	7	2-S4-4	Basically, love is the invisible.	AG	something that is invisible cannot be seen
35	Physical force	power	7	2-S4-4	power	AG	physical force or strength
36	vehicle	driving	7	2-S4-4	It has the driving.	AG after discussion	to control a vehicle so that it moves somewhere
37	Physical force	force	7	2-S4-4	force which can encourage people to achieve some goals	AG	physical strength, or violence
38	bodily action	push	13	2-S4-4	It is the love for families, soul mates and parents that push them	AG	to move someone or something away from you, or from their previous position, using part of your
39	fight/war	struggle	14	2-S4-4	struggle	AG	to use your strength to fight against someone or something
40	movement	against	14	2-S4-4	against difficulties	AG	if someone or something moves against the wind, the current etc, they face it and move in the opposite direction
41	vehicle	petrol	14	2-S4-4	In this way, love is like the petrol.	AG	a liquid used as fuel for cars and other vehicles
42	vehicle	car	15	2-S4-4	to a car	AG	a road vehicle for one driver and a few passengers
43	vehicle	battery	15	2-S4-4	the battery	AG	an object that fits into something such as a radio, clock, or car and supplies it with electricity
44	machine	player	15	2-S4-4	to a player	AG	a piece of equipment used for playing musics, etc

## A16. Transcription conventions

### Transcription conventions

- **R** stands for the researcher (I am the researcher)
- **S** stands for the student participant
- “ ” A speaker is reading a written text
- Underline used to show emphasis
- Hhhhh audible laughter with the upper case being louder
- <...> Added information for better understanding in terms of the context
- [...] Omission of elements not necessary for current analysis
- (...) silence or pause, less than 3 seconds
- (.....) silence or pause, more than 3 seconds
- (?) talk too obscure to transcribe
- ? rising intonation
- [SOUND] unexpected sounds or noise interruption

**Note:** Cited and adapted from Richards (2003, pp.80-81), Watanabe and Swain (2007, p.140) and Bailey (2008, p.131)

## A17. Screenshots of SRI data coded in NVivo

Nodes on spend and save			
Name	Files	References	Count
L2 learning strategies		6	44
Use language materials such as dictionaries		3	4
Use previously learned linguistic knowledge to facilitate a writing task		6	33
Use the first language as a base for producing the second language		5	7
Communicative function of metaphor in argumentative writing		4	4
Achieve coherence in the writing text		1	1
Attract readers' attention		2	2
Convey emotion and evaluation on certain topics		1	1
Consciously thinking about metaphor in L1		4	8
Compare one abstract concept to a more concrete one by looking for similarities		2	2
Compare one abstract concept to a more concrete one in order to achieve vividness		3	3
Express causal relationship by spatial sense		1	1
Use personal life experience as a concrete basis to express abstract viewpoint or concept		2	2
Desire for a wider range of vocabulary and better writing performance in L2		4	9
Achieve better writing performance (by revising)		2	2
Achieve native and idiomatic expressions		2	2
Achieve the diversity of vocabulary or more advanced and sophisticated vocabulary		2	5
Metaphor awareness		1	1
Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing		1	1

Nodes on campus love			
Name	Files	References	Count
L2 learning strategies		8	85
Use the first language as a base for producing the second language		6	15
Use previously learned linguistic knowledge to facilitate a writing task		8	66
Use language materials such as dictionaries		2	4
Desire for wider range of vocabulary and better writing performance in L2		6	9
Desire to make writing different		1	1
Achieve the diversity of vocabulary		3	5
Achieve native and idiomatic expressions		1	1
Achieve better writing performance (by revising)		1	2
Consciously thinking about metaphor in L1		6	16
Use personal life experience as a concrete basis to express abstract view		3	5
Compare one abstract concept to a more concrete one in order to achieve		2	2
Compare one abstract concept to a more concrete one by looking for si		4	9
Communicative function of metaphor in argumentative writing		4	10
Summarize viewpoints, introduce the topic, or support the viewpoint		1	1
Introduce and arouse interest		1	1
Increase comprehensibility and make oneself understood		1	1
Convey emotion and evaluation on certain topics		3	3
Attract readers' attention		3	3
Achieve coherence in the writing text		1	1



### Nodes on medical treatment

Name	Files	References
<input type="checkbox"/> L2 learning strategies <ul style="list-style-type: none"> <li><input type="checkbox"/> Use the first language as a base for producing the second language</li> <li><input type="checkbox"/> Use previously acquired knowledge to facilitate a writing task</li> </ul>	6	45
<input type="checkbox"/> Desire for a wider range of vocabulary and better writing performance in L2	4	5
<input type="checkbox"/> Achieve the diversity of vocabulary	4	5
<input type="checkbox"/> Communicative function of metaphor in argumentative writing <ul style="list-style-type: none"> <li><input type="checkbox"/> Convey emotion and evaluation on certain topics</li> <li><input type="checkbox"/> Achieve coherence in writing text</li> </ul>	1	2
<input type="checkbox"/> Consciously thinking about metaphor in L1	1	2
<input type="checkbox"/> Compare one abstract concept to a more concrete one by looking for similarities	1	1
<input type="checkbox"/> Compare one abstract concept to a more concrete one for vividness	1	1

### Nodes on icon worship

Name	Files	References
<input type="checkbox"/> L2 learning strategies <ul style="list-style-type: none"> <li><input type="checkbox"/> Use the first language as a base for producing the second language</li> <li><input type="checkbox"/> Use previously acquired linguistic knowledge to facilitate a writing task</li> <li><input type="checkbox"/> Use language materials such as dictionaries</li> </ul>	1	15
<input type="checkbox"/> Consciously thinking about metaphor in L1	1	4
<input type="checkbox"/> Compare one abstract concept to a more concrete one by looking for similarities	1	2
<input type="checkbox"/> Compare one abstract concept to a concrete one to achieve vividness	1	2
<input type="checkbox"/> Communicative function of metaphor in argumentative writing <ul style="list-style-type: none"> <li><input type="checkbox"/> Achieve coherence in writing context</li> </ul>	1	2

## A18. Screenshots of SRI data for inter-rater reliability check

	A	B	C	D	E	F
	Text topic	Participant	Metaphors asked	Recall comments/original interview data on metaphor use	Conceptual categories emerged from interview data coded by the researcher	Co-rater: Agreed / Not Agreed/ If not agreed, please write down your understanding
1	Spend & Save	2-S1-1	healing financial disease	R: Ok, good, let's take a look at your essay. The first point that I am interested in is (...) Please have a look at the second sentence in your essay. I noticed that you used the expression "healing financial disease". S: En. R: What I want to ask is, when you were writing this essay, have you thought differently by writing this expression? S: It was (...), because I thought that it was a common problem in terms of the budgeting of college students. Then every college student hoped to solve this problem as soon as possible. So I compared the problem to a kind of disease at that time and thought that it might be more vivid. This is what I thought personally.	Consciously thinking metaphor in L1 ( Compare one abstract concept to a more concrete one in order to achieve vividness	Agreed
2	Spend & Save	2-S1-1	healing financial disease	In other words, the problem had been very severe in fact. The word "healing" might be more able to attract people's attention at the beginning of my essay. It likes a hook.	Communicative function in argumentative writing: Attract readers' attention Consciously thinking metaphor in L1 ( Compare one abstract concept to a more concrete one by looking for similarities	Agreed
3	Spend & Save	2-S1-1	fertilize	I just used the word "fertilize" for one time, so I may have the feeling to use it again. When saying "Peiyang" in Chinese, I came up with the word "fertilize".	L2 learning strategies: Use the first language as a base for understanding or producing the second language (translation)	Agreed: L2 learning strategies - Use the first language as a base for understanding or producing the second language (translation)
4	Spend & Save	2-S1-1	added recall comments on his metaphor use in writing at the end of the interview	In fact, when I was writing this essay at the beginning, during which I only had a rough outline in my mind, some of the words in this essay had already been written. The words were simple and there might not so many modifiers in it. But when I modified it at the last stage, I would change the word "aspect" into "field" and the "deal with" with "heal". I thought in a simple and direct way at the beginning. Maybe it was influenced by L1 transfer. But later on, in order to write in a better way, I would change some words and phrases purposely.	L1 transfer L2 learning objectives Achieve better writing performance (by revising)	Partly agreed: L2 learning objectives - achieve better writing performance (by revising)  Comment: isn't also about communication? L2 learning objectives may be interpreted differently in my research filed.
5	Spend & Save	2-S1-1	added recall comments on his metaphor use in writing at the end of the interview	Because I did not express directly concerning some things, instead, the meanings were expresses in a roundabout way. Alternatively, a more vivid expression was used instead of talking about a concept directly. Possibly, on the basis of the characteristics of a thing, the rhetoric devices such as metaphor and symbolism were used, which could make a simple thing very interesting.	Metaphor awareness	Agreed
6	Spend & Save	1-S1-1	three carriages of economy	Because what I was thinking at that moment was that the topic was economy and spending, and then I came up with the same Chinese expression that I learned in senior high school. I was a student of liberal arts when in senior high, so I recited the knowledge point in the politics class saying that the three carriages <horse-drawn vehicles> that can pull economy forward are consumption, export and investment, so I wrote this word <carriages>.	L2 learning strategies: L1 transfer-- word-to-word/literal translation from L1 to L2 (Use previously acquired linguistic knowledge to facilitate a writing task (transfer))	Agreed
7	Campus Love	1-S15-4	single dog	Firstly, I wrote according to the procedure of writing an argumentative essay, so I wanted to use an up-to-date and controversial issue to introduce my topic. Since the topic is breakup, so I thought about people often talk about somebody who does not has a girlfriend/boyfriend as "single (单身) dog (狗)". And the clubs and societies in university often use it in the banners as a gimmick for publicity purpose. It seems to be a common phenomenon in China, So I used it here.	Translation Communicative function in argumentative writing Attract readers' attention	Agreed 1: L2 learning strategies - Use the first language as a base for understanding or producing the second language (translation)  Agreed 2: Communication function in argumentative writing - Attract readers' attention
8						

## A19. Initial coding scheme for co-rater's reference

Codes and categories emerged from stimulated recall data and corresponding definitions

**Research question 3:** How do Chinese English majors report their language choices and thinking processes around their use of metaphors in L2 argumentative writing?

**Key questions asked in the interviews:**

- 1) When writing words or phrases like this, what were you thinking about or how did you perceive it?
- 2) Why did you use this/these particular word/words or phrases, what were you thinking about then?
- 3) Could you tell me why you use this/these particular word/words or phrases during your writing processes? Can you still remember thinking anything at that particular time?

### 1. L2 learning strategies

- Use previously acquired linguistic knowledge to facilitate a writing task (transfer)
- Use the first language as a base for understanding or producing the second language (translation)
- Use language materials such as dictionaries and other online resources (resourcing)
- Self-monitoring (checking accuracy and appropriateness)

### 2. L2 learning objectives

- Achieve better writing performance (by revising)
- Achieve native and idiomatic expressions
- Achieve newness or novelty by using less frequently-used words
- Achieve the diversity of vocabulary or more advanced and sophisticated vocabulary

### 3. Communicative function in argumentative writing

- Achieve coherence in the writing text
- Attract readers' attention
- Convey evaluative emotion on certain topics
- Summarize viewpoints, stress on main topic, introduce the topic or support the viewpoint

### 4. Consciously thinking about metaphor in L1

- Compare one abstract concept to a more concrete one by looking for similarities
- Compare one abstract concept to a more concrete one in order to achieve vividness
- Express causal relationship by creating mental pictures
- Use personal life experience as a concrete basis to express abstract viewpoint or concept

### 5. Metaphor awareness

- Explicitly talk about applying rhetoric devices, such as metaphor and symbolism in writing

**A20. Vehicle groupings coded from written data**

1 ANIMAL	16 PHYSICAL PAIN	31 AREA/PLACE
2 BODILY ACTION	17. FIRE	32 BENEFIT
3 PARTS OF THE BODY	18 JOURNEY	33 RESERVATION
4 VIOLENT ACTION	19 BOMB	34 PLANT
5 SUPPORT	20 EXPLOSION	
6 GAME/SPORTS	21 FOOD	
7 MOVEMENT	22 PHYSICAL HARM	
8 PHYSICAL ACTION	23 HEAT	
9 ATTACHMENT	24 HEALTH	
10 PERSON	25 WEAPON	
11 VEHICLE	26 DEATH	
12 FIGHT/WAR	27 TASTE	
13 SEEING	28 ILLNESS	
14 PHYSICAL FORCE	29 PLEASANT FEELING	
15 MACHINE	30 LIGHT	

## A21. Email exchanges for recruiting interviewees

### 1. Email received from 2-S17-1

Re: PHD Research Programe [redacted]

Qiuyun Lu <edql@leeds.ac.uk>

Wed 2018-03-21 08:45

To: [redacted] <[redacted]@qq.com>

Dear [redacted]ui,

Thank you very much for your cooperation in my research project. As for the specific time for the follow-up interview, I will send a confirmation email to you by the end of tomorrow.

Thanks!

Best wishes,  
Qiuyun

---

**From:** [redacted] 2-S17-1 2@qq.com> **From:** 2-S17-1

**Sent:** 21 March 2018 08:38:13

**To:** Qiuyun Lu

**Subject:** PHD Research Programe J. [redacted] Ji [redacted] ig

Dear Qiuyun Lu

My argumental eaasy is sent to you by attachment. Please check it in your free time.

As the interview's time, It would be convenient for me to get the follow-up interview on Friday 8:30~12:30 or 19:30~21:30.

Yours

[redacted]

March 2018

[redacted]  
21st

## 2. Email received from 2-S5-1

Re: 英语: 议论文

Qiuyun Lu <edql@leeds.ac.uk>

Thu 2018-03-22 03:30

To: 31 <[redacted]@qq.com>

Dear Rui,

You said that you are able to participate in the follow-up interview today's evening. So, how about 7:00-7:30 pm in Room 305, School of Foreign Studies?

Looking forward to your reply.

Best wishes,

Qiuyun

---

From: [redacted] <[redacted]@qq.com>

Sent: 21 March 2018 04:44:32

To: Qiuyun Lu

Subject: 英语: 议论文 Subject: Argumentative writing essay from 2-S5-1

周五上午有空

周四晚上有空

Translation: I will be free on Thursday's evening and Friday's morning.

## 3. Email received from 2-S12-2

'写作2.doc'

Subject: Writing 2

31 <[redacted]@qq.com> From: 2-S12-2

Wed 2018-03-28 11:30

To: Qiuyun Lu <edql@leeds.ac.uk>

1 attachments (24 KB)

写作2.doc;

不参加访谈 Translation: I do not want to participate in the interview.