SECOND LANGUAGE ACQUISITION OF SPATIAL METAPHORS IN ENGLISH
AND CHINESE WRITINGS: INSIGHTS FROM NATIVE AND
LEARNER LANGUAGE CORPORA

By
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DEDICATION

To my parents

TABLE OF CONTENTS

TABLE OF CONTENTS- *continued*

TABLE OF CONTENTS- *continued*

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES –*continued*

ABSTRACT

First outlined by Lakoff and Johnson (1980), Conceptual Metaphor Theory (CMT) continues to thrive (e.g. Lakoff &Johnson 1992, Lakoff, 1993, 1999, 2008), by first challenging the traditional view on metaphor as a matter of language and something extraordinary and poetic. CMT claims that metaphor is pervasive and essential in language and thought. Furthermore, metaphor is considered as the locus for abstract reasoning in this theory.

Since its proposal, CMT has triggered plethoric research. Corpus-based approaches are emerging as fruitful due to their authentic large data coverage in metaphor research (Stefanowitsch, 2006). However, among the vast literature on conceptual metaphors in English and other languages, few empirical studies have examined metaphors in second language (L2) acquisition and the importance of metaphor has not been fully recognized as an indispensable dimension of communicative competence in second language teaching and learning (Littlemore, 2009; Littlemore & Low, 2006b). As noted in the literature, metaphors actually present a hurdle for L2 learners (Danesi, 1992); L2 learners misinterpret metaphors for cultural reasons (Littlemore, 2003); teaching conceptual metaphor as a learning strategy facilitate language learning (Littlemore & Low, 2006a; Li, 2009).

Thus, the current study investigates metaphor in learner language in light of CMT via a corpus-based approach, i.e., comparing learner corpora to native speaker corpora. The study particularly examines how L2 learners of Chinese and English express vertical

spatial metaphors in L2 English and L2 Chinese writings and how they differ from learners' target languages and their native languages.

The findings reveal that L2 language development is a dynamic process and four key factors are found to interplay in learners' acquisition of conceptual metaphors: frequency of the metaphor, L2 proficiency, topic familiarity, and linguistic factors. In particular, the frequency of the metaphor as reflected in the target language has the most important impact on learners' acquisition of conceptual metaphors, overriding the factor whether a metaphor is shared in L1 and L2 or not; secondly, L2 proficiency influences how learners are affected by their first languages: learners with lower proficiency are more affected; thirdly, learners acquire the metaphors associated with a familiar topic; finally, L2 learners are constrained by the main semantic unit in the metaphorical expressions. In particular, learners' use of metaphors are limited by the main verb occurring with the metaphor key words and learners use the metaphor words as the main verb instead of function words as native speakers do. Overall, the study demonstrates that figurative language development is a dynamic process: learners' metaphoric competence demonstrates a developmental pattern, in particular, a pendulum effect and it eventually emerges over L2 proficiency.

CHAPTER ONE: INTRODUCTION

Metaphor is not a new concept in language studies. As a figure of speech, the research can be traced back to classical theorists such as Aristotle who defines metaphor as instances of novel poetic language and is decorative and ornamental in nature (from Lakoff &Johnson, 1980). However, in their seminal work *Metaphors We Live By,* Lakoff &Johnson (1980) challenged the established view of metaphor as linguistic and rhetorical, proposing the thereafter well- known Conceptual Metaphor Theory (CMT). Commonly known as the contemporary theory of metaphor (Lakoff & Johnson, 1980, 1993, 1999), CMT views metaphor as a matter of thought rather than language. According to this theory, metaphor is pervasive and essential in our daily life. Instead of a figure of speech, it is defined in this theory as a cross-domain conceptual mapping in our conceptual system when we describe one thing through another. Hence, it is important to distinguish the expression used to realize a metaphor from the metaphor itself. According to Lakoff (1993), 'metaphorical expression' refers to a linguistic expression (a word, phrase, or sentence) that is the surface realization of such a cross-domain mapping" while metaphor is the mental mapping where one thing is mapped onto another (p. 203). The cross-domain mapping involves a source domain (the thing used to describe another thing) and a target domain (the thing being described). Furthermore, "In this process of cross-

domain mapping, everyday abstract concepts like time, states, change, causation, and purpose also turn out to be metaphorical" (p.203). Thus, CMT considers metaphor as fundamental in our everyday language and is the locus to our abstract thinking.

Since the proposal of CMT, the theory sets a milestone in the history of theoretical development of metaphor and continues to thrive (e.g. Gibbs, 1993; Graddy, 1997; Johnson, 1987; Lakoff, 1987, 1993, 2008; Lakoff & Johnson 1992, Lakoff and Turner, 1989. It has triggered plethoric theoretical and empirical research on metaphor by linguists from various perspectives such as applied linguistics, anthropology, psycholinguistics, discourse analysis, education, philosophy, corpus linguists (Chen, 2001; Cameron; 2007, Cameron &Deignan, 2006; Feng, 1997; Danesi, 1992; Deignan, 2005; Gibbs, 2006; Kövecses, 2005; Littlemore & Low, 2006b; Littlemore, 2009; Li, 2009; Steen, 2007; Yu, 1998, 2009), and critical discourse and corpus analyst (Charteris-Black (2004), to name just a few. Thus, metaphor has been extensively studied across disciplines, genres, and languages.

Despite the fact that metaphor is considered as essential in our thought and pervasive in our everyday language, the vast literature on metaphor in different languages, research on metaphor in second language studies is still rather limited in both scope and depth. If metaphor is part of our language and is essential, described as "absolutely central to ordinary natural language semantics" (Lakoff, 1993, p.203), and "is highly relevant to second language learning, teaching and testing, from the earliest to the most advanced stages of learning" (Littlemore and Low, 2006b), then it is crucial to second

language educators to investigate it as they examine grammatical and lexical issues for second language learning and teaching.

This current study thus aims to provide a cross-linguistic and cross-cultural perspective to analyze how second language learners' written language differ from the native speakers' written texts in terms of their metaphorical variety and density, in particular, how learners employ spatial metaphors to express abstract concepts in their writings. Spatial metaphors are those metaphors using SPACE as the source domain to describe concepts that do not belong to the SPACE domain. For example, 'I am feeling up' indicates a metaphor HAPPINESS IS UP since *up* is used to describe emotional states. In Chinese, 上品 *shang pin* (up object, 'good item') contains the metaphor GOOD IS UP since *up* is used to express good quality of an object while *shang ge yue* (up CL[1] month, 'last month') indicates the TIME AS SPACE metaphor because *shang* is used to indicate the past. However, as is well noted in the second language literature, learner language differs substantially from the native language. Hence, this study attempts to explore the metaphorical characteristics in learner language and address the following research questions by focusing on spatial metaphors in Chinese and English interlanguage. For a more manageable project, the spatial metaphors are limited to those containing the lexical items *up* and *down* in English, *shang* and *xia* in Chinese.

1) How metaphorical is learner's language in academic writing compared with that by the native speakers in the target language regarding the specified spatial metaphors?

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[1] Classifier, also known as measure words in Mandarin Chinese.

2) What spatial metaphors do learners use and how do they differ from or similar to the metaphors by the native language speakers of the target language?

3) How are learners' use of spatial metaphors influenced by their first language and culture? Do learners tend to use metaphors that are shared between the target language and their own native language and culture? If not, what factors have contributed?

4) How does L2 proficiency influence learners' expressions of spatial metaphors? Do L2 learners display a certain developmental pattern across proficiency levels?

By concentrating on these aforementioned research questions and following the new growing research interest in metaphor in second language learning and teaching, the current study aims to contribute to second language acquisition research (in particular, Chinese as a second language and English as a second language) in the following ways:

a. It will inform second language writing and second language acquisition research in light of the contemporary metaphor theory, an area which needs much more attention considering the vast literature on metaphor research and second language acquisition research in general, in that metaphor has not been fully recognized as important as other grammatical, lexical, and communicative issues;

b. It uses a still innovative and emerging research methodology in metaphor studies, i.e., a corpus-based approach, to complement previous research mostly based on contrived or researcher provoked linguistic data;

c. To the best of my knowledge, it is the first research about conceptual metaphor in L2 Chinese, so it will contribute to the L2 Chinese acquisition research and shed

light on how English speaking L2 learners of Chinese may conceptualize abstract concepts via the space domain and how it differs from English native speakers;

d. The findings may thus inform second language instruction (such as curriculum design, materials development, and pedagogy) and highlight the importance of conceptual fluency or metaphoric competence as an additional element in L2 learning and teaching.

CHAPTER TWO: LITERATURE REVIEW

2.1 Contemporary Metaphor Theory (CMT)

The contemporary metaphor theory (CMT), or conceptual metaphor theory, launched by Lakoff and Johnson (1980) and modified in their later work (e.g. Lakoff 1987, 1993, 1999; Lakoff & Turner 1989, Johnson 1987), challenges the traditional view of metaphor and results in an evolution in theoretical and empirical research on metaphor in language and thought. Classical metaphor theorists such as Aristotle view metaphor as a poetic imagination and a figure of speech, while CMT considers metaphor as a figure of thought. Lakoff (1993) states that "metaphor is absolutely central to ordinary natural language semantics, and that the study of literary metaphor is an extension of the study of everyday metaphor" (p. 203). According to Lakoff and Johnson (1980), "the essence of metaphor is understanding and experiencing one kind of thing in terms of another" (p.5) and "this may involve preexisting isolated similarities, the creation of new similarities, and more" (1980, p.154). The foundation of this theory of metaphor has been a range of conventionalized metaphorical ideas, called conceptual metaphors, realized via cross-domain mappings in our conceptual domains. The theory was then more comprehensively described in the book chapter "The Contemporary Theory of Metaphor (Lakoff, 1993) that metaphor is fundamental in our thoughts. More recently, Lakoff (1999) have shown how such conceptual metaphors are basic to our language and thinking about time,

causality, the mind, the self, and morality. The following claims are essential based on the extensively discussed conceptual metaphor theory.

- Our conceptual system is largely metaphorical;

- Our abstract thinking is metaphorical;

- Metaphor is pervasive in our everyday language and thinking;

- The mapping between the source domain and the target domain is not arbitrary;

- Metaphors are grounded in our bodily experience;

- Some metaphors are universal but others are culturally specific.

CMT has typically focused on conventionalized expressions, or conventional metaphors. In this sense, metaphor under the traditional view is considered as novel or creative metaphors in the contemporary theory. Conceptual metaphors are usually expressed in an A IS B format, using capital letters. For example, in the conceptual metaphor, HAPPY IS UP, the emotional state of happiness (more abstract) is viewed metaphorically as spatial orientation (more concrete). Metaphor is realized through mapping across two different domains, namely, the source domain (i.e., the thing that is being used to describe another thing, usually more concrete), to the target domain (i.e., the thing that is being described). In the example HAPPY IS UP, for instance, the physical vertical space constitutes the source domain, and the emotional state constitutes the target domain. According to CMT, specific properties of the source domain are 'mapped onto' the target domain. The relationship is one way.

Lakoff and Johnson(1980) state, "Our general position is that conceptual metaphors are grounded in *correlations* within our experience" (p.155). According to them, there are two types of experiential correlations: *experiential cooccurrence* and *experiential similarity.* An example of experiential cooccurrence is the MORE IS UP metaphor. MORE IS UP is based on the cooccurrence of two types of experiences: adding more of a substance and seeing the level of the substance rise. No experiential similarity is involved in this case at all. As for experiential similarity, one example is LIFE IS A GAMBLING GAME. This example describes life experiences as gambles in terms of losing or winning. Thus, the metaphor is grounded in experiential similarity.

In order to understand the conceptual metaphor theory, it is important to note that in conventional metaphor, we understand one thing in terms of another thing, particularly, something of a different kind. Lakoff and Johnson (1980) give the following example to illustrate. For instance, in the metaphor MORE IS UP, the concept of quantity is described through space orientation. By contrast, "The fog is in front of the mountain" is fundamentally different from the previous one. Lakoff and Johnson (1980) state,

> In the case of *fog*, we are understanding something physical (fog) on the model of something else physical but more clearly delineated- a bounded physical object. In the case of *front*, we are understanding the physical orientation- that of our bodies. In both cases, we are understanding the physical orientation of the mountain in terms of something *else* that is also physical. In other words, we are understanding one thing in terms of something else *of the same kind*. But in conventional metaphor, we are understanding one thing in terms of something *else of a different kind*." (p.170)

In other words, in conceptual metaphor, one thing is described through something from a different conceptual domain. The two domains involved in this theory are called source domain and target domain.

2.1.1 Concrete and Abstract Domains

According to CMT, conceptual metaphors involved two-domain mapping, usually, one concrete domain is mapped onto another abstract domain of experience. While domain might be defined differently in the literature, according to Croft (1993), a domain is 'a semantic structure that functions as the base for at least one concept profile (typically, many profiles).' There are basic and abstract domains. Basic domains originate in human experience and are not derived from other more fundamental domains; they include, for example, space, matter and temperature. These basic level domains serve as the input for more abstract target domains in the sense that these are conceptualized in terms of basic human experiences of the physical world such as its spatial and causal relations. Abstract domains are those that presuppose another domain (Croft, 1993, p.339) and include domains such as location and shape. Source domains are therefore the base domains of literal and figurative concepts that are embodied in words: we may say, therefore, that basic source domains are used to reflect in language how we experience more abstract target domains.

2.1.2 Image Schema and the Invariance Principle

According to Cognitive Semantics (Johnson, 1987; Lakoff, 1987) abstract reasoning depends largely on the use of conceptual metaphors. These conceptual metaphors can roughly be divided into two categories. a) The first category maps image schemas (CONTAINER, PATH, UP-DWON, FRONT-BACK, etc.); b) The second category of conceptual metaphors map on more specific or more elaborate source

domains. Abstract competition, for example is often structured in terms of RACING (e.g. keep up with the Jones) or FIGHT.

Of particular relevance to the current study is the first kind, metaphors mapped via image schemas. A schema, according to Johnson (1987) is "a recurrent pattern, shape, and regularity in, or of these ongoing ordering activities" (p.29). Image schema is robust in cognition and is used frequently when discussing conceptual metaphors. It was first discussed by Lakoff (1987), Lakoff and Turner (1989), and Johnson (1987). Lakoff (1987) notes that image schema refers to "relatively simple structures that constantly recur in our everyday bodily experience including schemas for containment (e.g. *in and out*) spatial orientation (e.g. *front and back, up and down*), and motion (e.g. *source-path-goal*) (p.267). Turner (1990) describes image schemas as "extremely skeletal images" (p.250).

Image schemas are pervasive in our language and experience to structure many concepts other than images. They are acquired through our physical experiences of being and acting in the objective world. For instance, we conventionally use various image schemas to conceptualize time, which has no shape, no physical structure. TIME can be viewed as a container ('in ten minutes'), a path ('leave past behind'), an object ('spend 10 minutes), spatial orientation ('up to now'). On the other hand, one image schema can be used for different concepts, for instance, GOOD IS UP ('live up to expectation'), MORE IS UP ('speed up to 60 miles per hour'). As Lakoff (1987, p.275) states, "Image schemas provide particularly important evidence for the claim that abstract reason is a matter of two things: a) reason based on bodily experience, and b) metaphorical projections from

concrete to abstract domains". Thus, those image schemas structure our experience with space and structure concepts in abstract domains.

Image schemas are the source of metaphorical mappings for abstract domains. As Gibbs(1999b, p.45) also summarizes: "Image schemas emerge throughout sensorimotor activity, as people manipulate objects, orient themselves spatially and temporally, or direct their perceptual focus for various purposes". We may consider image schemas as a set of deep level conceptual primitives because they are used to structure more complex concepts.

Based on the essential role that image schema has on our cognition, Lakoff (1993) puts forward "the Invariance Principle": "Metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain" (p.215). The invariance principle constrains mappings between the source domain and the target domain. As Lakoff (1993) puts it, Invariance Principle "…guarantee that, for container schemas, interiors will be mapped onto interiors, exteriors onto exteriors, and boundaries onto boundaries; for path-schemas, sources will be mapped on sources, goals onto goals, trajectories onto trajectories, and so on" (p. 215). In other words, the structure of the image schema limits what can be mapped. For instance, in the metaphor LIFE IS A JOURNEY, the beginning point of life, birth is mapped onto the starting point of a journey, while the ending point of life, death is mapped onto the destination of the journey.

2.2 General Metaphor Research Based on CMT

Since the proposal of the conceptual metaphor theory in the 1980s, metaphor has been investigated across disciplines both theoretically and empirically, attracting conceptual theorists (Lakoff, 1987, 1993, 1999;), corpus analysts (Deignan, 1999, 2005, 2006; Stefanowitsch & Gries, 2006) discourse analysts (Low, Littlemore, and Koester, 2008; Cameron, 2007), psychologists (Chen, 2001; Gibbs, 1994, 2008). However, most of these studies have been concentrated on first language studies about English or cross-linguistic studies involving English.

Compared with the vast literature in English on metaphor, metaphor research in Chinese is just emerging and has not been extensively studied from such multiple perspectives. Yu (1998) is a notable exception who applied the contemporary metaphor theory to the Chinese language and culture by conducting a comprehensive comparison, in particular, the Time-as-Space metaphor and the Event Structure metaphor, between Chinese and English. Thereafter, metaphor has gradually been realized as an important element in our conceptual system in Chinese and more studies have occurred including spatial metaphors between Chinese and English (Lan, 2003), metaphorical expressions of body, heart, and emotions in Chinese and English (Yu, 2007, 2009), spatial conceptualization of time in Chinese (Yu, 1998), and so on. These studies show that some metaphors share certain similarities across languages and others belong to a particular language and culture.

2.3 Other Models of Metaphor Based on CMT

Many other metaphor theories arose based on this model among which definition of metaphor is one of the theoretically thorny issues in metaphor research. Steen(2007)

states that philosophers, logicians, grammarians, psychologists, literary critics, poets, all have different emphasis and criteria when defining metaphor. However, based on the Lakoffian cognitive-linguistic definition of metaphor as a cross-domain mapping (Lakoff & Johnson, 1980), three alternative models have arisen in response to it particularly differing in how many 'domains' are incorporated: the many-space approach also Conceptual Integrate Theory, or Blending Theory with at least four conceptual spaces (Fauconnier & Turner, 2000), the class-inclusion approach (Gluckberg & McGlone, 1999) with three conceptual categories, the career of metaphor approach (Gentner & Bowdle, 2001) with two or three concepts or domains[2]. As Steen (2007) points out that "the models exhibit only partial overlap and are therefore not in genuine competition with each other. In fact, they are in fairly complementary distribution, capturing different aspects of metaphor in language and thought" (p.54).

However, the four models share some similarities: 1) all models have a source and a target, 2) all entail that metaphor involves an expression used in a way deviant from its basic meaning. Meanwhile, they differ in their assessment of what it is for a linguistic expression to be used indirectly (Steen 2007). The current research adopts the most widely accepted definition of metaphor in the Lakoffian tradition as a mapping across two conceptual domains, of which image-schema constitutes an important portion, since spatial metaphors are analyzed and the mapping involved is relatively simpler.

2.4 Metaphor and Metonymy

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[2] For an overview, see Steen (2007).

Metaphor and metonymy are closely related in that they both involve mapping one concept onto another for certain conceptual relations. It is said some conceptual metaphors may have originated in metonymy. For example, the conceptual metaphor ANGER IS HEAT may derived from in the metonymic association between anger and body heat since when people get angry, heat increases in their body. So, heat can be used as a short hand for anger (Littlemore & Low, 2006a). However, metaphor and metonymy are different. In Littlemore's (2009) words, "metonymy is the mental and linguistic process where one thing is used to refer to something that is related to, or more often, to something that it forms only a part of" (p. 107). In other words, metaphor involves the perception of relationships between a source and target domain, whereas metonymy involves two features of a single domain. As Johnson (1987) states, "A metaphor, in this 'experiential sense, is a process by which we understand and structure one domain of experience in terms of another domain *of a different kind*" (p.15). For example, take an example from Wu (2008), 'new hand on the road' in Chinese where 'new hand' stands for new driver. In this expression, the one part of a single domain (i.e. new hand) provides 'access' to the whole part of the domain (i.e., human body). It is also possible for a whole domain to stand for part of a domain to stand metonymically. For example, *Taipei is hot* where Taipai is used to refer to the weather in Taipei (Wu, 2008). Conceptual metonymy suggests more complex possibilities such as MEMBER FOR CATEGORY (e.g. *aspirin* to refer to any headache pill), ACTION FOR OBJECT (e.g. 'Can I have a bite?') (examples from Wu, 2008), but it is adequate for present purposes to distinguish metaphor and metonymy.

2.5 Metaphor and Culture

According to the standard view of metaphor in the cognitive linguistic framework, metaphors are based on embodied human experiences (Lakoff & Johnson 1980, 1999). As Lakoff (1993) predicts, "Metaphorical mappings vary in universality; some seem to be universal, others are widespread, and some seem to be culture specific" (p.245). Lakoff and Johnson seem to emphasize the universality of metaphors since metaphors are bodily grounded. Because we share our physical experience, the metaphors tent to be similar too. However, metaphors vary to different degrees in various (sub)cultures, including both within cultures and across cultures. Kövecses (2005) explores the complicated issue of how and why conceptual metaphors are both universal and culture-specific. He points out (p.4),

- Universal experiences do not necessarily lead to universal metaphors;
- Bodily experience may be selectively used in the creation of metaphors;
- Bodily experience may be overridden by both culture and cognitive processes;
- Primary metaphors (i.e., basic-level metaphors) are not necessarily universal;
- Complex metaphors may be potentially or partially universal;
- Metaphors are not necessarily based on bodily experience-many are based on cultural considerations and cognitive processes of various kinds

Gibbs (1999a) also highlighted the importance of culture: "One cannot talk about, or study, cognition apart from our specific embodies interactions with the cultural world, and this includes the physical world, which is not separable from the cultural world in the

important sense that what we see as meaningful in the physical world is highly constrained by our cultural beliefs and values" (p. 153).

2.6 Linguistic Metaphor and Conceptual Metaphor

One of the major significance of the CMT is the distinction between conceptual metaphor and 'metaphorical expressions' (a word, a phrase, or a sentence) that is the "surface realization of such a cross-domain mapping" (Lakoff, 1993). In other words, conceptual metaphor goes beyond actual linguistic forms and lies in the mental level. For instance, the conceptual metaphor LOVE IS A JOURNEY can be manifested by various linguistic expressions such as: a) *look how far we've come*; b) *the relationship isn't going anywhere*; c) *our relationship if off the track*. These expressions do not contain the linguistic form such as 'love' or 'journey' themselves, but all of them entail the above conceptual metaphor.

This corresponds to the distinction between 'linguistic metaphor' and 'conceptual metaphor' in more recent discussions on the theory. As it noted, it is important to distinguish the difference between linguistic metaphor and conceptual metaphor when analyzing metaphor (Littlemore, 2009; Littlemore & Low 2006a). *Linguistic metaphor* means "words or expressions that are uttered or written, As such, they can be represented by any part of speech, not just nouns". As a result, linguistic metaphor lies in the realm of actual words. By contrast, *Conceptual metaphor* "are not linguistic expressions, but rather relationships" like LOVE IS A JOURNEY that underlie expressions such as *It's been a bumpy road*. It is a mental cross-domain mapping. Thus conceptual metaphor goes beyond the words used for that metaphor.

As is noted, the precise relation between the linguistic metaphor and concetpaul metaphor is unknown and is beginning to be seen as a major area of research (littlemore &Low, 2006a). However, in discourse analysis of metaphors, linguistic metaphors, i.e., the lexical-grammatical structure used to express a conceptual metaphor cannot simply be ignored. Littlemore(2009) states that "conceptual and linguistic metaphor presents both a challenge and an opportunity to second language educators" (p. 98). In other words, conceptual metaphors may involve both conceptual and linguistic similarities as well as differences.

2.7 Metaphor and Second Language Acquisition

It has taken a long way for metaphor to find its way into the mainstream research field in L2 learning and teaching. As is pointed out by Littlemore &Low (2006a), "in recent years, there has been a growing interest in the problems that figurative language poses for foreign language learners, how learners cope with figurative language, how they learn it, and what sort of instruction facilitates the ability to communicate in the short term, and learn in the long term" (p. However, in contrast to the vast literature on metaphor as a linguistic and cognitive issue in general, metaphor in L2 teaching and learning has only been investigated in limited depth and scope. Amongst these limited studies that have examined how L2 learners actually use or understand metaphors in various genres such as speech or writing, it is noted that metaphors present a hurdle for second language learners for L2 understanding and production, as well as a help when they acquire the necessary figurative thinking abilities to aid the L2 learning process.

First, learner discourse displays excessive degree of literalness. Danesi (1992) states that learner discourse lacks metaphor compared with native speaker discourse. For instance, English speaking students [learning Spanish as L2] have little access to the conceptual system of the target language and their composition show a high degree of 'literalness'. The 'literalness' of learner discourse, seems to indicate that students have had little or no opportunity to access the metaphorically structured conceptual domains inherent in the native discourse. Danesi (1992) further points out,

> While student-produced discourse texts (oral and written) often manifest a high degree of verbal fluency, they invariably seem to lack the conceptual appropriateness that characterizes the corresponding discourse texts of native speakers. To put it another way, students 'speak' with the formal structures of the target language, but they 'think' in terms of their native conceptual system: that is, 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, they student texts manifest an asymmetry between language form and conceptual content. What student discourse typically lacks, in other words, is CONCEPTUAL FLUENCY (p. 490).

Danesi (1992) further proposes, "…to be conceptually fluent in a language is to know how that language reflects or encodes its concepts on the basis of metaphorical structuring. This kind of knowledge, like grammatical and communicative knowledge, is by and large unconscious in native speakers," but it is not available to L2 learners (p.490).

Second, it is noted that L2 learners have a tendency to use conceptual metaphors that are similar in both L1 and L2 (Danesi,1992; Denesi, 1995, Chateris-Black, 2002). In a small-scale exploratory study conducted by Danesi (1995) where the type of language produced in a free composition exercise in the target language was examined, he noted that learners of various proficiency levels including elementary, intermediate and advanced English-speaking students of Italian all showed a tendency to use conceptual

metaphors that were similar in both languages. He explains such a phenomenon exists because the students had developed 'no new ways of thinking conceptually' as a result of their language learning experiences (1995, p.12).

Third, learners' acquisition of metaphors is influenced by L1 conceptual and linguistic transfer, which is the best reason why learners tend to use those metaphors that are alike in L1 and L2. In order to trace linguistic transfer, Littlemore and Low (2006a) states, "collocation and phraseology are therefore important components of linguistic metaphor" (p.15), because metaphors tend to collocate repeatedly with the same set of words. The frequency aids (L2 learners') interpretation by native speakers of a language, as it tends to keep metaphorical and nonmetaphoric forms distinct (Deignan, 2005).

Fourth, culture presents a main obstacle to L2 learners in understanding and producing metaphors because they are culturally-loaded expressions (Littlemore, 2003; Deignan, 2003). For instance, overseas students encountered problems when understanding the metaphors the instructor used in university lectures (Littlemore, 2003). As she states,

> Confusion is particularly likely to arise when, for cultural reasons, the speaker and listener attach different connotations to the source domain. A student's cultural background is also likely to affect the ways in which he or she is able to use clues in the surrounding context to help interpret metaphors. Students are perhaps more likely to notice clues that correspond to their cultural expectations than ones that do not (p.274).

Further, exploring metaphors in second language acquisition can benefit students' cross-cultural communicative competence. As Boers (2003) remarks: "If language is an integral part of culture, and if culture is expressed (albeit individually) through metaphor, then it follows that cross-cultural communication would benefit substantially from a heightened

metaphor awareness on the part of educators and language learners" (p. 236). Cultural barriers have been manifested in various studies. In a study about Chinese ESL expression of certain abstract ideas such as ANGER in writing, Feng (1997) found "The Chinese speakers are seen as conceptually crippled in English. Their linguistic variety and conceptual richness in Chinese almost disappear in their English expressions" (p.80).

Littlemore and Low (2006a) suggested cultural differences in terms of metaphor (and metonymy) need to be considered from a linguistic angle as well as a conceptual perspective. The reason is that even when languages employ the same conceptual metaphors, there can be differences in the types of linguistic metaphor that are produced, in the degree of conventionalization of these metaphors and in the scope of the conceptual metaphors themselves. In a comparative study of metaphor between English and Polish, Deignan et al. (1997) identified a number of cross-linguistic differences between conceptual metaphors and their linguistic variations. They classified these differences into four types:

- same conceptual metaphor + equivalent linguistic expressions
- some conceptual metaphor +different linguistic expression
- different conceptual metaphors used in the two languages
- words and expressions with the same literal meanings but different metaphoric meanings

One explanation for cross-cultural variation at the linguistic level is that different features of a word are salient in different cultures, making them more susceptible to selection for

figurative transfer or use (Gyori, 2000). Thus, linguistic features provide important insights into cross-cultural variations.

Fifth, as a learning strategy metaphor has been shown to take positive roles in second language learning. Littlemore (2009) holds that "using conceptual metaphor in the language classroom is significantly more effective than less systematic approaches to vocabulary teaching" (p. 99). Sacristán (2005) proposes that metaphor is a useful device for teaching L2 Business English learners. Boers (2004) demonstrates that conceptual metaphor awareness can help L2 learners expand and retain vocabulary. Barcelona (2001) argues that the contrastive study of conceptual metaphors across languages should help L2 textbook writers and teachers in their selection and arrangements of the teaching materials. Li (2009) conducts an empirical study of the conceptual motivations in learning metaphorical expressions, idioms and proverbs and reveals the important role of conceptual metaphor in L2 learning (p.138):

a) Conceptual metaphors and image schemas can facilitate the learning of the metaphorical senses of the words in the target domain.
b) Conceptual metaphors introduced via Chinese (L1) can enhance the learning of the metaphorical senses of the English (L2) words in the target domain better than conceptual metaphors introduced via English.
c) Conceptual metaphors can facilitate the learning of English (L2) idioms and proverbs.

As illustrated above, as a learning strategy, metaphor could be a helpful tool to L2 learners to facilitate L2 learning. In order to help learners to understand or process conceptual metaphors, learners need to be taught to develop their metaphorical competence (Danesi, 1992; Littlemore & Low, 2006b), a concept that is proposed to highlighted as additional dimension for learners' communicative competence because "metaphoric competence has in fact an important role to play in all areas of

communicative competence" and "it's highly relevant to second language learning, teaching and testing, from the earliest to the most advanced stages of learning (Littlemore & Low, 2006b, p.268) .

2.8 Recent Development in CMT

Some recent development in contemporary metaphor and their implications in second language learning and teaching have been emerging. Some key developments are listed as follows.

2.8.1Overlapping

Although CMT has been revolutionary in cognitive linguistics and beyond, it has encountered some criticisms in recent years. Though the theory has been constantly developed and refined, one of the main criticism is that "the number of conceptual metaphors has had a tendency to proliferate; they vary significantly in the extent to which they are employed and elaborated; and that there is a huge amount of overlap between them" (Littlemore, 2009, p.99). Luodonpää-Manni & Viimaranta (2010) also expresses a similar view that many metaphors discovered by Lakoff and Johnson (1980) overlap. For instance, GOOD IS UP and BAD IS DOWN convey the same idea as in HEALTH AND LIFE ARE UP; SICKNESS AND DEATH ARE DOWN. This calls into question as to how to categorize metaphors.

Closely related to the idea of overlapping, Grady (1997) suggests the idea of primary metaphor, i.e., more generic-level of metaphor because conceptual metaphors do not in fact constitute the most basic level of mapping. Instead, the idea of 'primary metaphor' constitutes a more fundamental type of metaphor. Since they are more

fundamental, one primary metaphor can often underlie several conceptual metaphors. Primary metaphors are based on our bodily functioning in the world and are basic (Gibbs, 2006). Such basic concepts include CHANGE IS MOTION, HELP IS SUPPORT, and CAUSES ARE PHYSICAL SOURCES. The idea of primary metaphor could help us reconsider categorization of metaphor from a more general framework and brings about the question on what level of generalization should be considered when analyzing and researching metaphor.

2.8.2 Metaphor and Phraseology

Phraseological patterns of words have been noted for distinguishing metaphorical senses form their literal senses by examining their surrounding words (Deignan, 2005). Phraseology has been also shown to be a challenge in second language classes, indicating that it should be seriously considered when researching metaphor for second language teaching and learning to help students to use metaphors in phraseologically appropriate ways (Littlemore, 2009).

2.8.3 Metaphor in Discourse

Metaphor in classic conceptual metaphor theory is viewed from a static sense, but it is increasingly being considered as a dynamic cognitive process. As is demonstrated by Cameron and Deignan (2006), metaphor emerges in discourse as a result of interaction between various social and psychological factors. As they point out, one's exposure to language and existent metaphor aid in comprehension of metaphor. In their view, human interaction is a complex system in which individual, small events can produce significant changes. Metaphors emerge in a random manner, with specific, pragmatic meanings as

well as fixed phraseologies, neither of which may be translatable between languages. Further complicating the issue is the fact that different metaphorical meanings emerge in different discourse settings. As Littlemore (2009) states that metaphor comprehension do not always involve a straightforward transfer from the source to the target domain. New meanings emerge beyond the two domains.

2.9 Second Language Development as a Dynamic Process

There is a recent surge of interest in viewing language development from a dynamic systems view from methodological and theoretical perspectives (De Bot, 2008; Ellis, 2008; Larsen-Freeman, 2008). Larsen-Freemen (1997) is the first applied linguist who saw the potential of such a model. According to the dynamic systems theory, language development is characterized as a dynamic process in which language development is complex and interacts with various subsystems. Language develops nonlinearly and sometimes is unpredictable and chaotic. There are backslides, stagnations, and jumps, and like the unpredictability of avalanche. In this perspective, variation and nonlinearity are natural phenomena, providing insights into language development when looked globally instead of a noise viewed from a local point of view.

To sum up, although there is a growing interest in metaphor research in recent years, not many second language researchers and practitioners have fully realized the importance of metaphors in language learning, the role of metaphors in cultural learning and understanding, and the deficiency of metaphorical content in learner discourse compared with native speakers. As is suggested by Littlemore and Low (2006a), "the research base for figurative language remains minimal" compared with other areas of

language learning problems (p. xv). This may be caused by a lack of research in its general implications for language learning and for discourse programming and it is still a relatively unknown area of cognitive science for many researchers (Danesi, 1992).

The current empirical study is thus situated in such a theoretical framework in which the power of classic conceptual metaphor theory (CMT) and the new ideas brought to CMT in recent years coincide on the journey of theoretical advancement. It is an initial bold attempt of its kind to analyze metaphors in L2 Chinese as well as L2 English texts by incorporating some of the new emerging ideas in CMT and applied linguistics. Particularly pertinent to the current study is the new idea of overlapping, frequency of occurrence, linguistic issues such as phraseology, and metaphor as a dynamic process. When exploring the conceptual mappings between the source and the target domain, the linguistic issues in the study of metaphor in discourse cannot be ignored. Linguistic and conceptual issues which interact in certain ways, further complicated by cultural factors, will compose a dynamic process and pose special challenges for second language learners and teachers.

CHAPTER THREE: RESEARCH METHODOLODY

3.1 Defining the Scope of the Research

3.1.1 Salience of the Domain of Space

According to the different source domains called upon, Lakoff and Johnson (1980) distinguish three types of metaphors, i.e., orientational/spatial metaphors, ontological metaphors and structural metaphors. The source domain for spatial metaphors is space, for instance, *up-down, in-out, back-front, central-peripheral*, etc.. By mapping a spatial structure, in particular, the image-schematic structure onto a non-spatial concept, spatial metaphors give the concept a spatial orientation. Thus spatial metaphor is considered as one of the essential metaphors to conceptualize our world and experience.

Lakoff and Johnson (1980) summarize the importance of orientational metaphor in our cognition (p. 17-19):

- Most of our fundamental concepts are organized in terms of one or more spatialization metaphors.
- There is an internal systematicity to each spatialization metaphor. (e.g. HAPPY IS UP is consistent in the examples 'I'm feeling up' and 'My spirits rose.')
- There is an overall external systematicity among the various spatialization metaphors, which defines coherence among them. Thus, GOOD IS UP gives an UP orientation to general wellbeing, and this orientation is coherent with spatial cases like HAPPY IS UP, HEALTH IS UP, ALIVE IS UP, CONTROL IS UP, STATUS IS UP.
- Spatialization metaphors are rooted in physical and cultural experience; they are not randomly assigned. A metaphor can serve as a vehicle for understanding a concept only by virtue of its experiential basis.
- There are many possible physical and social bases for metaphor. Coherence within the overall system seems to be part of the reason why one is chosen and not another. . . . The major metaphor in our culture [English] is HAPPY IS UP; there is a reason why we speak of the height of ecstasy rather than the breadth of ecstasy.

- In some cases spatialization is so essential a part of a concept that it is difficult for us to imagine any alternative metaphor that might structure the concept (e.g. high status).
- So-called purely intellectual concepts, e.g. the concepts in a scientific theory, are often-perhaps always- based on metaphors that have a physical and/or cultural basis.
- Our physical and cultural experience provides many possible bases for spatialization metaphors. Which ones are chosen, and which ones are major, may vary from culture to culture.
- It is hard to distinguish the physical from the cultural basis of a metaphor, since the choice of one physical basis from among many possible ones has to do with cultural coherence.

Due to their significant status of the space concept in our cognition, this current study chooses to analyze spatial metaphors which are metaphors that employ the vertical spatial orientation as the source domain due to their essential role in our cognition. Space is a foundational ontological category in language, and the human conception of space structures other parts of the conceptual system through metaphorical mappings (Lakoff 1987, 1993). This is also reflected by Regier (1996, p.18-20). He states,

1) The primacy of space is strengthened by the fact that the human conception of space appears to structure other parts of the conceptual system through spatial metaphor.
2) Spatial relations are often expressed by closed-class forms. A closed class is a relatively small set of linguistic forms that adds members only rarely; examples are prepositions and verbal prefixes.
3) Space is also attractive as a domain of linguistic inquiry because spatial systems appear to exhibit considerable cross-linguistic and cross-cultural variation.

Spatial metaphors can be realized by using a number of words that indicate spatial properties. The domain of space is built around a system of coordinates having three axes: up-down axis, front/back axis and left/right axis, among which the first axis is considered as the primacy (Fillmore, 1982, p.36-27). In many languages, when a nonspatial axis is invoked, it is almost always the up/down axis (Jackendoff, 1996, p.14-24).

Despite the saliency of the *up-down* axis, it should be noted that spatial metaphors mapped onto the *up-down* image schema can be achieved via various prepositions: such as *under, underneath, beneath, below* as well as verbs such as *fall, drop, decrease,* to name a few. As is pointed out by Boers (1996), *under, underneath, beneath, below* are

primarily used in a static sense, while *down* is primarily used in a dynamic sense due to the 'preposition' vs. 'adverb' distinction (p. 97). "Static relations focus on the location of a trajectory and hence use an explicit landmark as reference point. Dynamic relations focus on the motion of a trajectory over a path, and the location of this path (relative to a landmark) may be considered self-evident, vague, or irrelevant" (p.97). For example, the sentence, *the cat is under the table* describe a static relations between the cat and the table while *the apple falls down from the table* depicts the motion of the apple and its movement from the table to the ground. Due to these various alternatives that can be used to achieve the same *up-down* image schema, different researchers use different criteria. The current study chooses *up/down* (in English), *shang/xia* (in Chinese) as the main words to study the metaphors, following Lan (2003), due to their highest frequency in *COBUILD* dictionary and *The Dictionary of High Frequency Words in Contemporary Chinese*, four lexical items *up* and *down* in English, *shang* and *xia* in Chinese indicating two SPACE concepts, namely UP and DOWN.

3.1.2 Senses of *up* and *down, shang* and *xia*

In order to categorize the metaphorical uses of *up* and *down, shang* and *xia*, a detailed discussion of the their senses is needed. This will be approached from two aspects: syntactic and semantic components.

3.1.2.1 Semantic and Syntactic Components of *up* and *down*

In terms of syntactic function, *up* can be used as a preposition, adverb, noun, adjective, and a verb. The following are some examples.

e.g. The cat is *up* the tree. (preposition)

He stands *up*. (adverb)

The *ups* and downs. (noun)

She is always *up* on current events. (adjective)

He *upped* and ran away from home. (verb)

In terms of semantic components, *up* has one essential sense based on merriam-webster dictionary: in or into a higher position or level, especially, away from the center of the earth, from beneath the ground or water to the surface, from below the horizon. Thus, *up* indicates a vertical spatial orientation, which is defined as the basic literal meaning in the study. Any other meaning derived from this basic sense is considered metaphorical in nature in the current study. For instance,

e.g He stands up. (literal meaning)

The price goes up. (metaphorical meaning)

up in the first example above is literal since it means the physical vertical orientation. The second example indicates quantity. Thus, it is categorized as the metaphor called MORE IS UP.

According to Machonis (2009), *up* has three main senses: completed aspect/action, intensified state, direction. The particle indicates three senses: intensity, completed action, and direction. While the first two senses are not related to the literal sense of *up* indicating physical verticality and are clearly metaphorical in nature, the third one may denote both literal and metaphorical senses. For instance, *clean up the house* indicates an intensified state, *make up a decision* means a completed action. Both cases are metaphorical in which up is used to describe STATES. "Direction" can denote physical

verticality such as '*he stands up*' or non physical verticality such as '*the price goes up*' in which *up* is used to conceptualize QUANTITY. However, there is also a frequent overlap between intensity and completed action and the boundary may also be fuzzy (Machonis, 2009). For instance, *clean up the house* could mean both. For the current study, in both cases, *up* is used to indicate a state, so they belong to the same category of metaphor of STATES.

Regarding syntactic components, *up* occurs quite frequently as an adverb with a verb. Such phrases are commonly referred to as phrasal verbs. *Up* can also be used as an adjective, a noun, and occasionally a verb. The following are some examples.

e.g. make up a decision, take up a job (adverb)

go up the hill (adjective)

ups and downs (noun)

She upped and left. (verb)

According to most dictionaries, the basic meaning of *down* is 'toward or in a lower physical position'. This sense is defined as the literal meaning. Based on this meaning of physical direction, *down* is frequently used to indicate a less active or a worse state or quantity. For instance,

e.g. The prices go down. (quantity: LESS IS DOWN)

his health goes down, calm down (less active state: INACTIVE IS DOWN)

let someone down (less active state: SADNESS IS DOWN)

Regarding syntactic components of *down*, it can be used as an adverb, preposition, and occasionally as a verb.

e.g. Go down the tree (preposition)

He started to settle down. (adverb)

He downed to the ground. (verb)

3.1.2.2 Semantic and Syntactic Components of *shang* and *xia*

- Syntactic function of *shang* and *xia*

a. As a main verb. Different from English, *shang* and *xia* are more commonly used as a main verb in Mandarin Chinese. For example, *shangke* (go to class), *shang ban* (go to work), *shangzai* (upload), *xiake* (get off class), *shangsheng* (rise), *xiaban* (get off work), *xiazai* (download), *xiajiang* (decline).

b. As an adjective. *shang* and *xia* can also be used an adjective such as *shangpin* (good objects), *shangyidai* (previous generation), *sixia* (private), *xiayidai* (next generation).

c. As a verb complement. For instance, *aishang* (fall in love) in which *shang* is a complement to the main verb *ai* (love) to indicate an achieved result. *xia* has the same function, for instance, *daxia jichu* (lay down a foundation) in which *xia* is a complement to the main verb *da* to indicate a passive or settled result.

- Semantic senses of *shang* and *xia*

Similar to *up* and *down,* the basic sense of them is the physical vertical orientation. Any other sense based on the basic sense is considered metaphorical. For example,

e.g. Yundong yuan paoshang shan qu.

The athlete runs *up* the hill. (literal)

e.g. Pingguo cong shushing luo xialai

An apple falls *down* from the tree. (literal)

e.g. Ta aishang LE xiaoming.

She falls in love with xiaoming.

e.g. Jiage xia jiang LE.

The price went down.

The first two examples are literals uses of the two words in question while the last two examples are metaphorical in nature since the meanings differ from their basic senses. In 'aishang le xiaoming,' it means a completed state in that 'she has fallen in love with xiaoming'. In 'jiage xia jiang le,' it means 'the price is going down'.

up, *down* in English, and *shang, xia* in Chinese have many different senses based on their basic meanings and they have a remarkable consistency. However, systematic research along this line is still sporadic. Lan (2003) is a one of the notable research by a corpus-dictionary combined approach about *up*, *down* in English and *shang*, *xia* in Chinese and discovered four main concepts sharing the same target domains, namely SATES, QUANTITY, SOCIAL HIERARCHY and TIME. The following are examples for each category.

STATES: FUFILLMENT of an action is SHANG/UP

e.g. 考上大学 (kaoshang daxue, 'test up university', 'be enrolled by a university')

e.g. take up teaching

QUANTITY: MORE IS SHANG/UP

e.g. 物价上涨 (wu jia shangzhang, 'price up rise', 'a rise in the price')

e.g.   The price is going up.

SOCIAL HIERARCHY: IMPORTANCE IS SHANG/UP

e.g. 上级 (shangji, 'up level', 'the upper level')

e.g   move up the career ladder

TIME: EARLIER TIME IS SHANG, LATER TIME IS DOWN (Chinese);

LATER TIME IS UP, LATER TIME IS DOWN (English),

e.g. 上个月   (shang ge yue, 'last CL month', 'last month')

e.g   up to now, handed down by the previous generations

In the last example, Chinese and English share the same source and target domains to use SPACE AS TIME, but differ in that English has the metaphor LATER TIME IS UP. In addition to these four categories specified in the literature, however, there are other spatial metaphors that are different from English regarding *up* and *down* and do not fall into these previous categories. For instance, it is frequently found in the corpus that native speakers of Chinese use one type of metaphor containing the lexical item *Shang* ('up'). The following are some examples.

e.g. 在 这件 事情   上 他 赢 了。

zaizhe jin shiqing shang ta ying le

at this CL matter   up   he win CRS[3]

'He won as far as this matter is concerned.'

---

[3] Sentence final particle indicating 'currently relevant state, see Li and Thompson (1981).

This type of metaphor will be named as RELEVANT SCOPE IS SHANG in the current study. This above example means 'he has won regarding this matter, but he might have lost in some other aspects'. Careful examination of learner data reveals that L2 learners of Chinese are also aware of this metaphorical usage that is unavailable to *up* in English.

Furthermore, the connection between linguistic forms and conceptual metaphors has not been well addressed (e.g. Lan, 2003). It has been noted by corpus linguists that one of the most intriguing insights gained from corpus-based approaches to metaphor is that there are often formal differences between literal and non-literal uses (Stefanowitsch & Gries, 2006). Metaphorical uses of lexical items frequently prefer a different word class than literal uses (Deignan, 1999); in other words, "metaphorical uses of a word commonly appear in distinctive and relatively fixed syntactic pattern", which cannot simply be explained by the domain mapping of the conceptual metaphor theory (Deignan, 2006, p.106). For instance, in Chinese, when the metaphor RELEVANT SCOPE IS UP is used, the pattern *zai* + noun *shang* ('at…up') frequently occurred, but when the metaphor becomes more idiomatic as in (2), *zai* is usually omitted. For example,

e.g. 事实上 (shishi shang, reality up/on) 'in reality'

在实力上占优势 (zai shili shang zhan youshi, at strength up take advantage)

'be advantageous in terms of strength'

在其他问题上有分歧 (zai qita wenti shang you fenqi, at other problems up/

'have disagreement in other problems'

Another example in Chinese is the phrase 马上 *mashang* (on the horse 'immediately'). If we simply look the function of *shang* in the phrase, it literally means 'on', but since the phrase is a fixed time phrase and has a metaphorical meaning when it occurs before a verb, it simply means 'ready to take action' or 'immediately'. Thus, in such cases, *shang* is considered metaphorical since it cannot be interpreted by separating it from the phrase itself. By contrast, when *shang* is used to indicate a fulfilled state, it is typically followed by a verb as in the following example:

e.g. *aishang* love on/up 'fall in love', *bishang yanjing* close up eyes 'close eyes' .

The focus of the current study then is to study the four key words *up*, *down*, *shang*, *xia* by linking the conceptual level and the linguistic level between English and Chinese. More importantly, it focuses on the comparisons between native speaker language and learner language.

3.2 Recategorization of Spatial Metaphors: Up*/Down* and *Shang/Xia*

A key word can derive many different metaphorical senses. According to Lakoff and Johnson (1980), there are ten categories of orientational metaphors associated with UP and DOWN.

1) HAPPY IS UP; SAD IS DOWN

2) CONSCIOUS IS UP; UNCONSCIOUS IS DOWN

3) HEALTH AND LIFE ARE UP; SICKNESS AND DEATH ARE DOWN

4) HAVING CONTROL OR FORCE IS UP; BEING SUBJECT TO CONTROL OR FORCE IS DOWN

5) MORE IS UP; LESS IS DOWN

6) FORSEEABLE FUTURE EVENT ARE UP (AND AHEAD)

7) HIGH STATUS IS UP; LOW SATUS IS DOWN

8) GOOD IS UP; BAD IS DOWN

9) VIRTUE IS UP; DEPRAVITY IS DOWN

10) RATIONAL IS UP; EMOTIONAL IS DOWN

Lakoff and Johnson (1980) also add FINISHED IS UP. However, as they pointed out later, "There is an over-all external systematicity among the various spatialization metaphors, which defines coherence among them. Thus, GOOD IS UP gives an UP orientation to general well-being, which is coherent with special cases like HAPPY IS UP, HEALTHY IS UP, ALIVE IS UP, CONTROL IS UP" (Lakoff & Johnson, 1992, p. 299). Luodonpää-Manni &Viimaranta (2010) also point out that most of these metaphors are consistent with the GOOD IS UP, BAD IS DOWN model based on the negative or positive evaluations entailed, indicating the high importance of this metaphor. They also point out that ACTIVE/PASSIVE is one of the basic vertical metaphors.

Considering that not all these above ten metaphors (Lakoff and Johnson, 1980) are realized by the linguistic forms containing *up, down, shang, xia*, and the issue of overlapping, metaphor types are recategorized into the four following categories.

1) STATES

- GOOD IS UP, BAD IS DOWN

  ➢ VIRTUE IS UP, DEPRAVITY IS DOWN

  ➢ RATIONAL IS UP, EMOTIONAL IS DOWN

- FINISHED/FULFILLMENT IS UP

- ACTIVE IS UP, PASSIVE IS DOWN

  - HAPPY IS UP, SAD IS DOWN,

  - CONSCIOUS IS UP, UNCONSCIOUS IS DOWN,

  - HEALTH AND LIFE ARE UP, SICKNESS AND DEATH ARE DOWN,

  - HAVING CONTROL OR FORCE IS UP, BEING SUBJECT TO CONTROL OR FORCE IS DOWN

2) QUANTITY

- MORE IS UP, LESS IS DOWN

3) SOCIAL HIERARCHY

- HIGH STATUS IS UP, LOW STATUS IS DOWN

4) TIME

- FORSEEABLE FUTURE EVENT ARE UP (AND AHEAD) (English)

In our native English corpus, actual data of the vertical metaphors containing the lexical items falls into the following four categories: STATES, QUANTITY, TIME, SOCIAL HIERARCHY, but in Chinese, there are two extra categories for both *shang* and *xia*.

shang:

SCOPE: 从理论上说 (cong lilun shang shuo: 'in theory')

OTHER (to indicate a time period):

e.g. 早上 （zaoshang 'morning'）晚上 （wanshang 'evening'）

xia:

EVENT MEANTURE: 敲了一下门（qiaole yixia men 'knock on the door once'）

CONDITION: 在这种情况下(zai zhezhong qingkuang xia 'under such circumstances'）

Lakoff and Johnson (1980) point out that many of our fundamental concepts are structured in terms of spatial metaphors. "The major orientation such as up-down, in-out, etc., seem to cut across all cultures, but which concepts are oriented which way and which orientations are most important vary from culture to culture" (p.24). A contrastive study between the learner's interlanguage, their native language, and the target language thus can reveal sights into how learners utilize spatial concepts to describe the world in the target language and how their native language and culture can influence their learning of the metaphors.

3.3 Research Methodology

One caveat has to be added from the beginning when it comes to methodology. Metaphor analysis and metaphor understanding is two different issues in metaphor research. According to Steen (1997), "metaphor analysis is a task for the linguist who wishes to describe and explain the structure and function of language. Metaphor understanding is a cognitive process which is the object of investigation of psycholinguists and discourse psychologists who are conducting behavioral research"(p.59). In other words, metaphor understanding is a behavioral and psychological issue while "metaphor analysis is a goal-and norm-related activity in the pursuit of data collection. It is the intentional technical identification of conceptual metaphors from metaphorical language in discourse"(p.59). Thus, this study focuses on analysis of learners' metaphorical language but not learners' understanding or processing of the metaphor.

3.3.1 Identification of Metaphor

In identifying metaphor in language, Steen (2007, p. 261) suggests three general methodological issues that have to be considered to identify a metaphorical mapping.

1) Finding a metaphorically motivated linguistic form
   - Decide what counts as one form
   - Decide whether it has at least two senses
   - Decide whether the two senses are related by some form of nonliteral similarity
   - The direction of the derivation or mapping has to be found on a criterion of basicness, whether that is historical, experiential, acquisitional, and so on.
2) Demarcating conceptual domain
   - Decide what level of abstraction
   - Decide which set of polysemous words (or more generally linguistic forms) are included
   - Decide about the descriptive framework for analyzing the syntactic, semantic, pragmatic, and encyclopedic information that can be collected about each of the polysemous items
3) Identifying a cross-domain mapping
   - Decide the relative salience of the two domains as distinct conceptual systems.
   - Decide about the necessary and sufficient degree of similarity required for a mapping since corresponding elements between two domains may be relatively more or less similar.
   -

As is discussed in previous chapter, the four lexical items have been determined to search for lexical items. Dictionaries[4] are used to check for the many senses of the four lexical items and its other senses. The basic sense is mainly based on our bodily experience. According to the CMT framework, metaphors are based on our bodily experience in our physical world and we describe one thing (abstract) through another (concrete). Thus, the basic sense of the four lexical items is thus related to our direct physical experience with space, which involves concrete spatial orientation or movement. Thus, if there is literal sense of vertical space orientation involved, then the four lexical items will be considered as having the literal, or basic meaning; if the basic sense involves an extension of meaning beyond the vertical space orientation, then it is considered as metaphoric. For

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[4] Dictionaries consulted: Longman dictionary of contemporary English (1995), dictionary.com, Marriam-webster Online, Xinhua zidian, Xiandai hanyu zidian, Cihai.

instance, 'up' in 'wake up' does not involve any physical spatial orientation. In that sense, when the domain of space (in particular, the UP-DOWN, SHANG-XIA image schema) is mapped onto a domain other than space, it constitutes a conceptual metaphorical mapping.

When it comes to the identification of metaphor, it is worth noting that there is not just one specific way, depending on the research area in which metaphor is investigated. In the current research, since the lexical items are predetermined and related to the physical space, it is not so challenging to distinguish different senses of the lexicon based on the physical –abstract criteria, which can be easily looked up in a comprehensive dictionary. Though each tool has their limitations in distinguishing a basic sense from other senses, Steen (2007) highlighted the helpfulness of using a dictionary and a corpus (p. 100). Corpora might be a good tool to determine the most basic sense of a word based on its frequency of occurrence; however, it is pointed out that the most frequent sense of a word may not be the literal sense since some metaphorical meanings associated with a particular lexical item are so popular (Deignan, 2006). This is particularly true with these highly frequent lexical items examined in the current search, so a dictionary serves as a better tool to define basic meanings for a chosen lexicon. For the current study, the issue is relatively simple since spatial metaphors are examined in that the basic meaning involves the physical space orientation. Any extended senses derived from the basic sense are considered metaphorical.

3.4 A Corpus-based Contrastive Analysis

3.4.1 Advantages of corpus-bases approach

It is fair to say that in the past fifteen years, corpus-based methods have revolutionized research in language use. Sinclair (1991) is one of the notable linguists who argue that the systematic study of large corpora yields information about language use that is otherwise unavailable based on intuition. He states,

> … the contrast exposed between the impressions of language detail noted by people, and the evidence compiled objectively from texts if huge and systematic. It leads one to suppose that human intuition about language is highly specific, and not at all a good guide to what actually happens when the same people actually use the language. (Sinclair, 1991, p.4)

Although corpora are but one source of evidence among many, complementing rather replacing other data sources such as introspection and elicitation, there is a general agreement today that they are "the only reliable source of evidence for such features as frequency" (McEnery & Wilson, 1996, p.12). Granger (2002) also comments on the advantage of using a corpus for linguistic studies. "Frequency is an aspect of language of which we have very little intuitive awareness but one that plays a major part in many linguistic applications which require knowledge not only of what is possible in language but what is likely to occur. The obvious strength of the computer corpus methodology lies in its suitability for conducting quantitative analyses" (p.4)

Corpus-derived insights, which may be difficult to gain using intuition alone, have been well recognized in applied linguistic research in the last two decades. Recently, the approach is merging in studying metaphor (and metonymy) "for a strong emphasis on authentic data and the empirical verification of many of the theoretical claims" in the theory of conceptual mappings (Stefanowitsch & Gries, 2006, p.1). As pointed out by Littlemore (2009), one criticism of conceptual metaphor theory is that "the examples used to illustrate [the theory] are not taken from real data" (p. 102). In this sense, corpus-

based approach shows their unique advantage in metaphor research by providing naturalistic data.

In studying learner language, corpus-based learner language analysis, or Contrastive Interlanguage Analysis (CIA) (Granger 1998) has emerged as a useful approach. CIA involves two types of comparison: native speaker/nonnative speaker (NS/NNS) comparison and nonnative speaker/nonnative speaker (NNS/NNS) comparisons. According to Granger (1998), NS/NNS comparison can highlight a range of features of non-nativeness in learner writing and speech, i.e., not only errors, but also instances of under- and overrepresentation of words, phrases and structures. Following the framework of CIA, this study compares interlanguage (i.e., learner language) to native speaker language in terms of how learner language differs from the English native speakers' language in utilizing spatial metaphors to express abstract notions in writing.

Corpus-based research into metaphor is still at its infancy due to the limitations of exploiting all metaphor based on computer techniques, but it has shown some fruitful results. As Stefanowitsch & Gries (2006) remarks, "Corpus-based research into the linguistic and cognitive nature of conceptual mappings is still very much in its initial stages. Nevertheless, the research record so far is impressive, the corpus-based approach has uncovered a wealth of intriguing facts about conceptual mappings that was not know beforehand, and indeed, that could not have been learned from the traditional, introspective approach" (p. 12). Deignan (2003) also points out that "language in use is the central source of nonintuitive evidence we have to research the nature of metaphor" (p.265). Corpus-based tools also provide us with insights into differences between literal

and metaphorical uses in terms of their syntactic patterning and word class (Deignan, 2006). Thus, corpus-based approach to metaphor is equal or superior to research based on introspection or eclectic collections of individual citations in metaphor identification. It is superior particularly because of its data coverage and quantified frequency to show the importance of a given metaphor in a particular language and show the systematic nature of a conceptual mapping (p.64-65).

3.4.2 Limitations of a corpus-based approach

Deignan (1999): "While a corpus-based approach to the study of metaphor shows up syntactic, collocational and semantic patterns which are difficult to access in any other way, this method has limitations, and has received some criticism"(p. 196). She mentions three possible limitations:

- The limited usefulness of corpora in the study of innovative metaphor;

- The necessity of working bottom-up rather than top-down in terms of developing models of linguistic pattering;

- The issue of representativeness (of a corpus data)

Despite its limitations, corpus-based approaches have been increasingly recognized as a useful tool to complement other approaches to metaphor and have proven fruitful with its unique advantages.

3.5 Identifying Metaphor in Corpus

Since conceptual mappings are not linked to particular linguistic forms and none of the currently available large corpora contain any semantic/metaphoric annotation,

searching for conceptual metaphors in corpora proves to be a challenge to researchers. Thus a number of strategies are proposed for extracting metaphors in corpora (Stefanowitsch & Gries, 2006, p.2-6):

1) Manual searching

2) Searching for source domain vocabulary

3) Searching for target domain vocabulary

4) Searching for sentence containing lexical items from both the source domain and the target domain

5) Searching for metaphors based on 'markers of metaphor'

6) Extraction from a corpus annotated for semantic fields/domains

7) Extraction from a corpus annotated for conceptual mappings

The challenge of identifying metaphor has been noted in the literature. The intricacies and difficulties of identification are now well documented. Problems arise in identification because metaphor cannot be defined by necessary and sufficient conditions that would create clear category boundaries (Deignan, 1999)

> "It will be clear from the discussion so far that the direction of investigation in corpus linguistics is generally from word to meaning. In the case of metaphor, patterns can sometimes be traced from linguistics evidence through to a possible underlying metaphor in Lakoff's terminology (1987). It is not possible to work the other way around; that is, there is no automatic way of discovering the linguistic realizations of any conceptual metaphor, because a computer cannot tell the researcher anything about the speaker meaning. Concordances will show the researcher words in their context, but he or she has to process this information. The researcher uses informed intuition to decide whether a particular citation of a word is metaphorical, within his or her own definition of metaphor." (p. 181)

In other words, computer-generated results for metaphor research require elaborate manual reworking. The current study thus employs a combination of two strategies:

searching for source domain vocabulary, i.e., *up/down* (including *upper*) in the two English corpora and *shang/xia* in the two Chinese corpora, combined with a manual checking to sort out the metaphorical and literal uses.

When researchers identify metaphorical uses from literal uses, the commonest and most popular approach to metaphor identification is probably the researcher's unilateral identification (Cameron & Low, 1999, p.49), which Deignan (1999) called "informed intuition". It has two main advantages: identification criteria specific to the project can be set by the researcher and a wide range of perspectives from multiple disciplines may be integrated based on the experience of the researcher. However, it also has a danger of subjectivity since the metaphors identified by the researcher may not be explicitly indicated by the speakers. Additionally, researchers tend to have a heightened sensitivity to metaphors that are familiar to them, which may lead to over-interpretation of the expressions. However, other approaches to metaphors such as post-hoc techniques (i.e., asking speakers what they mean) and involving a third party are not problem-free either. Respective reports from speakers and post-hoc debriefings may cause mentalistic accounts and high degree of uncertainty that will jeopardize the validity of the focus of the study.

Metaphor identification can also involve a third party. The problem with third-party identification lies in the possibility that different people may use different definitions of metaphor. As Cameron and Low (1999) show, information provided by the third parties need be treated with caution and must be relevant to the research. Due to the popularity of the researcher identification approach via 'informed intuition' and relative

straightforwardness of the conceptual mapping between the space domain and another domain, the current study employs such an approach, combined with dictionary consultation since corpus-based approaches cannot retrieve retrospective information from learners, as well as the consideration that speakers do not normally realize that they use metaphors, which is one of the key points of the conceptual metaphor theory.

Finally, it should be noted that the metaphors involving the lexical items *up/down* and *shang/xia* in the current study are not an exhaustive list of the concept of UP/ DOWN and SHANG/XIA since a conceptual metaphor can be manifested by various linguistic forms and some may not be explicit at the lexical level but embedded in the context. Due to limitations of the corpus searching technology in identifying all instances of a given metaphor at the current stage, this study has chosen to only include those metaphors containing the above four lexical items *up, down, shang, xia* as representative indexing spatial metaphors based on criteria set up by previous literature.

3.6 The Data

The data for the study comes from four corpora: the two native corpora used are the *Frown* Corpus and the *UCLA Chinese Corpus*; the two Interlanguage Corpora are *Interlanguage Corpus of Written Chinese* developed by Beijing Language University and *CLEC* (*Chinese Learner English Corpus*). The *UCLA Chinese corpus* and the *Interlanguage Corpus of Written Chinese* can be accessed online and the rest were purchased from the distributors. The two native corpora are very comparable in that the *UCLA Chinese Corpus* was built based on the *FROWN* corpus. The two learner corpora are generally comparable for the following reasons:

1) Both are scripts from standard composition tests and topics involved are common themes about the Chinese society and universities.

2) Both are collected from a variety of universities, so it is similarly balanced.

3) Both are mainly argumentative and narrative genres

4) The student population is of similar proficiency range (intermediate low– intermediate high)

The following is a structure of each corpus:

Table 1 Corpus Structure

Name	Size	Content
UCLA Chinese corpus (NC)[5]	687,634 words 15 genres	Collected from written modern Chinese available from the Internet, collected during the period of 2000-2005 though some texts were written in earlier periods
Frown Corpus (NE)	About 1 million words 15 genres	Early 1990s American English
CLEC (Chinese Learner English Corpus)	1 millions in total, but only a subcorpus of 277,000words (1800 compositions based on exams) are used	Collected from different universities based on 1996-1997 English tests, in total 1800 compositions compiled from the national College English Tests in China (College English Test-CET, band 4 and 6)
CLL corpus (Corpus of American students learning Chinese as a second/foreign language)	4 million words in total, but only a subcorpus of 42,388 words (118 compositions from American students are used)	Collected from different universities based on the standard written Chinese test (HSK) during 1992-2005

There are two proficiency levels for each learner corpus. In the ELL corpus, the proficiency level is divided by the proficiency of the learners, Band 4 and Band 6, which

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[5] For ease of reference, the native English corpus is referred as NE, the native Chinese as NC, the Chinese learner corpus as CLL, and the English learner corpus as ELL in the following discussion.

is already separated in the corpus itself. Learners who take Band 4 English test typically have about 4 semesters of English studies at the college level, while Band 6 are who have passed Band 4 test and have at least one or two more semesters of English studies after the Band 4 test. The CLL corpus is divided by the researcher into two proficiency levels, according to the learners' test results. Since the average points of their compositions including the lexical items *shang* and *xia* is 70.44 (*shang*) and 70.71 (*xia*), so 70 is decided as the cutting line. Learners who achieved a lower score than 70 are described as LP (lower proficiency) group, while those who achieved 70 or more are defined as HP (higher proficiency) group.

Though the two learner corpora are not exactly the same, given that the focus of the study is not on the level of topic or genre types, but on the level of how learners use the target language compared with the native speakers, the comparison is still reasonable. The limitation of data lies in the fact that the learner corpora are relatively smaller since they are based on one category of texts (i.e., scripts from learners' composition tests) than the native corpora which are large sized general databases composed of different written genres. The comparisons will be characterized as the ones between the specialized corpora and general corpora. Both quantitative and qualitative analysis of the corpus data will be integrated in the current study. Due to the large size of the native English and Chinese corpora, 25% percent of each native corpus will be sampled and coded to represent the whole corpora, but all learner data including the four lexical items will be coded and analyzed.

CHAPTER FOUR: DATA ANALYSIS

4.1 Metaphors Contain *up/down* in ELL Corpus

4.1.1 Quantitative Analysis: Metaphorical Density

4.1.1.1 *up:* Quantitative Analysis

Table 2 Overall picture of UP/SHANG

Speaker Type	Raw Frequency (RF)		Normalized Frequency [6] (NF)	
ELL (277,000w) LP=117,000w HP=160,000w	476 (up)	LP 241	**1718.4**	**LP 2059.8**
		HP 235		**HP 1468.7**
NE (1 million w)	1979 (up)		**1979.0**	
NC (687,634 w)	4173 (shang)		**6068.6**	

As is shown in the above Table, *shang* is used much more frequently in Chinese than *up* in English. This includes the examples in which *shang* is used as a main verb and other cases such as a preposition and adjectives. Even though *shang* is frequently used as

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[6] Normalized Frequency (NF): frequency per million words, is typically used for comparison of frequency when corpus sizes differ.

a verb, the conceptual metaphors match the one when *up* is used in a phrasal verb such as *go up* or *come up*. Even though there are cases when *shang* may not be able to be directly translated into *up*, the conceptual metaphors are shared. For example,

e.g. *shangke*, normally translated as 'attend a class' but not '*attend up a class'

shangban, 'fulfilling work duties' 'go to work'

However, the metaphor used here is ACTIVE IS UP (PASSIVE IS DOWN). This is similar to the metaphor in English where *up* is used as follows when *up* is used to indicate 'into a public state', or more general, 'into an active state' since the house is 'up' there unsettled, or unsold.

e.g. The house is *up* for sale.

In summary, even though the linguistic forms of *shang* in Chinese might not be able to be directly or equivalently translated into *up* in some cases, the conceptual metaphors are similar.

The data then was carefully examined for metaphorical and literal uses. In native Chinese corpus, there are 4 uncertain cases for lack of context in which the objects of the verb *shang* is omitted due to a previous context. Since this corpus cannot retrieve any contextual information, these cases are not counted in metaphorical analysis. The following is one example.

e.g.　小 眼睛　　*上*　　啦!

Xiaoyanjing shang la!

little eye　　up　　PRT

"xiaoyanjing" ('little eye') is used metonymically to refer to a person who has little eyes. The sentence could be interpreted as "It's little eye's turn to go *up* (to a stage)" in which *up* is used literally or 'it's little eye's turn (to attend a class, to go online, etc.) in which *shang* is used metaphorically to indicate connection to the Internet, which is the metaphor ACTIVE IS UP.

Table 3 Metaphorical *up* in ELL corpus

	Literal (raw counts)	Metaphorical (raw counts)	**Met. Density in corpus (normalized frequency)**
LP (up)	12	229	**1957.2**
HP (up)	42	193	**1206.2**
NE (up)	128	374	**1496.00**
NC (shang)	656	388	**2257.00**

As is shown in the above table, LP learners significantly used more metaphors than HP group and native English speakers. Though this could be true due to characteristics of learners in that LP group may overcompensate and overuse a specific conceptual metaphor than the target language. However, this is not the case here. Upon closer examination of the data, it is clear that LP learners repeatedly used the phrase "use up" in which 'up' is used metaphorically to indicate a completed state because of the influence of the specified topic in the English exams. The topic in question is 'global shortage of fresh water' in which "shortage" could be directly translated into "use up", so LP learners used 'use up the fresh water' quite frequently (110 cases out of 229 metaphorical examples in total). Though it is arguable that why learners would use 'use

up' instead of other phrases such as 'finish using' or 'short of water' and so on, these examples are excluded in order to yield a more accurate result of how learners use the metaphor, and LP learners' use of metaphor is updated to 119 occurrences. Since HP learners do not deal with the topic in question, the issue does not affect them. The statistics of metaphorical *up* are presented as follows:

Table 4. *up* in ELL corpus

	Literal (raw counts)	Metaphorical (raw counts)	**Met. Density in corpus (normalized frequency)**
LP (up)	12	119	**1017**
HP (up)	42	193	**1206.2**
NE (up)	128	374	**1496.00**
NC (shang)	656	388	**2257.00**

Figure 1 Metaphorical *up* in ELL
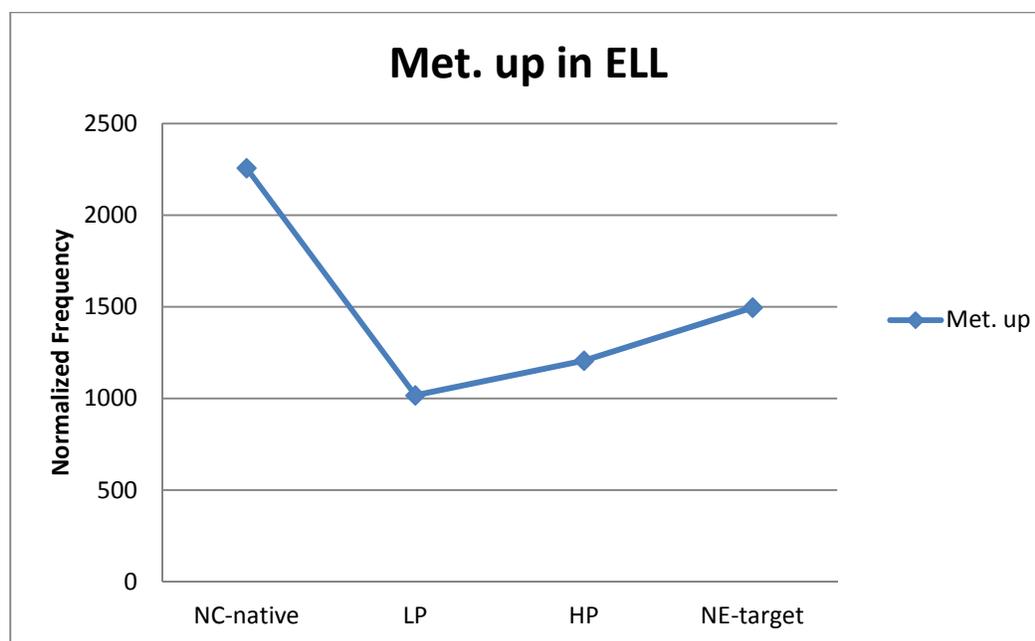
The order of metaphorical density of *up* (*shang* in native Chinese corpus) for all these four groups are as follows: NC>>[7]NE>>HP>>LP. Differences between all groups are statistically significant.

The following is a statistical summary:

- LP underuse met. *up* than NE significantly (LL[8] = 91.86)

- LP underuse met. *up* than HP group significantly (LL =16.12)

- HP underuse met. *up* than NE significantly (LL =31.14)

- HP is closer to the target language than LP to the target language

- HP+LP<<NE (LL=56.87), indicating significant difference

In this case, the figure shows that HP demonstrates a better awareness of the target language than LP. L1 transfer is not obvious in this case based on statistics since native Chinese enjoys a much higher frequency of *shang*. The influence of L1 will be discussed in more detail in the next section. In this section, how proficiency affects learners' acquisition of metaphors will be the focus.

4.1.1.2 *Down:* Quantitative Analysis

Table 5 Overall picture of DOWN (raw frequency)

ELL-down	Raw Frequency	**Normalized Frequency**
LP	36	**307.69**
HP	75	**468.75**
NE	215	**860.00**
NC	478	**2780.5**

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[7] ">>" indicate significantly more, "<<" significantly less, ">=" more but not significant; "<=" less but not significant.
[8] The log-likelihood (LL) test can be used for corpus comparison, in particular, to test whether an item is overused or underused in relation to another corpus and whether the difference is significant or not. See the following website for the LL calculator: http://ucrel.lancs.ac.uk/llwizard.html. If the ratio is equal to or more than 3.84, then the difference is considered significant (p< 0.05). The larger LL ratio is, the more significant the difference is.

Similar to the issue of *up*, *down* is also affected by the topic of water shortage since LP learners use examples such as 'cut down water use'. Corpus search shows that there are a total of 32 cases of *down* including 5 cases that are directly affected by the title, so 27 raw occurrences are used for the metaphorical analysis.

Table 6 *down* in ELL corpus

ELL-down	Literal	Met.	Met. density in corpus (Normalized Frequency)
LP	4	27	230.7
HP	21	54	337.5
NE	100	115	460
NC (xia)	212	266	1547.3

Figure 2 Metaphorical *down* in ELL

Met. *down* in ELL

	NC-native	LP	HP	NE-target
Down	1547.3	230.7	337.5	460
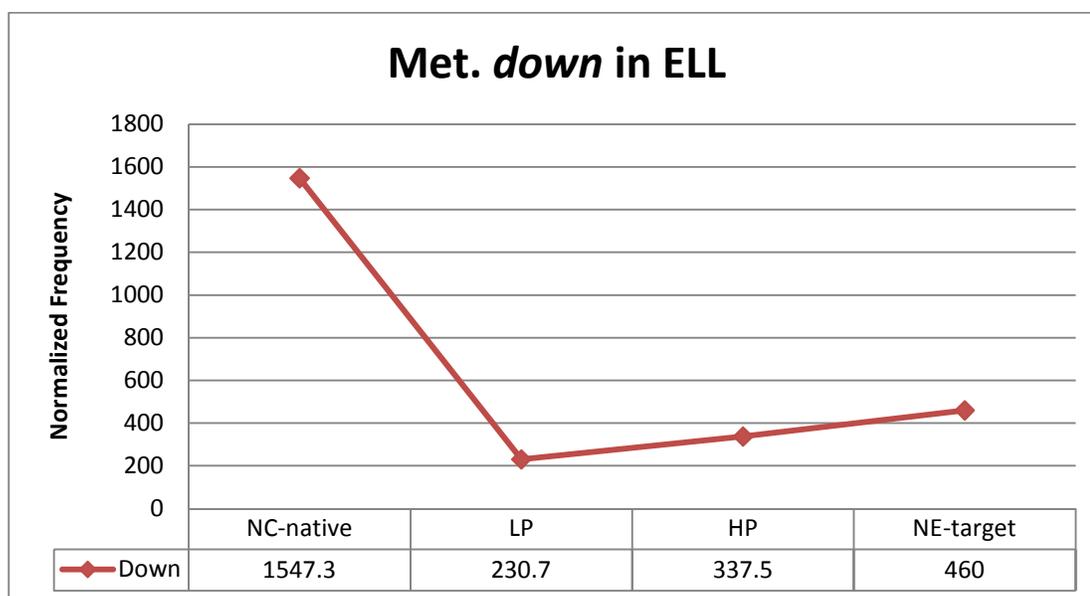
Down demonstrates a similar distribution in the English learner corpus when compared to *up* except that learners use a lower number of *down*:

The order of metaphorical density of *down* (*xia* in native Chinese corpus) for all these four groups are as follows: NC>>NE >> HP>> LP. Below is a statistical summary:

- NC differ from NE significantly (LL=621.80)

- HP differ from LP significantly (LL=20.19)

- HP differ from NE significantly (LL=18.89)

- LP underuse met. *down* significantly than NE (LL=77.59)

- HP is closer to NE than LP to NE

- Overall, learners (HP+LP<<NE) underuse significantly than NE (LL=41.98)

4.1.1.3 Symmetry between *up* and *down*: Metaphorical Density

Figure 3 *up/down* in ELL

	NC-native	LP	HP	NE-target
Met up	2257	1017	1206.2	1496
Met down	1547.3	230.7	337.5	460
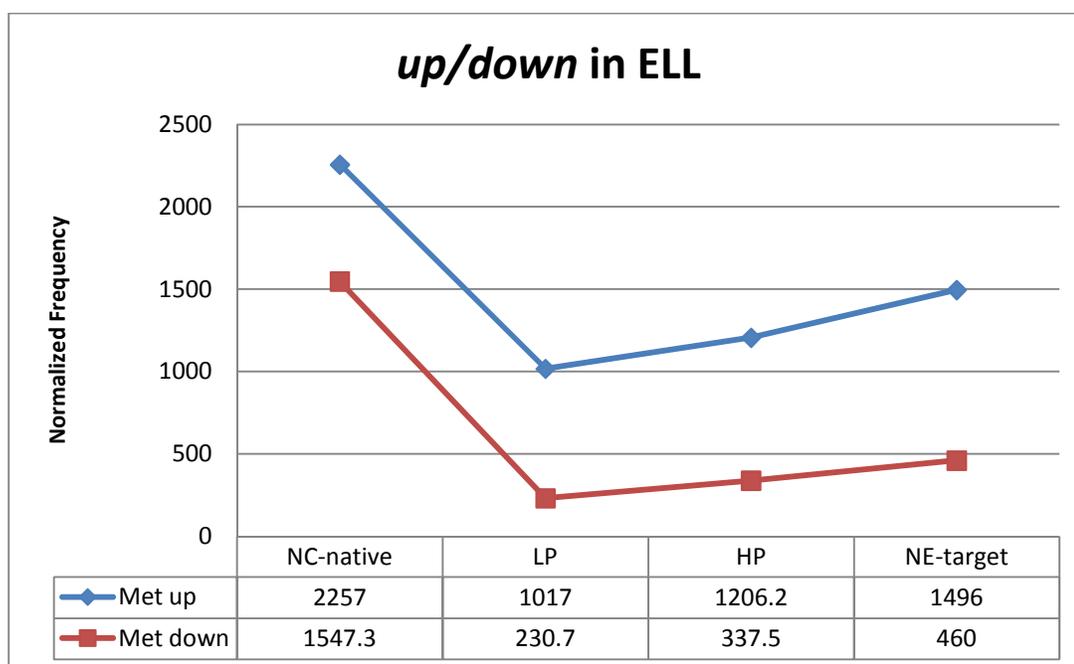
As is shown in the above figure, learners display a similar pattern in using *up* and *down* for metaphors in that LP underuses than HP; both LP and HP underuse signficantly than

the target language; HP is closer to the target language, indicating that HP have developed a better competence in using the metaphors in L2.

To sum up the discussion above, learner proficiency plays an important role in second language acquisition in terms of developing metaphorical competence: learners of a higher proficiency demonstrate more metaphorical uses in their linguistic production of writing compared with learners of a lower proficiency level. This is compatible with the general picture in second language acquisition that the higher proficiency is, the closer the learners' interlanguage is to the native language, in this case, the more metaphoric learner language is. This also shows that metaphorical awareness is part of language development.

4.1.2 Analysis of Metaphorical Variety

4.1.2.1 *up:* Metaphorical Variety

Up in English and *shang* in Chinese are typically mapped onto four categories:

1) QUANTITY: *More Is UP*.

    E.g. The price is going up.

      jiage shangzhang.

2) SOCIAL HIERARCHY: *More Important Is UP*.

    E.g. The upper class objected to the idea.

    Shangceng jieji fandui zhege zhuyi.

3) TIME: *Towards a Later Time Is UP*.   (English)

    Towards an earlier time is Shang. (Chinese)

    E.g. Up to present day

E.g. Shang ge yue   'Last month'

4) STATES: *Into A More Active/Completed State Is UP/Shang.*

E.g.   wake up, finish up the work

Shangban, ('go to work'), Ai shang ('fall in love')

Different from Lan (2003), in Chinese, another category using *shang* for SCOPE is identified since it has typical linguistic structure and has a high frequency of occurrence in Chinese. It is worth noting since *up* does not have such a metaphorical usage.

5) RELEVANT SCOPE IS SHANG

E.g.   Zai zhege shiqing shang hen qingchu

'very clear in terms of this matter'

E.g.   Zai mianzi shang guo buqu

'can't get over it in terms of face'

One extra category is *shang* used to indicate a time period, which is different from the AN EARLIER TIME IS SHANG and A LATER TIME IS XIA in Chinese. It is very restricted in productivity, however, only used with certain words such as *zao* (morning), *wan* (evening), or a number to indicate age period, which is an old usage.

6) PARTICULAR TIME PERIOD IS SHANG

E.g. Zao shang 'morning', wan shang 'evening', wu sui shang 'at the age of 5'

The following Tables show the raw frequency and normalized frequency of *up* metaphors in each corpus. Since each corpus is of a different size, raw frequency is transformed into normalized frequency (i.e., occurrence per million words) for convenience of comparisons.

Table 7 Raw frequencies of various metaphors of *up* in ELL corpus

ELL-Met.	NC(171,908.5) *shang*	LP (117,000) *up*	HP (160,000) *up*	NE(250,000) *up*
STATES	169	91	179	339
QUANTITY	35	17	7	16
TIME	10	11	6	8
SOCIAL HIERARCHY	29	0	1	11
SCOPE	109	-	-	-
Other (Particular Time Period, e.g. *zao shang)*	36	-	-	-
Total	388	119	193	374

Table 8 Normalized Frequency of various metaphors of *up* in ELL corpus

ELL- Met.	NC- *shang*	LP	HP	NE
STATES	983	777.7	1118.7	1356
QUANTITY	203.5	145.2	43.7	64
TIME	58.1	94	37.5	32
HIERARCHY	168.5	0	6.2	44
SCOPE	634	-	-	-
Other (zao shang)	209.4	-	-	-

Figure 4 STATES in all four Corpora

STATES

■ STATES	NC	LP	HP	NE
	983	777.7	1118.7	1356
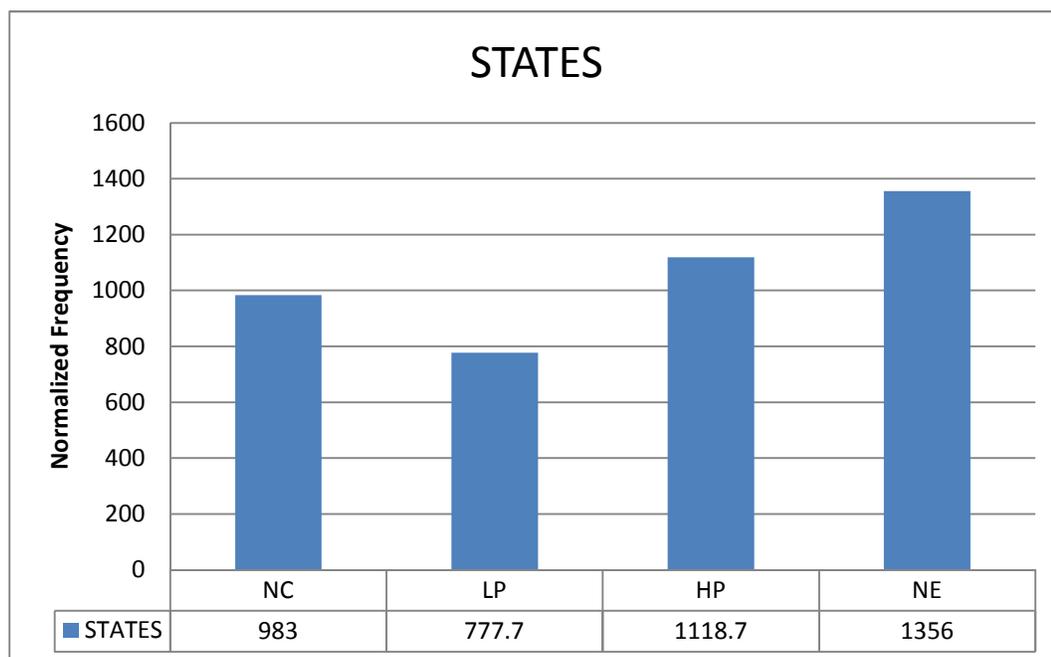
Both LP and HP learners underuse the spatial metaphor denoting STATES:

- LP learners underuse the metaphor than HP learners (LL= 8.25);

- LP significantly underuse than NE (LL=24.49)

- HP underuse significantly than NE (LL=4.41).

Though both groups of learners underuse the metaphor compared to the target language users, i.e. native English speakers in this case, LP learners show more deviation or distance statistically to the target norms (i.e., English), while HP learners demonstrate a closer pattern to the target language and remain closer to the target norm. In addition, the difference between the LP learners and HP learners are significant as shown above (LL=8.25).

4.1.2.2 *down:* Metaphorical Variety

down in English and *xia* in Chinese is mapped onto four typical domains:

- STATES: Into A State of Inactivity Is Down

  e.g. The theater is closed down.

  xia ban 'get off work'

- QUANTITY: Towards A Smaller Quantity Is Down

  e.g. The price of the milk should be down next week.

  Jiage *xia*jiang 'price goes down'

- TIME: Towards a Later Time Is Down

  e.g. The gift was handed down through generations.

  xia ge yue 'next month'

- SOCIAL HIERARCHY: Towards A Less Important Status Is Down

  e.g. He would have to step down from the premiership.

  xia ji 'lower rank'

- UNDER PARTICULAR CIRCUMSTANCE/CONDITION

  e.g zai zhezhong qingkuang *xia*, ta likai le wo.

  'Under such circumstance, he left me'.

English also has this conceptual metaphor but uses *under* instead of *down.* The issue will

be revisited later.

The metaphor below occurs in Chinese only:

- EVENT MEASURE

  When used with numbers, *xia* functions a measure word for events, indicating

  occurrence times.

  E.g. Yi xia (one time), liang xia (twice)

Ta jiaole wo liangxia. 'He called me (my names) twice.'

As shown earlier, *down* in LP subcorpus has 5 cases where the uses are directly affected

by the topic. There are in total of 24 cases of *down* used for QUANTITY, but the

aforementioned topic generated 5 cases are excluded for analysis. This yields 19 cases of

down used metaphorically as QUANTITY.

Table 9 Raw frequency of *down*

ELL-down	**LP-ELL**	**HP -ELL**	**NE**	**NC**
STATES	8	27	97	8
QUANTITY	19	25	13	16
TIME	0	1	3	24
SOCIAL HIERARCHY	0	1	2	11
CONDITION	-	-	-	56
EVENT MEASURE	-	-	-	71

Table 10. Normalized frequency of *down*

ELL-down	**LP-ELL**	**HP -ELL**	**NE**	**NC**
STATES	68.3	168.7	388	511.9
QUANTITY	162.3	156.2	52	93
TIME	0	6.2	12	139.6
SOCIALHIERARCHY	0	6.2	8	63.9
CONDITIONS	-	-		325.7
EVENT MEASURE	-	-		413

Similarly, STATES is more statistically significant across all four corpora.

Figure 5 STATES: *down*

STATES: *down*

	NC	LP	HP	NE
■ STATES	511.9	68.3	168.7	388
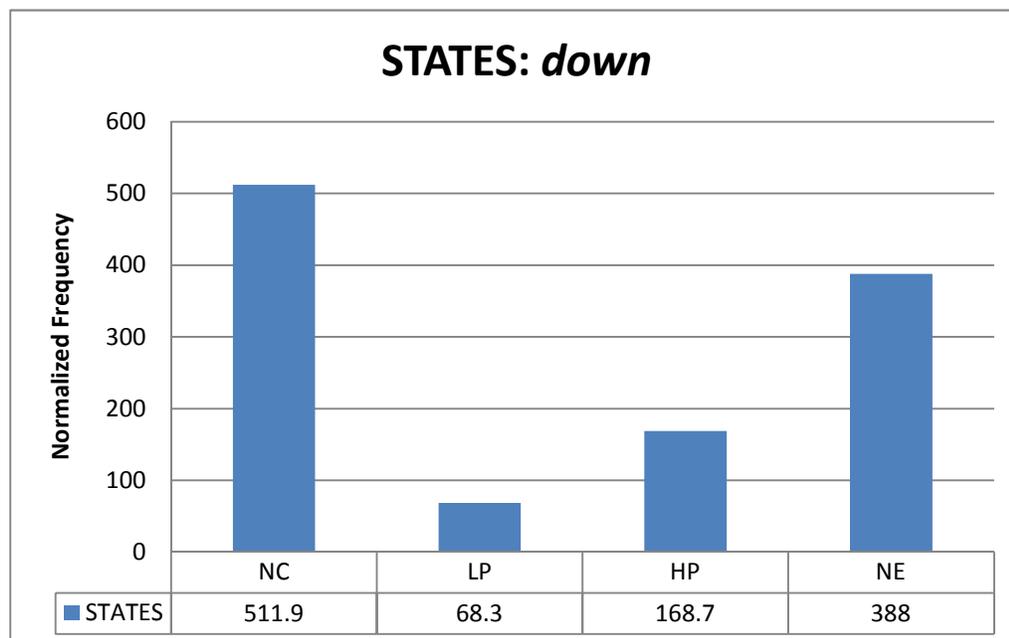
Similar to metaphors using *up,* LP learners distribute a wider variation than HP in relation to the target language user in *down* used for STATES:

LP significantly underuse than HP (LL=5.80)

LP significantly underuse than NE (LL= 36.20)

HP significantly underuse than NE (LL=16.82)

QUANTITY

Both LP and HP learners overuse this metaphor containing *down* compared to the target language speakers. It looks like learners have developed a good awareness in using this metaphor. One reason is that the concept of QUANTITY is more concrete than STATES. In addition, it is also structurally simple for learners since most of them use linguistic expression *go down* in which both *go* and *down* are highly common and frequent words

in English and learners usually acquire these common words first than more difficult and rare ones.

4.1.2.3 Asymmetry between *up* and *down:* Metaphorical Variety

In the following two figures, the X-marked line is the target language by the native speakers. It can be seen that learners fluctuate around the target line, by either underusing or overusing a particular metaphor.

Figure 6 up in ELL

up in ELL

	STATES	QUANTITY	TIME	HIERARCHY	SCOPE	OTHER
LP	777.7	145.2	94	0		
HP	1118.7	43.7	37.5	6.2		
NE-target	1356	64	32	44		

Figure 7 down in ELL

down in ELL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
LP	68.3	162.3	0	0		
HP	168.7	156.2	6.2	6.2		
NE-target	388	52	12	8		
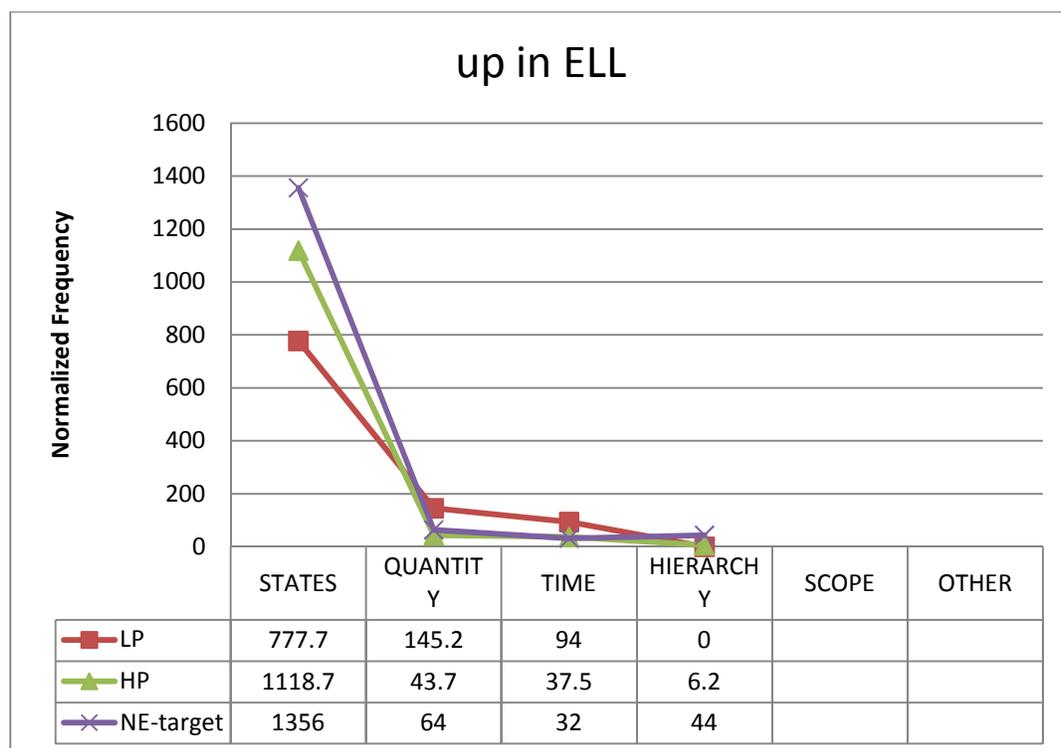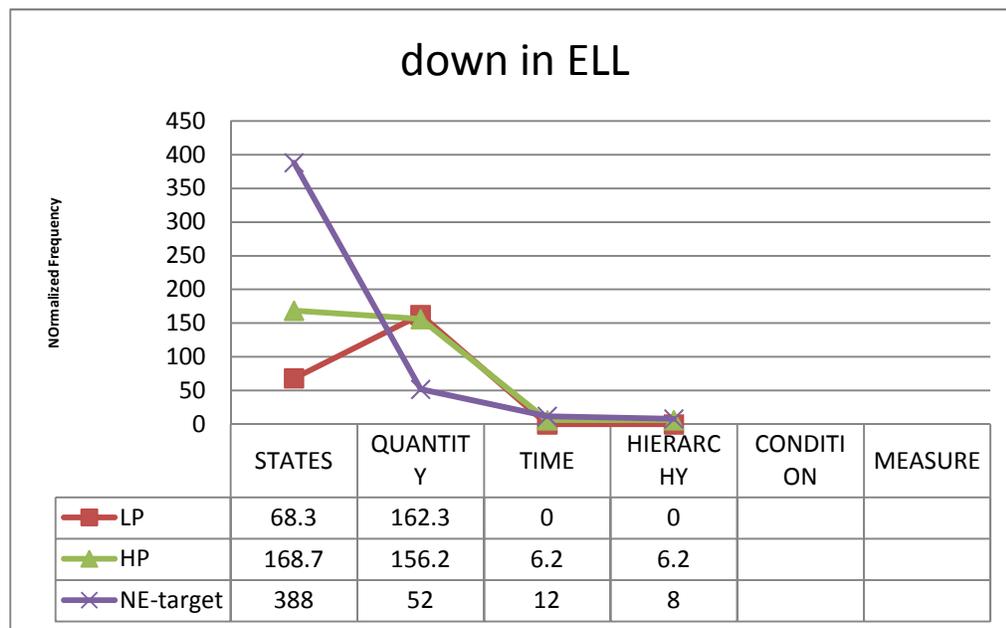
In the current study, there are not enough cases either in the native data or learner data, so no detailed discussion will be given here. But it is safe to conclude that they occur rarely in both the native and learner language.

According to the above two diagrams, a few patterns contrasting *up* and *down* emerge:

1) Asymmetry between the overall frequencies of *up* and *down*

Metaphorical *up* is used much more frequently than metaphorical *down*, which results from the difference in the overall frequency of *up* than *down* in the native corpus. This is a direct reflection of daily uses by English native speakers. According to the previous discussion, *up* occurs 1718.4 times per million while *down* only occurs 776.44 times per million in the corpus.

2) Asymmetry between STATES and other metaphors

• *Up*: all four groups use STATES significantly more than other types of metaphors. This indicates that STATES is more frequent than other metaphors in the *up* case. In

other words, metaphorical *up* is mainly used to mean STATES.

- *Down*: Different from *up*, there are no particular metaphor types that all four groups use substantially more than other spatial metaphors. *Down* is not frequently used metaphorically for any of the four metaphors specified above. This may have been caused by the overall higher frequency of *up* than *down* in the target language/daily uses. The overall high frequency of *up* may have strengthened learners' awareness of using the metaphor.

3) Asymmetry between STATES and QUANTITY

Learners tend to underuse STATES while overuse QUANTITY (except for one case, HP underuse in *up* for QUANTITY) when compared with the native speakers. This could be resulted from the degree of concreteness of the two concepts: STATES is arguably more abstract than QUANTITY. STATES is used for description of qualities while QUANTITY can be explained by numerical counting. This seems to be particularly true since LP underuse STATES in the *down* case in which they rarely use a metaphor. The difference between STATES and QUANTITY is especially wider for LP learners than that for HP learners. Thus, learners tend to underuse more difficult /abstract concepts while overuse more concrete concepts if they are lexically/structurally simple in English. For instance, in the phrase *go down,* it is a verb-plus-adverb structure.

4) L2 Proficiency

For STATES, it is symmetrical that both LP and HP underuse metaphorical *up* and *down* when compared to native speakers, but LP underuse more than HP. By contrast, for QUANTITY, it is a different pattern: LP overuse metaphors for both *up* and *down*,

while HP underuse in one case (i.e. *up*) but overuse in another (i.e. *down*). This may seem inconsistent. However, if we set the native speakers' language as the target/comparison line, again we notice that in both cases, LP show more deviation from the target speakers while HP more attraction to the target line. It is important to note that in the current study, the criterion of acquisition is the distance/difference to the native speakers instead of frequency (overuse or underuse) alone. Overuse of a particular linguistic item is as bad as underuse of it if it deviates further from the native speakers' language. As a result, whether it is overuse or underuse, if it is more deviant from the target language, it is more difficult to learn, subject to interference by various factors in the learning process. In other words, overuse or underuse more than the target language both means less normal or less standard compared with the native speakers.

In the *up* case, LP overused 145.2 while HP learners underuse 43.7 when compared to the native speakers. The frequency difference between LP and the native speakers (145.2-64=79.2 per million words) is larger than the frequency difference between the LP and native speakers (64-43.7=20.3 per million per million words). Thus, three important patterns emerge when proficiency is concerned:

a. If both LP and HP underuse, then LP underuse more than HP (e.g. STATES: up, down);

b. If both LP and HP overuse, then LP overuse more than HP (e.g. QUANTITY: down);

c. If one underuse and another overuse when compared with the native speakers, LP displays a wider deviation from the native speakers (.e.g. QUANTITY: up) than

HP.

So far, one final question remains: why did HP overuse *down* but not *up* since it is overall less frequent than *up* in the corpus? For one, this is in accordance with the previous discussion that the concept of QUANTITY is more concrete than STATES, thus learners may have developed more awareness in using it. Thus, learners including HP learners tend to overuse QUANTITY than native speakers in their interlanguage. However, in this case, other than the factor of concreteness, the higher use of *down* than *up* is probably due to the topic influence since lots of the essays in the ELL corpus are about a social problem such as water shortage, pollution, etc.. If it is a problem, it is related to something negative, thus the concept of *down* fits in.

In summary, as illustrated above, for *up* and *down* metaphors in ELL corpus, both analysis of metaphorical density and variety point to a general tendency:

1) LP shows a greater degree of fluctuation, thus more variation around the norm, or the target language, while HP shows a lower degree of fluctuation, thus more stability and is closer to the target language;

2) Both LP and HP may overuse or underuse than native speakers, which shows that the development in learners is not linear but dynamic, showing moments of progress and regress, but the overall pattern or tendency is obvious: more stability emerges over time at a higher proficiency level.

Below is a simplified graph of the acquisition pattern and how it swings away from the target line over proficiency level. The higher the proficiency is, the closer the

interlanguage is to the target line, and vice versa. We can call this a pendulum effect affected by L2 proficiency.

Figure 8. Pendulum effect

Target line (center line)

HP

Negative/underuse   Positive/overuse

0

LP
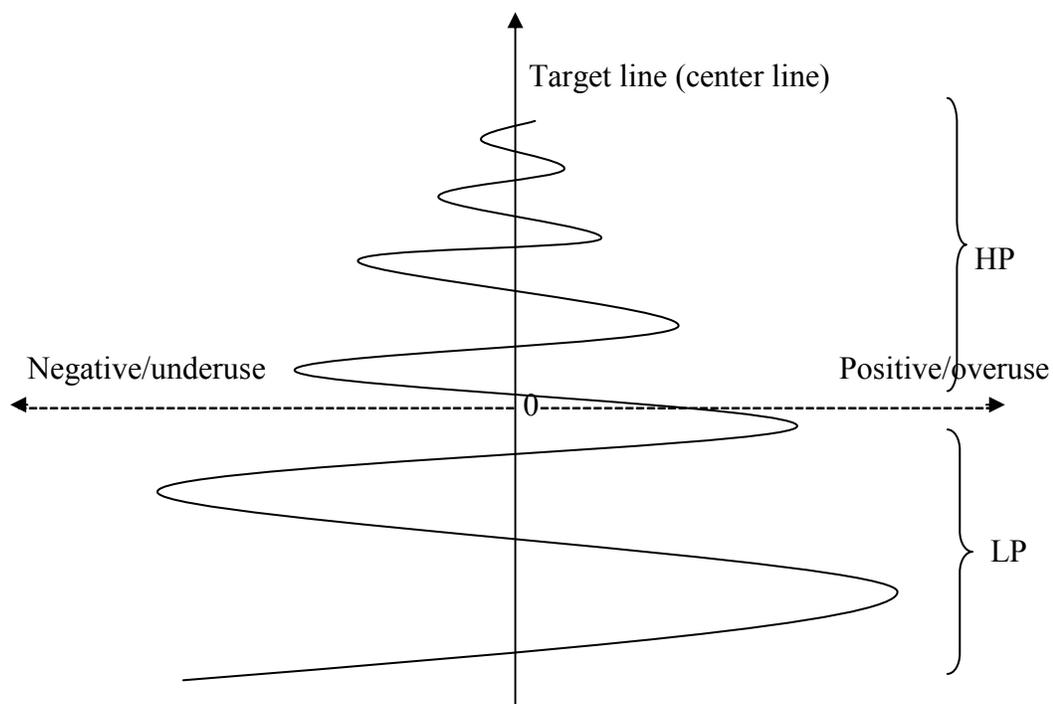
Note: HP and LP refer to the wavy line section. Target line is the center straight line.

To sum up, this chapter shows that language development is dynamic, nonlinear. Language development emerges over proficiency and seemingly chaotic or confusing patterns if we look at learners' linguistic phenomena in an isolated fashion. However, if we take these chaotic patterns as part of the development and look at in the larger picture of language development, learners' development shows a pendulum effect in which LP learners' language swing further away from the center (i.e. target language) by either

using too much or too little than HP learners' language when compared with the target language speakers.

Spatial metaphors used for SCOPE, OTHER (for *shang*), CONDITION, EVENT MEASURE (for *xia*) will be visited later when discussing the Chinese language learners since English language does not include those usages and English language learners do not use them in English.

4.2 Metaphors Containing *Shang/xia* in CLL Corpus

In the ELL corpus, the search result of *up* and *down* shows that cases that were actually used by the learners, which is similar to search results in a native speaker corpus. However, in the Chinese language learner (CLL) corpus, due to a different coding method from the ELL corpus, the search result differs from the actual occurrences of the defined lexical item to be searched in the corpus while the ELL corpus only includes the actual occurrence of the key word. For example, when searching 下 'xia', the results include the following example:

e.g 下命令 'xia mingling' (give authoritative commands) (coded by corpus compilers)

*[9]作命令 'zuomingling' (learner's actual use)

So *xia* does not actually occur in the learner data but coded by the corpus compilers. Consequently, the search result in this corpus includes both those entries that actually occur in corpus but also those that are added by coders during coding process where the

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[9] * means this is an error made by learners.

key word *shang/xia* is missing or mistakenly used by another word. Only those actual occurrences are included for frequency analysis, with those code entries (i.e, *shang* or *xia* added when coded by coders) eliminated since they are not actually used by learners. It is manageable to manually check each case since this is a small corpus and there are only 178 cases of *shang* and 74 cases of *xia*. Each coded case will be followed by learners' original expression in [ ] and the symbol for the error type.

4.2.1 Quantitative Analysis: Metaphorical Density

4.2.1.1 *shang:* Metaphorical Density

Search results yielded 178 occurrences of *shang*, which included 10 cases where learners either missed the lexical item *shang* or used a wrong word due to similarities in pronunciation or morphology between *shang* and another Chinese character; in either cases, *shang* in these results was added by coders instead of being used by learners. Thus, there were 168 actual occurrences of *shang* in the corpus, which were then further analyzed for metaphorical meanings and yielded 107 metaphorical cases and 61 literal meanings.

Since learner writing was based on specified topics, the 107 cases (LP 53; HP 54) were then further analyzed for any possible direct topic influence, i.e., directly influenced by the title. Upon closer examination, LP and HP overused SPACE AS TIME metaphor, in particular, AN EARLIER TIME IS UP; A LATER TIME IS DOWN, due to the writing topic about "generation gap". Learners use *shang yi bei* (up CL generation 'older generation') when discussing this topic. In total, corpus search generated 53 occurrences of *shang* for LP and 54 occurrences of *shang* for HP including, which includes 7 cases

(*shangyibei*) are topic generated for LP and 2 cases (*shangyibei*) for HP. These 9 cases are then excluded for analysis. The following is the data Table without such direct topic-generated cases.

Table 11 *shang* in CLL corpus

Speaker type	Lit. Shang/up (raw frequency)		Met. Shang/up (raw frequency)		Met. density in corpus (normalized frequency)	
CLL (shang)	61	LP 18	(107-9)	LP (53-7)	2311.9	LP **2617.5**
		HP 43		HP (54-2)		HP **2095.5**
NC(shang)	656		388		**2257.00**	
NE (up)	128		374		**1496.00**	

Figure 9. shang in CLL

	NE-native	LP	HP	NC-target
shang	1496	2617.5	2095.5	2257
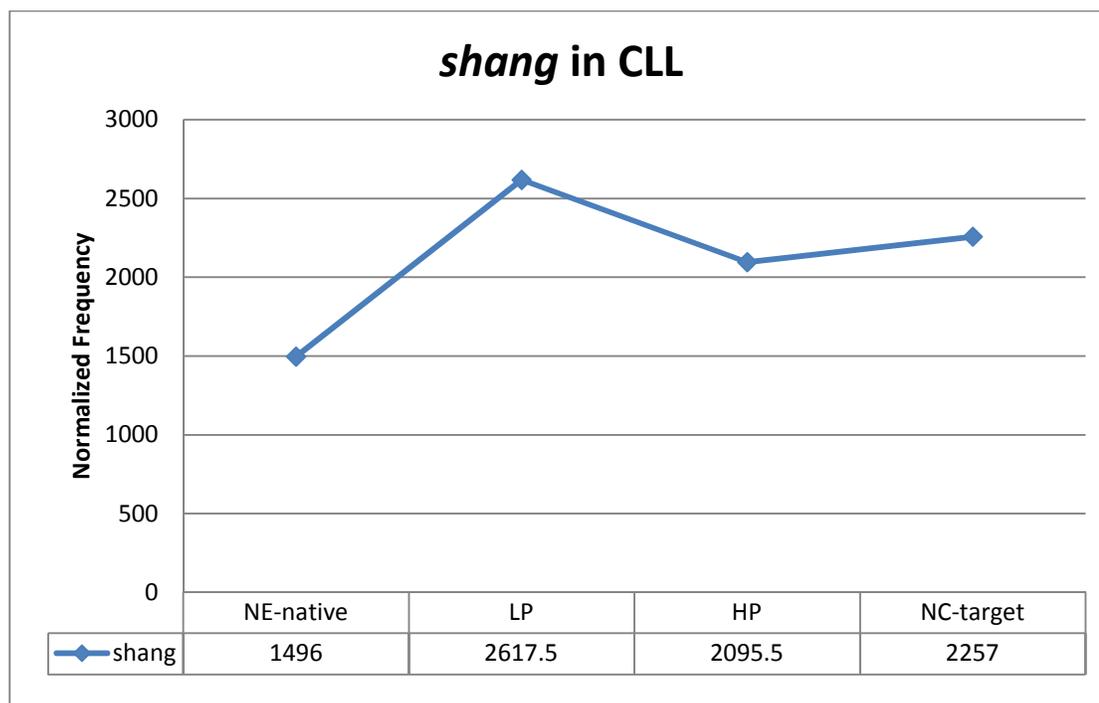
Overall, learners (LP+HP) overuse *Shang* metaphors even though their native language, English, is less metaphorical in this regard. The order of metaphorical density across the four groups is as follows:

LP>>NC>>HP>>NE (LL=26.69, 5.99, 100.54)

LP+HP<=NE (LL=2.15, based on the average of LP and HP)

All differences between each group are significant; however, when combined together, learners do not differ from the target language speakers significantly. The figure also entails that HP uses fewer metaphors containing *shang* but is closer to the target language while LP shows a greater degree of variation by overusing significantly than the target language users.

4.2.1.2 *xia*: Metaphorical Density

Corpus search results yield a total of 74 entries including one case of 重大 '*zhongda, significant*' mistakenly written as *重下 '*zhongxia*' (which is meaningless) where *da* is similar to *xia* in morphology. *Xia* occurs in the actual frequency but *xia* in this case is neither used metaphorically or literally but an error, so it is not included in analysis, i.e., not counted as either literal or metaphorical since it does not make sense. Search results also include another case when the wrong word *zuo* ('do') is used in *作命令 'zuomingling' instead of 下命令 'xia mingling, give (authoritative) commands'. Since 下 *xia* is coded by corpus coders in this case, it is also excluded from the data analysis. The result then includes 72 actual meaningful occurrences.

These 72 are analyzed for metaphorical meanings and yield 55 cases of metaphorical uses.

Recall earlier that learners use *shang* to indicate TIME when discussing the 'generation gap', so these cases of *xiayibei* 'next generation' are also excluded. There are 4 cases of *xiayibei* for LP and 2 cases of *xiayibei* for HP, neither of which is included in metaphorical analysis.

Table 12 *xia* in CLL corpus

Speaker Type	Lit. (raw counts)		Met. (raw counts)		Met. density in corpus (normalized frequency)	
CLL (xia)	17	LP 7	55-6	LP (28-4)	1155.9	**LP 1365.6**
		HP 10		HP (27-2)		**HP 1007.4**
NC (xia)	212		266		**1547.3**	
NE (down)	100		115		**460**	

Figure 10 xia in CLL corpus

	NE-native	LP	HP	NC-target
xia	460	1365.6	1007.4	1547.3
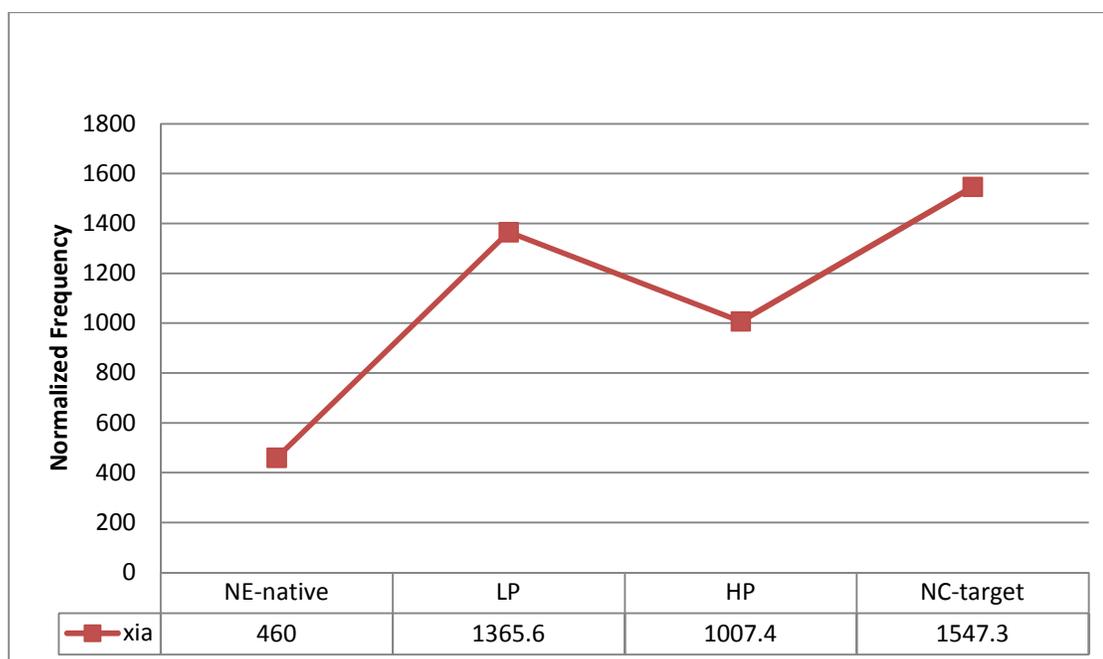
Despite a low frequency in learners' native language (i.e., English), *down* shows an interesting pattern in which LP uses a significantly higher degree of metaphor (1365.6 per million words) compared with HP (1007.4 per million words) (LL= 54.28) but underuse significantly than native Chinese speakers (1547.3 per million words) (LL=11.34). In this case, LP uses more metaphors and is closer to the target language speakers, while HP demonstrates more variation or distance in relation to the native Chinese speakers. This seemingly contradicts with our previous discussion that HP show more closeness to the native speakers.

In order to account for the seemingly inconsistence stated earlier, the metaphor types using *xia* is analyzed. Below are different metaphor types using *xia.*

Figure 11 xia in CLL

xia in CLL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
NE-native	388	52	12	8		
LP	284.5	0	398.3	0	569	113.8
HP	322.3	80.5	161.1	0	282	161.1
NC-target	511.9	93	139.6	63.9	325.7	413
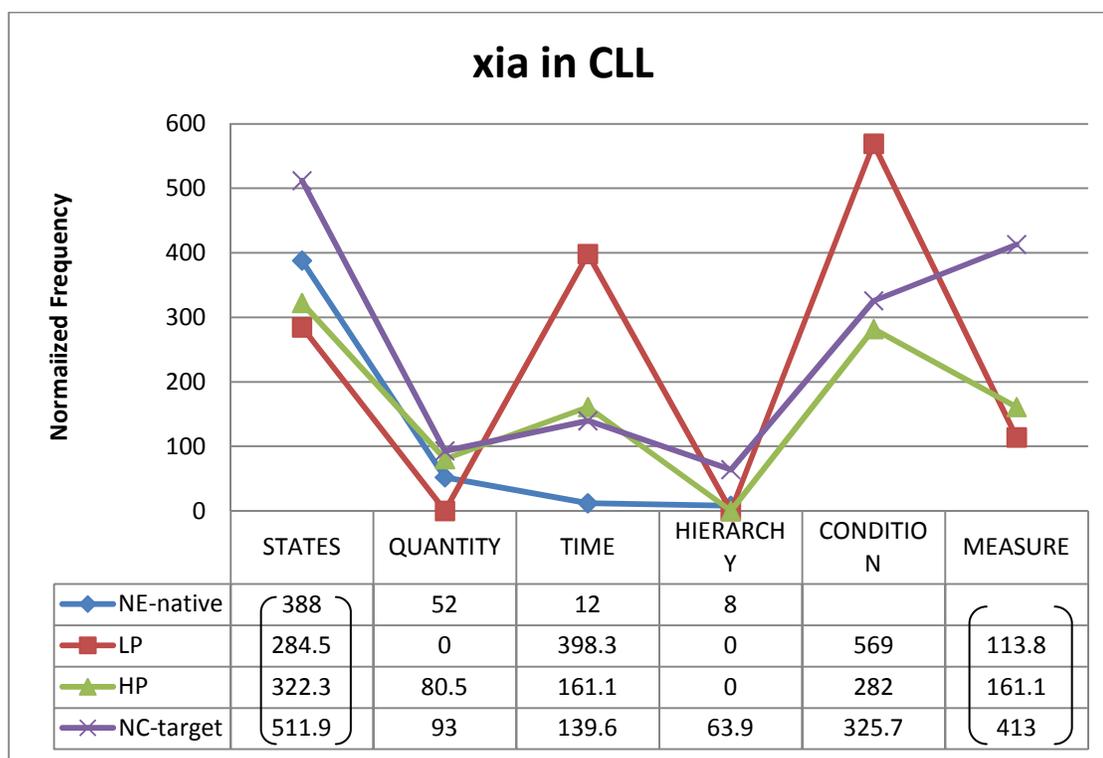
Let us now look at how much LP learners have overused TIME and CONDITION.

Table 13 TIME

	LP	NC	HP
TIME	398.3	139.6	161.1
TOTAL metaphor used *down*	1365.6	1547.3	1007.4
%	**29%**	9%	16%

Note: All numbers in the above table means occurrences per million words.

If LP would use same proportion of TIME metaphor as NC (the target language), LP would only use X= 122.9 (X/1365.6=9%). Thus, any number above 122.9 or below shows LP's variation from the target line. So LP overused at least 275.4 (398.3-122.9=275.4) metaphors per million words for TIME.

The same analysis applies to CONDITION.

Table 14 CONDITION

	LP	NC	HP
CONDITION	569	325.7	282
Total metaphor used *down*	1365.6	1547.3	1007.4
%	**41.7%**	21.0%	28%

If LP would use same proportion of CONDITION metaphors as NC (the target language), LP would only use Y= 286.8 (Y/1365.6=21%), so LP overused at least 282.2 (569-286.8=282.2) metaphors per million words for CONDITON.

4.2.1.3 Symmetry between *shang* and *xia*

Figure 12 shang/xia in CLL

shang/xia in CLL

	NE-native	LP	HP	NC-target
shang	1496	2617.5	2095.5	2257
xia	460	1365.6	1007.4	1547.3
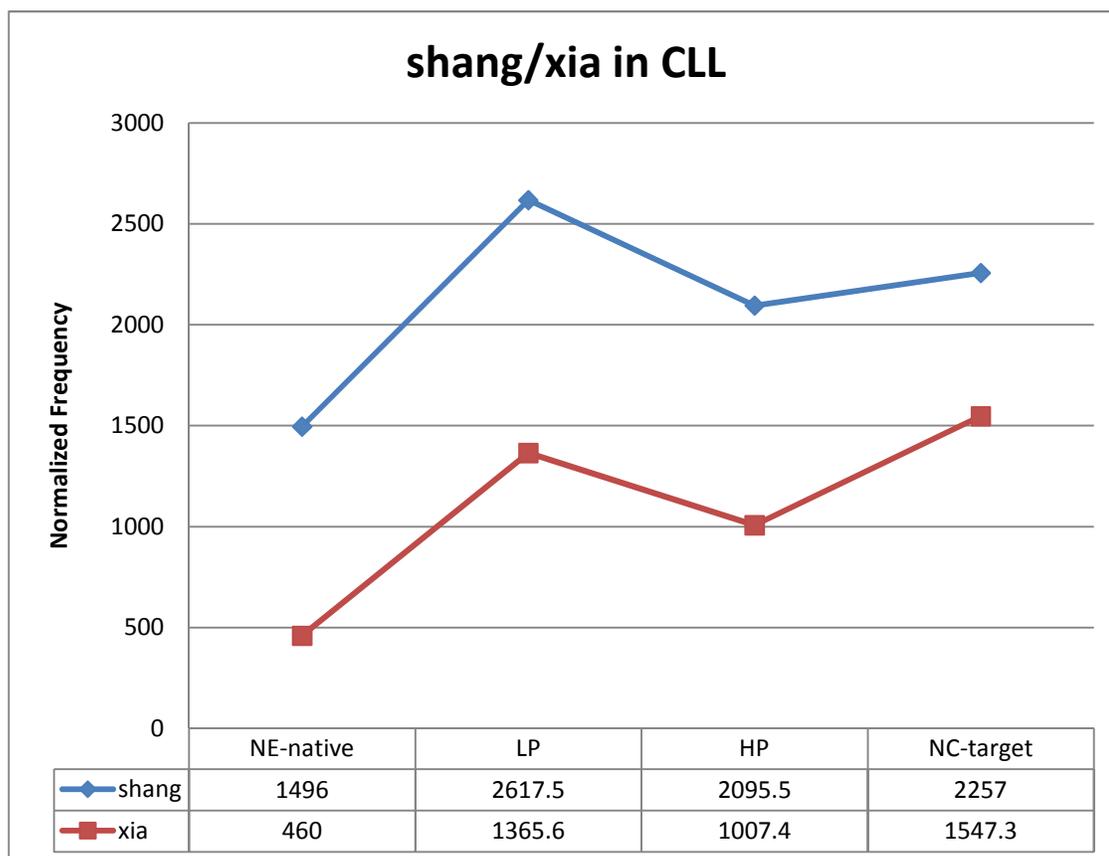
As a result, even the overall number of *xia* metaphors used by LP may appear closer to the target language than HP, it actually indicates that LP overuse two particular metaphors so many more times than those used by HP compared with the target language speakers. This again in fact shows that LP demonstrates more variation than HP, which corresponds to the general finding of this study in that LP shows more variation while HP shows more stability and less variation when compared with the target language. Thus, it is symmetrical that in both *shang* and *xia* cases, LP show more variation while HP is more stable and closer to the target language.

4.2.2 Analysis of Metaphorical Variety

4.2.2.1 *Shang:* Metaphorical Variety

Table 15 Metaphorical Variety of *Shang*

Shang in CLL	LP (CLL) RF/**NF** 17,574w	HP (CLL) RF/**NF** 24,814w	NE *up* (NF) 250,000w	NC *shang* (NF) 171,908.5w
STATES	26/ **1479.4**	31/ **1249.2**	1356	983
QUANTITY	1/ **56.9**	2/ **80.5**	64	203.5
TIME	1/ **56.9**	1/ **40.2**	32	58.1
SOCIAL HIERARCHY	0/ **0**	1/ **40.2**	44	168.5
SCOPE	17/ **967.3**	17/ **685**	-	634
Others (e.g. *zao shang, wan shang)*	1/ **56.9**	0/ **0**	-	209.4

Figure 13 *shang* in CLL

shang in CLL

	STATES	QUANTITY	TIME	HIERARCHY	SCOPE	OTHER
NE-native	1356	64	32	44		
LP	1479.4	56.9	56.9	0	967.3	56.9
HP	1249.2	80.5	40.2	40.2	685	0
NC-target	983	203.5	58.1	168.5	634	209.4
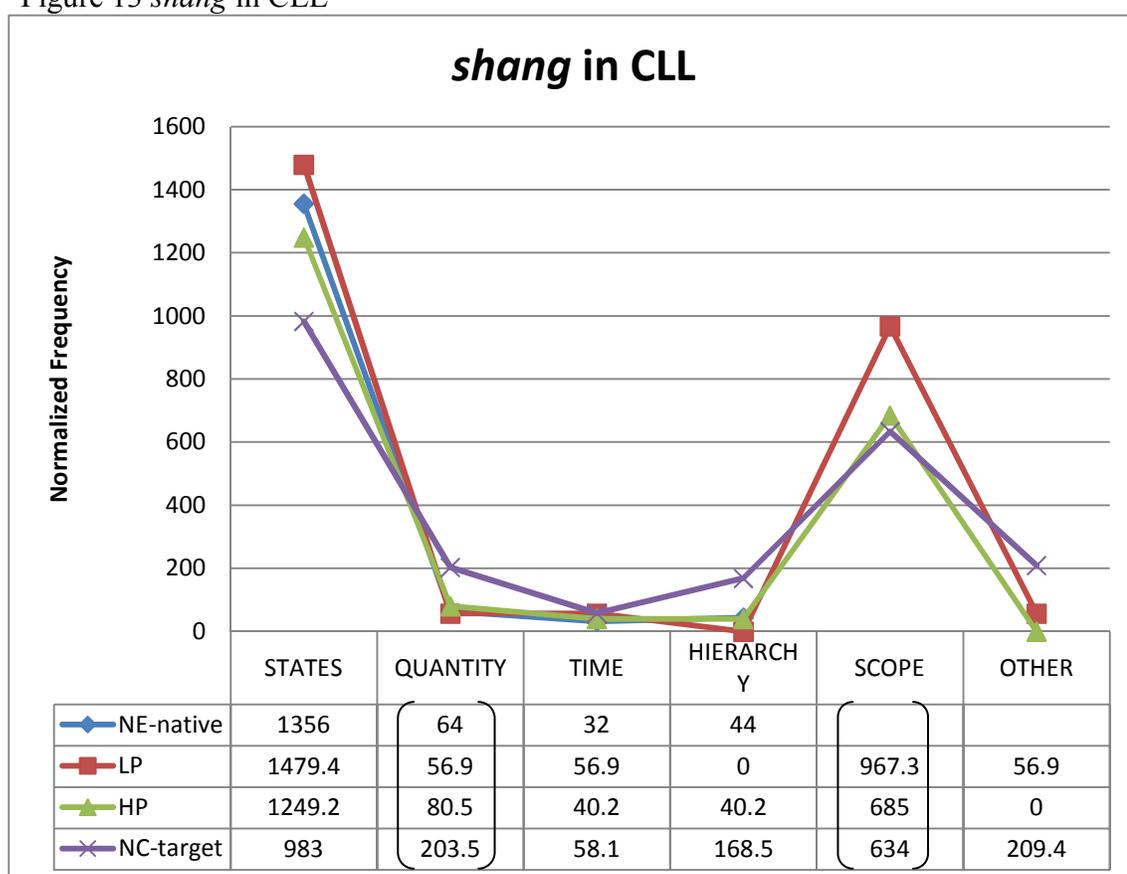
Statistical summary:

STATES: LP>>HP>>NC, LL=19.41, 31.78

SCOPE: LP>>HP>=NC, LL=48.47, 1.97

QUANTITY: LP<<HP<<NC, LL=4.07, 55.08

TIME: HP<=LP<=NC, LL=2.89, 0.01

HIERACHY: LP<<HP<<NC, LL=55.73, 84.78

OTHER: HP<<LP<<NC, LL=78.88, 92.87

In the above figure, it is very clear that LP (square-marked line) again demonstrates more variation to the target line (X-marked line) while HP (triangle-marked line) to the target line. This can be shown that LP line has two maximum frequency rates (STATES, SCOPE) and two minimum frequency rates (QUANTITY, HIERARCHY). Again, we will only focus on statistically significant metaphors such as STATES and SCOPE but leave out detailed discussion for infrequent metaphors in the current study such as QUANTITY, TIME, HIERARCHY, and OTHER.

Again, the tendency that HP demonstrates more stability and is in general closer to the target language is clearly recognizable: both LP and HP overuse *shang* for STATES and SCOPE compared with the target language users, but HP shows more stability and LP more variation around the target. It is clear that metaphorical development emerges over time and proficiency.

4.2.2.2 *Xia*: Metaphorical Variety

Table 16 Metaphorical Variety of *xia*

	LP-CLL (xia) RF/NF 17574 w	HP-CLL (xia) RF/NF 24814w	**NE (down) Normalized Frequency**	**NC (xia) Normalized Frequency**
STATES	5/ 284.5	8/ 322.3	388	511.9
QUANTITY	0/ 0	2/ 80.5	52	93
TIME	7/398.3	4/161.1	12	139.6
SOCIAL HIERARCHY	0/ 0	0/0	8	63.9
CERTAIN CONDITION	10/ 569	7/282	-	325.7
EVENT MEASURE (*yixia*)	2/ 113.8	4/ 161.1	-	413

Figure 14 xia in CLL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
NE-native	388	52	12	8		
LP	284.5	0	398.3	0	569	113.8
HP	322.3	80.5	161.1	0	282	161.1
NC-target	511.9	93	139.6	63.9	325.7	413
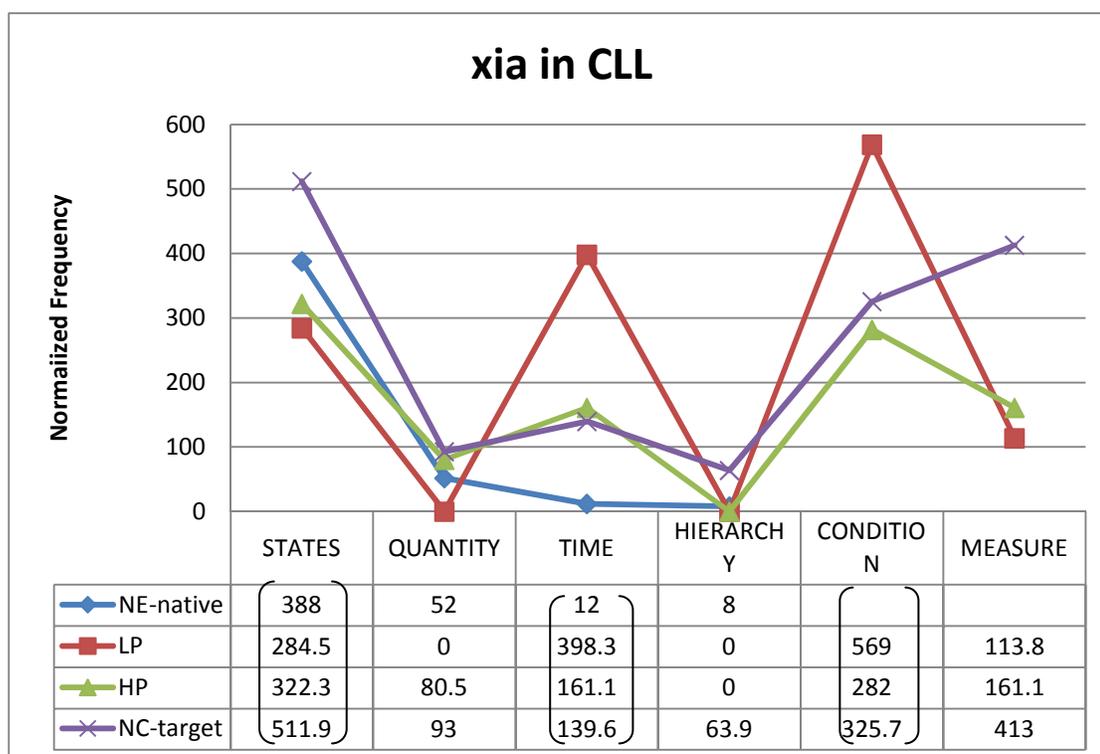
Statistical summary:

STATES: LP<=HP<<NC,   LL=2.36, 43.47

TIME: LP>>HP>=NC,   LL=103.83, 1.54

CONDITION: LP>>HP, HP<=NC, LP>>NC, LL=98.71, 3.15, 67.0

MEASURE: LP<<HP<<NC,   LL=8.18, 114.38

QUANTITY: LP<<HP<=NC,   LL=111.60, 0.9

HIERACHY: LP=HP<=63.9,   LL=0, 88.58

In this figure of *xia*, similarly, for those statistically significant metaphors such as STATES, TIME, CONDITION, and MEASURE, HP demonstrates a closer pattern to the target language speakers, i.e, native Chinese speakers. Based on frequency, there are three different patterns:

- both HP and LP underuse for STATES and MEASURE:

    ✓ STATES: LP (284.5) < HP(322.3) < NC-target (511.9)

    ✓ MEASURE: LP (113.8) < HP(161.1) < NC-target (413)

- both HP and LP overuse for TIME

    ✓ TIME: LP(398.3)>HP (161.1) > NC-target (139.6)

- HP underuse and HP overuse for CONDITION

    ✓ CONDITION: NC-HP (325.7-282)<LP-NC (569-325.7

    (the difference between LP and NC is larger than the difference between HP and NC)

Again, both HP and LP may underuse or overuse, but in all the above four metaphors, HP demonstrates more closeness to the target speakers and LP more deviation from the target speakers. This is in accordance with the dynamic view of language development in that

language development is not linear but dynamic, at times, may be chaotic, but when considered as a whole, language development emerges over proficiency and time.

4.2.2.3 Asymmetry between *shang* and *xia*

Figure 15 shang in CLL
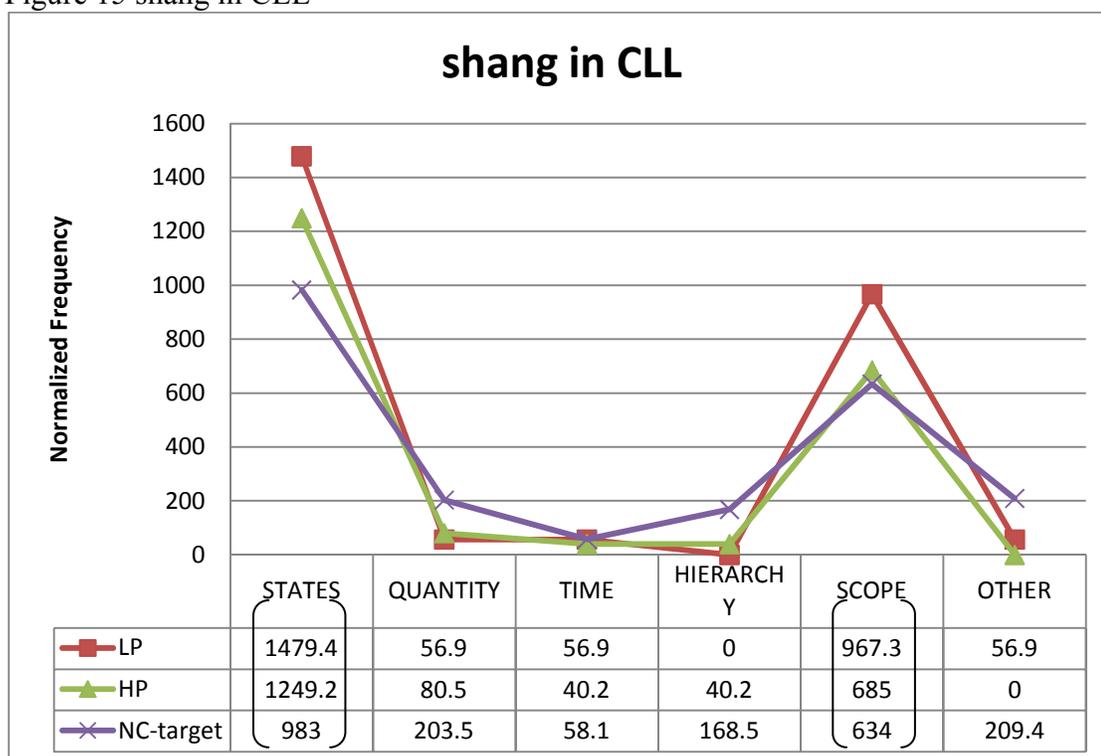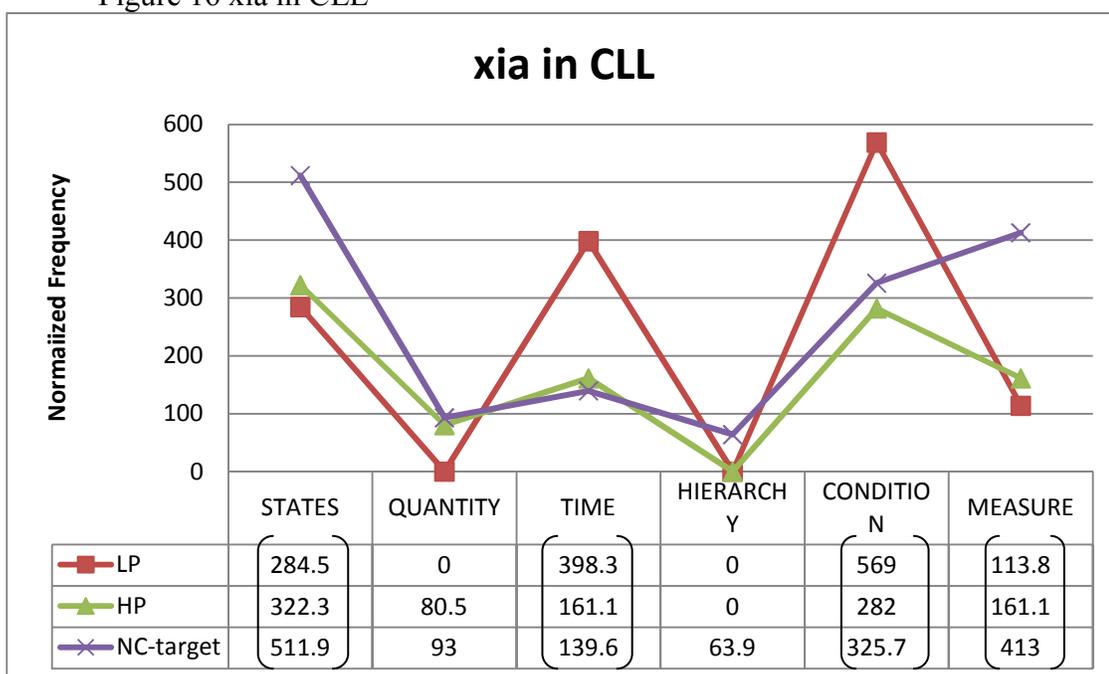

	STATES	QUANTITY	TIME	HIERARCHY	SCOPE	OTHER
LP	1479.4	56.9	56.9	0	967.3	56.9
HP	1249.2	80.5	40.2	40.2	685	0
NC-target	983	203.5	58.1	168.5	634	209.4

Figure 16 xia in CLL

xia in CLL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
LP	284.5	0	398.3	0	569	113.8
HP	322.3	80.5	161.1	0	282	161.1
NC-target	511.9	93	139.6	63.9	325.7	413

Similar to *up* and *down*, a few patterns contrasting *shang* and *xia* surface based on the discussion above:

1) Asymmetry between the overall frequency of *shang* vs. *xia*

Metaphorical *shang* is used much more frequently than metaphorical *xia* in learner corpora, which is proportional to the overall frequency of *shang* and *xia* in the native corpora. According to the previous discussion, *shang* (2257 times per million words) occurs much more frequently than *xia* (1547.3 times per million words) in the native Chinese corpora.

2) Asymmetry between STATES and other metaphors

As shown above, in *shang* and *xia* case, it is also clear that STATES is the most frequent metaphor for all groups and *up* used as STATES is much more frequent than *down* used

as STATES, which is caused by the high frequency of *shang* over *xia* in the target language.

3) Asymmetry between *shang* and *xia* for TIME

In the *shang* case: all four groups rarely use any metaphors. In the *xia* case: both LP and HP overuse than the target language, but the general tendency is that LP overuse more than HP. The asymmetry will be visited later in the next chapter.

4) L2 proficiency

In the *shang* case,

- STATES: LP overuse more than HP compared to the target language speakers(NC);

- SCOPE: both LP and HP overuse than target language speakers(NC), but LP overuse more than HP;

In the *xia* case,

- STATES: Both LP and HP underuse than the native Chinese speakers (NC), but LP underuse more than HP;

- TIME: Both LP and HP overuse than the native Chinese speakers (NC), but LP overuse more;

- CONDITION: LP overuse but HP underuse compared to the target language speakers, but the difference between LP and the native Chinese speakers (569-282=287 per million words) is larger than that between HP and the native Chinese speakers (325.7-282=43.7 per million words). Recall the pendulum effect we discussed earlier, underuse or overuse is not the matter but the

numerical difference.

Thus, similar to *up* and *down*, three patterns emerge when proficiency is concerned for *shang* and *xia* metaphors:

a. If both LP and HP underuse, then LP underuse more than HP (e.g. STATES: xia);

b. If both LP and HP overuse, then LP overuse more than HP (e.g. SCOPE: shang, STATES: shang, TIME: xia);

c. If one underuse and another overuse when compared with the target language speakers, LP displays a wider deviation from the target language speakers (e.g. CONDITION).

To sum up, as illustrated above, for *shang* and *xia* metaphors in CLL corpus, both analysis of metaphorical density and variety point to a general tendency:

1) LP shows a greater degree of fluctuation, thus more variation around the norm, or the target language, while HP shows a lower degree of fluctuation, thus more stability and is closer to the target language;

2) Both LP and HP may overuse or underuse than native speakers, which shows that the development in learners is not linear but dynamic, showing moments of progress and regress, but the overall pattern or tendency is obvious: more stability emerges over time at a higher proficiency level.

The pendulum effect again applies here.

Figure 17 Pendulum effect
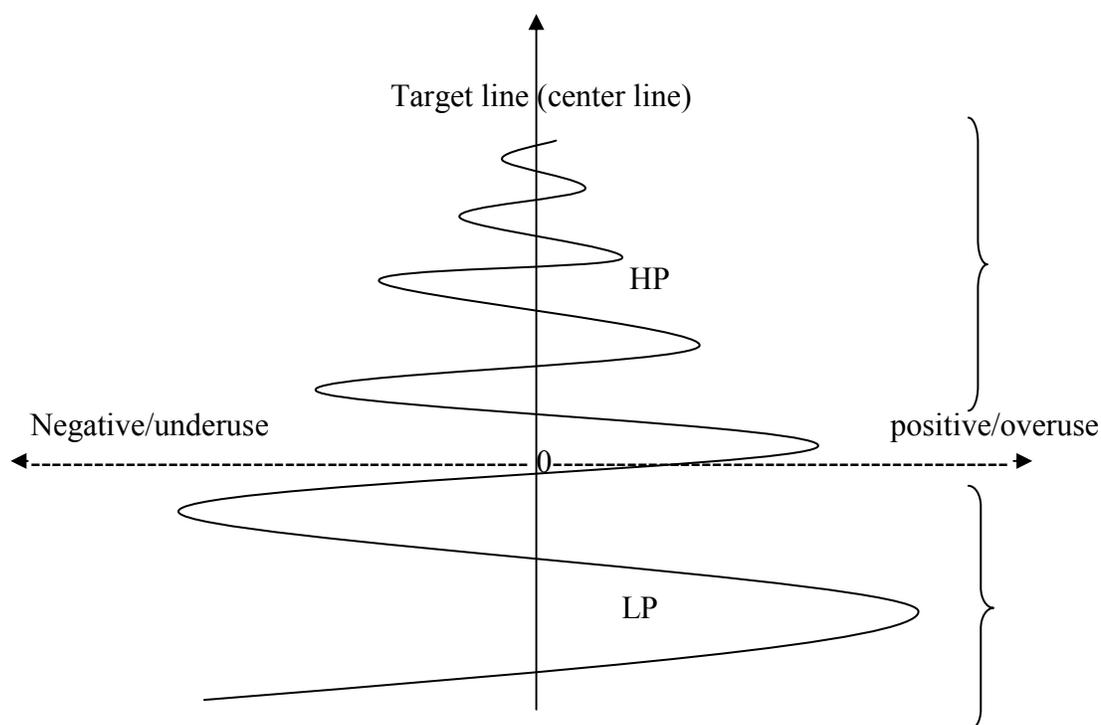
Note: HP and LP refer to the wavy line section. Target line is the center straight line.

Learner's underuse and overuse of certain metaphors corresponds with the dynamic systems perspective in that language development is not linear but dynamic. This is particularly true for LP learners in which they vary more than HP.

4.3 L1 Influence and Other Affective Factors

According to the previous chapters, the quantitative analyses reveal that learners' language development is dynamic but not linear, which is reflected by underuse and overuse of certain metaphors when compared with the target language speakers in the current study. This chapter will answer why learners overuse some metaphors but

underuse others, and how they differ from those used by the native speakers in terms of quality.

L1 influence or L1 transfer is a popular topic when analyzing learner language. Typically, L1 transfer is related to structural/linguistic transfer in SLA research. It is particularly useful when dealing with error analysis. However, since this study is about conceptual metaphors which are more than a matter of language but semantic concepts, thus another concept, 'conceptual transfer' is included, in particular, L1 transfer here refers to both linguistic transfer and conceptual transfer or metaphorical transfer from the first language to the target language. In the following discussion, when L1 transfer is not specified, it refers to both conceptual and linguistic transfer. For instance, the metaphor GOOD IS UP/SHANG may be transferred by learners from English to Chinese or vice versa by learners since they are shared between the two languages both linguistically and conceptually as shown in the following examples.

E.g. women de shenghuo shuiping *shang*shen.

'Our MOD living conditions go up'.

L1 transfer is assumed in the study to exist from the beginning of L2 learning; in other words, learners are expected to first use their first language as a resource when learning a second language. How much L1 influence then is a matter of degree over time or proficiency level, intertwined with other affective factors in the learning process. Corpus-based studies have their own limitations since the learning process cannot be retrieved but only the linguistic product. However, since the two learner corpora were

compiled from different universities, it is considered that all other factors such as pedagogical materials or instructional approaches are balanced out.

When it comes to conceptual metaphors, it is considered that linguistic transfer and conceptual transfer interact in certain ways in learners' acquisition of conceptual metaphors over time (or proficiency), if anything related to the concept or linguistic issue (i.e. lexical or grammatical or both) goes out of order, for instance, excessive transfer of a target form, learners will display unusual developmental patterns. The usual developmental pattern is defined as follows: LP shows more closeness to L1 while HP shows more tendency to L2 since they are at a higher proficiency level and closer to the 'target'. The target language is the norm that learners need to improve and they constantly make corrections in order to reach the norm.

4.3.1 Quantitative Analysis L1 influence

Figure 18 up/down in ELL

	NC-native	LP	HP	NE-target
Met up	2257	1017	1206.2	1496
Met down	1547.3	230.7	337.5	460
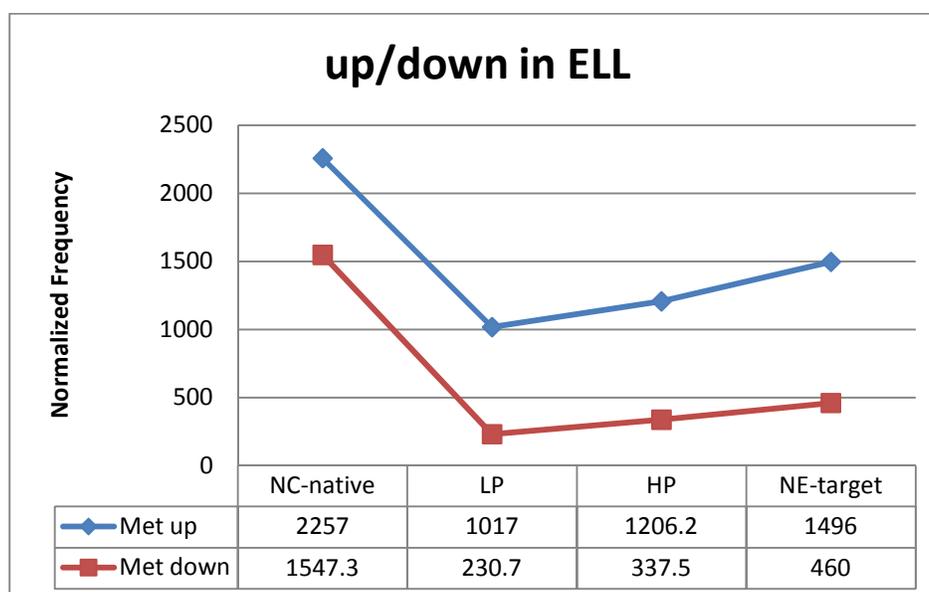
In the *up/down* figure, learners' L1 (i.e., Chinese) has much more frequent occurrences of *shang* and *xia* than the target language (i.e., English)*,* both LP and HP learners underuse the *up/down* metaphors significantly than their first language though LP underuse than HP. According to the steep falls in the above figure as reflected by frequency rates, it is evident that neither LP nor HP group is not very close to L1 in terms of the quantity of metaphors used.

Figure 19 *shang/xia* in CLL

	NE-native	LP	HP	NC-target
shang	1496	2617.5	2095.5	2257
xia	460	1365.6	1007.4	1547.3
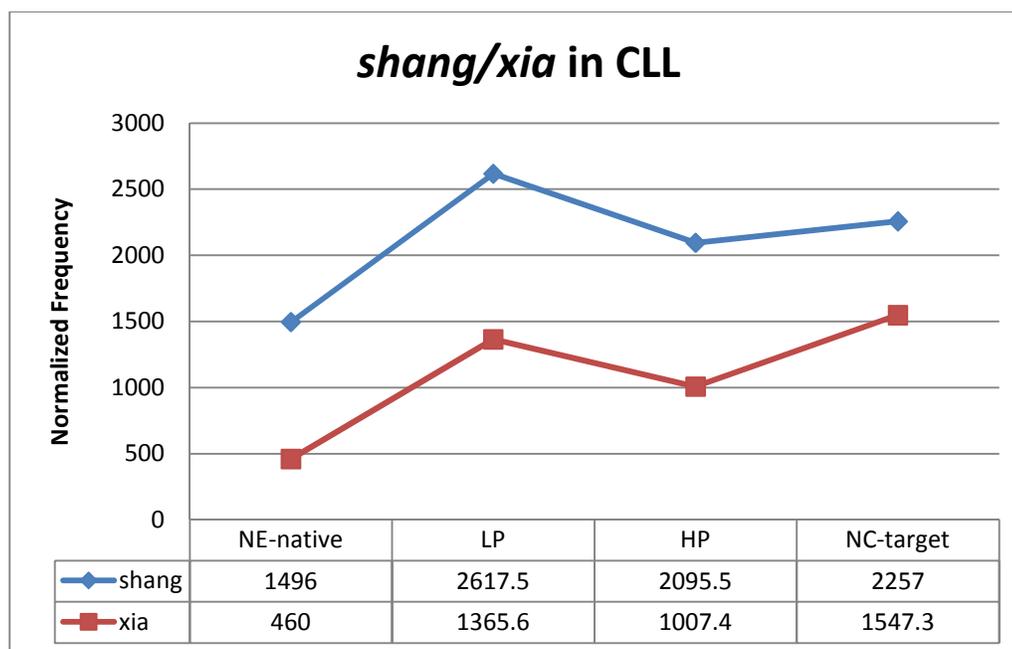
However, the *shang/xia* figure shows an opposite pattern in which both LP and HP groups overuse than their native language Chinese and LP overuse than HP even though the *shang/xia* metaphors in their native language enjoys a much lower frequency level than the target language. In this case, neither LP nor HP learners are very close to their native language in term of quantity of metaphors used.

When the figures are considered together, it is obvious that the quantity of the metaphors used in learners' first language do not seem to affect the quantity of metaphors learners use in the target language. Instead, learners could overuse or underuse in their interlanguage compared with the native speakers.

Based on quantity, there is not much L1 transfer taking place in both cases. LP demonstrates an extreme pattern by underusing than HP and the target language users (NE) in *up/down* case but overusing than HP and the target language users (NC) in the case of *shang* and overuse than HP though underusing than NC. The two figures show that learners at this stage are more affected by the frequency of the metaphor in the target language. In *up/down* figure, the learners underuse than their L1 (Chinese) is related to the lower frequency of the metaphors in L2 than L1. Likewise, learners in *shang/xia* case overuse than their L1 (English) is related to the higher frequency of the metaphors in L2.

Whether learners are more influenced by L1 or L2 can be tested statistically. As is listed above, each group (LP, HP, L1, L2) has a statistic showing the occurrences of normalized frequency in the corpus. The influence can be shown when the numbers are compared on a linear scale. If the number is closer to L1, then it is more affected by L1. Otherwise, L2. If both LP and HP are more influenced by L1, for instance, the distance between LP or HP to L1 will indicate which one (LP or HP) is more affected. The greater the numerical distance (a positive or negative value is not a concern, only the numerical distance/difference is), the less influence it is. In other words, if the frequency rate is closer to L2 or L1, then it means that it shows more tendencies toward L2 or L1 and is more attracted to that end. Below are detailed comparisons for *up*, *down*, *shang,* and *xia*.

up: LP (1017) is closer in number to learners' L2 (1496) than to L1 Chinese (2257). Thus, LP is more affected by L2 instead of L1. HP (1206.2) is closer to L2 English (1496) than to L1 Chinese (2257), so HP is also more influenced by L2. However, HP is closer to L2 (1496-1206.2= 289.8) than LP to L2 (1496-1017=479).This means both LP and HP are more influenced by L2 instead of L1, but HP is more influenced by L2 and have developed a stronger sense in the target language than LP.

down: both LP (230.7) and HP (337.5) are closer to the target language English (460) than to learners' L1 Chinese (1547.3). However, the distance between HP and the target language (122.5) is shorter that between LP and the target language (229.3). It can be concluded that both LP and HP are more affected by L2 instead of L1, and HP is even more affected by L2.

shang: similar to *down*, both LP (2617.5) and HP (2095.5) are closer to the target language (2257) Chinese than learners' L1 English. HP has developed a better awareness of the target language and is more affected by L2 while LP has over-raised their awareness of the target language and thus deviate more from the norm even though they use more metaphors than the L2 group.

xia: despite low occurrences in learners' L1 (460), both LP (1365.6) and HP (1007.4) are closer to the target language English (1547.3). However, different from all previous cases, LP is closer to the target language than HP to the target language.

The overall pattern affected by frequency of *up, down, shang, xia* is summarized as follows:

Table 17 Frequency Effect of *up, down,shang, xia*

	LP	HP
Up	L2	L2+[10]
Down	L2	L2+
Shang	L2	L2+
Xia	L2+?[11]	L2

Overall, as stated earlier, all four cases do not show much influence of L1 frequency. From the summary, both LP and HP are more affected by L2 than L1, HP is closer to L2. However, this is not the case for *xia*. It is generally uncommon that LP could have developed a better sense of the target language than HP. However, it is compatible with the dynamic systems perspective that second learning process is unpredictable. However, it is not random in this case for *xia*. The high frequency of LP using *xia* is caused by learners' overusing TIME and CONDITION metaphors as discussed in the previous section when discussing the asymmetry between *shang* and *xia*. The overuse of TIME and CONDITION in fact is a direct influence from L1. If these two factors are considered, LP is more affected by L1 linguistically. In other words, in the *xia* case, in quantity, LP is closer to the target language speakers, but in quality, they are more affected by their L1.

In summary, the quantitative analysis shows that both HP and LP are mainly influenced by L2 (i.e. the target language) frequency instead of L1 frequency. This demonstrates that at both proficiency levels, learners overall have developed some good awareness of the target language and is not much affected by the density of metaphors used in L1, except for the case of *xia*, where the seemingly contradicting case in fact

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[10] "+" indicates a closer distance to the target language.
[11] "?" indicates an exception or unusual case.

entails that LP is further more affected by L1. This issue will be discussed later soon in the qualitative analysis.

4.3.2 Qualitative Analysis of Metaphorical Variety

A quantitative analysis misses out many details, thus a qualitative analysis across each metaphor will be discussed in the following to reveal more insights. If we look at the distribution of metaphorical variety, only a few metaphor categories stands out statistically significant. In order for an item to be statistically meaningful in a corpus, there should be at least 1 occurrence out of 10,000 words. Otherwise, it is difficult to make meaningful generalizations/comparisons other than to note that it is rare. The discussion will focus on the following five metaphors since they are statistically meaningful in the corpora: STATES (*up*, *down*, *shang*, *xia*), TIME (*xia*), SCOPE(*shang*), CONDITION(*xia*), and MEASURE(*xia*).

Figure 20 up in ELL

up in ELL

	STATES	QUANTITY	TIME	HIERARCHY	SCOPE	OTHER
NC-native	983	203.5	58.1	168.5	634	209.4
LP	777.7	145.2	94	0		
HP	1118.7	43.7	37.5	6.2		
NE-target	1356	64	32	44		

Figure 21 down in ELL

down in ELL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
NC-native	511.9	93	139.6	63.9	325.7	413
LP	68.3	162.3	0	0		
HP	168.7	156.2	6.2	6.2		
NE-target	388	52	12	8		

Figure 22 shang in CLL

shang in CLL

	STATES	QUANTITY	TIME	HIERARCHY	SCOPE	OTHER
NE-native	1356	64	32	44		
LP	1479.4	56.9	56.9	0	967.3	56.9
HP	1249.2	80.5	40.2	40.2	685	0
NC-target	983	203.5	58.1	168.5	634	209.4

Figure 23 xia in CLL

xia in CLL

	STATES	QUANTITY	TIME	HIERARCHY	CONDITION	MEASURE
NE-native	388	52	12	8		
LP	284.5	0	398.3	0	569	113.8
HP	322.3	80.5	161.1	0	282	161.1
NC-target	511.9	93	139.6	63.9	325.7	413

Figure 24 STATES: up, down, shang, xia

STATES

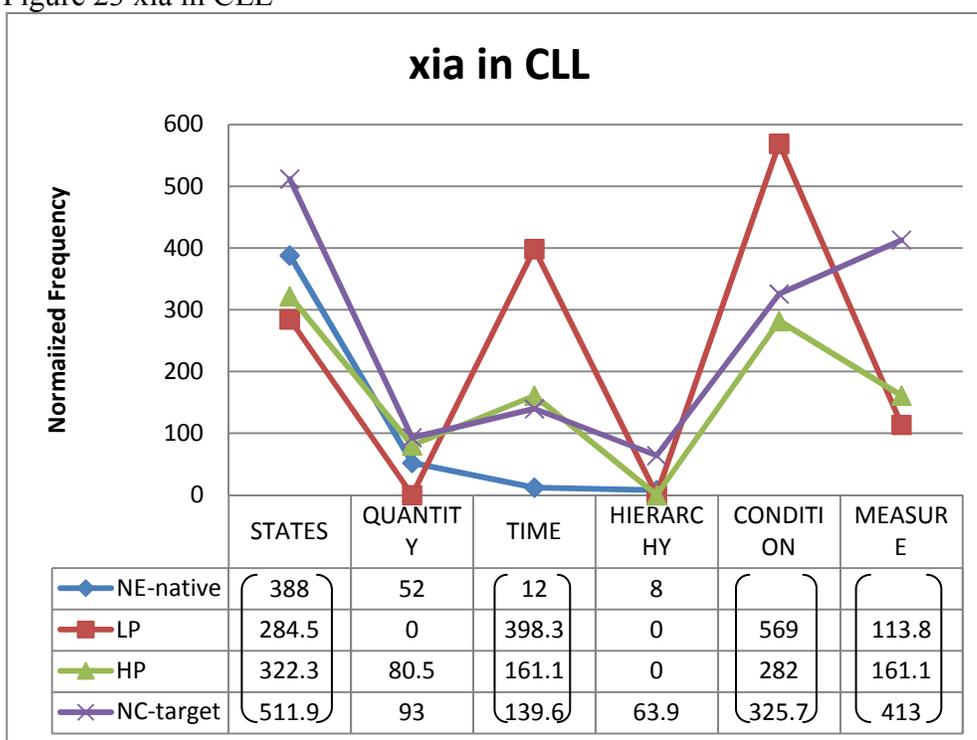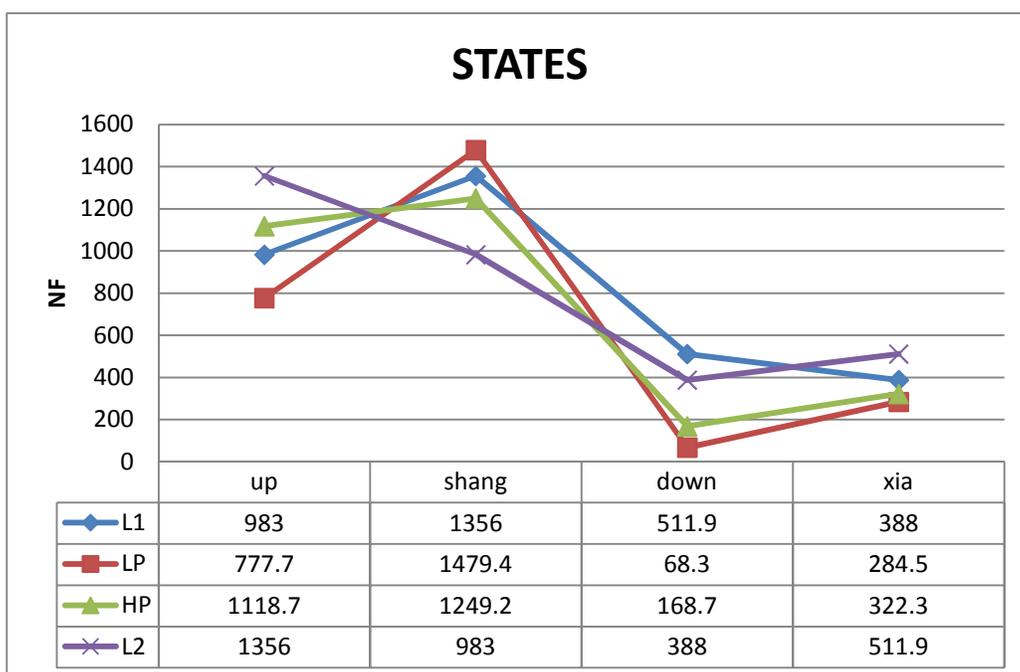|	up	shang	down	xia
L1	983	1356	511.9	388
LP	777.7	1479.4	68.3	284.5
HP	1118.7	1249.2	168.7	322.3
L2	1356	983	388	511.9

As is shown in the above figure, in general, high frequent metaphors in both L1 and L2 contribute to learners' high production of such metaphors, as is demonstrated in *up* and *shang* cases.

4.3.2.1 STATES: *up* and *shang*

STATES: *up*

In the case of *up,* learners follow a standard developmental pattern in which both LP and HP underuse than the target language speaker and HP is closer to the norm. LP learners used following metaphors to indicate a certain state:

ACCOMPLISHED STATE IS UP: *make up my mind, give up an opportunity,*

GOOD IS UP: *make up for something, grow up, build up the country/economy,*

ACTIVE IS UP: *stay up all night, keep up with the changing society*

In English, when *up* is used to indicate a certain state, native English speakers use a rich variety of expressions to indicate a certain state:

ACCOMPLISHED STATES IS UP:

wrap up the trip, end up taking his action, problems clear up, sum up, fill up, give up, take   up painting, show up, mix up, lab set up, shut up, stormy sky open up, are fed up, whip up support, match up, prop up a bureaucracy, make up his mind, wound up watching a play, problems clear up, ...

GOOD IS UP:

from informal school right up to prestigious university, business grow up, live up to one's image,...

ACTIVE IS UP:

what's up, wake up, up against, wouldn't catch up with them, face up to, …

By comparing English learner data to native English speakers' data, it is obvious that native English speakers use a much more varied verbs along with *up*. It seems that the verb that learners use determined whether use *up* or not. In other words, they need to know what verbs are used first and decide whether to use *up* or not. That's why sometimes they would use a wrong expression since up is so semantically bleached and it is hard for learners to grasp the exact meaning of it. Thus, it is easier for them to determine a main verb first and then use *up*, but since learners' main verbs are still so limited because they are more difficult to acquire since each verb carries their own particular meaning. If learners are limited in using various verbs, their use of the verbal phrases with *up* will be limited. This also corresponds with the earlier finding that the Chinese learners overuse *shang* to indicate a state partially because *shang* is the main verb in such expressions. Thus the semantic function of *shang* and *up* might have mainly contributed to the learners' performance.

STATES: *Shang*

In the case of *shang,* both LP and HP overuse than the target language speakers, which is a nonstandard developmental pattern. It is shown that LP is influenced by L1 more than HP though both overuse than the target language. Upon closer look at the data, the overuse of *shang* as STATES is caused by learners' frequent use of the following expressions to indicate going to a public place (academic organization), in particular:

e.g. *shangxue, shangke, shangdaxue, shang youeryuan, shang gaozhong*

'go to (attend) school, go to (attend) class, attend a university, a kindergarten, high school'

Data shows that learners use half metaphors or more when *shang* used as the main verb (LP 50%, HP 62%). The metaphor is identified as TOWARDS A PUBLIC STATE/LOCATION IS SHANG, or simply put, PUBLICITY IS SHANG. It is reasonable to claim that learners are using expressions that are related to their daily life. According to the composition of the corpus, these learners are students, so school life is one of the most common topics to them. Thus it is not surprising that the learners have overused such expressions.

One would assume that the ELL students would have a similar situation since they are students and write about their life as well. However, the issue lies in that such a linguistic expression as shown in the examples cannot be directly translated into *up* in English. It is fair to state that ELL learners also wrote about these school related topics but not reflected in the *up* expressions. For instance, they might use 'go to school', 'attend school' or ' go to class' to express such an idea instead of 'go up to school'. In addition, in such examples, "shang xue", "shang ke", "shang youeryuan", *shang* is the main verb, i.e., it carries the main semantic property while in English when *up* is used, it is either an adverb or a preposition which carries less semantic properties than the main verb itself regardless what verb is involved. Thus, ELL learners would not overuse *up* phrase when compared to CLL learners who used *shang* phrases because in such phrases, *up* is not the main verb, or the semantic core.

If learners overuse such an expression, then it will inevitably affect the overall number of metaphors. Two factors affected LP and HP learners' performance: students' familiarity with the vocabulary/topic that is closely related to their life and the linguistic properties of the key words *shang* and *up*.

In Chinese, when *shang* is used to indicate a certain state, native Chinese speakers use the following expressions. These expressions mainly fall into four categories:

1) *shang* as the main verb and occurs as the first character in the phrases, meaning ACTIVE IS   SHANG; e.g.上大学 (shangdaxue, 'going to college')，上班(shangban 'go to work')

2) *shang* as the verb complement and follows the verb in the phrases, meaning ACHIEMENT IS SHANG (or ACHIEVING A DESIRED RESULT IS SHANG), in other words, achieving a new state/situation, e.g. 吃上 (chishang, 'managed to eat sth')，赶上 (ganshang 'managed to catch up with')， 接触上 (jiechushang 'managed to contact')，连上 (lianshang 'managed to connet')，换上 (huanshang 'managed to exchange')， 追上 (zhuishang 'managed to catch up with sb')， 配上 (peishang 'managed to match up with') ，看上 (kanshang 'started to like')，考上 (kaoshang 'managed to test inot a school')，称得/算得上, (cheng/suan deshang 'can be counted as')，比不上 (bibushang 'can't be compared to')，用不上 (yongbushang 'can't be used as')

3) *shang* as preposition and occurs at the end of the phrase, these phrases are nouns, referring to a meeting, conference, organization, etc. e.g. 在会议上 (zaihuiyi shang 'at

a/the conference'），生日宴上(shengriyan shang 'at the birthday party'），在比赛上 (zai bisaishang 'at the competition')

4）other structure such as a fixed four-word phrase, meaning differently such as ACTIVE IS SHANG/GOOD IS SHANG, etc. 迎难而上 (yingnanershang 'to face up to the difficulty'，奋发向上 (fenfaxiangshang 'to work hard to make progress')

Native Chinese speakers use 33% metaphors when *shang* functions as the verb complement structure to indicate ACHIEVEMENT IS SHANG/ACHIVING A DESIRED RESULT IS SHANG. Native Chinese speakers use 18% for metaphor PUBLICITY IS SHANG when shang is used as a preposition (e.g. *zai huiyi/hunli shang* 'at the meeting/wedding'). Native Chinese speakers use 17% when *shang* functions as the main verb to indicate ACTIVE IS SHANG (e.g. *shang ban* 'go to work'/ *shangwang* 'go online'). The remaining 32% metaphors are a combination of different structures such as a fixed-word phrase *yingnanershang* 'face up to the difficulty', *shang* as adjective as in *meishi zhishang* 'good food is best', *shang* in a fixed phrase *mashang* 'immediately' indicate ACTIVE IS SHANG.

To sum up the above discussion, the semantic property of *up* and *shang* affect how learners use the metaphors. In particular, learners have more difficulty using them as function words but native speakers tend to use as function words. Chinese native speakers mainly use *shang* as a verb complement to indicate an achieved result/state where *shang* serves as a function word. By contrast, learners use more than half of all STATES metaphors by using *shang* as the main verb (LP 58%, HP 56%) where *shang* carried the main meaning, with the rest metaphors mixing different structures stated above in 2), 3),

and 4). Furthermore, these structures in learner data in which *shang* used as the main verb are also school-theme related, for example, *shangxue/daxue* (go to school/college, etc.).

4.3.2.2 STATES: *down & xia*

Table 18 STATES: down &xia

	L1	LP	HP	Target language
down	511.9	68.3	168.7	388
xia	388	284.5	322.3	511.9

STATES: *Down*

Both *down* shows a usual developmental pattern where both LP and HP underuse than the target language speakers. As is shown in the figure, LP rarely uses *down* to indicate a certain state to the point where it is statistically insignificant. Since a lot of the essays in the ELL learner corpus is about a certain social problem and one would expect abundant ideas expressing an undesirable state, learners' lack of such metaphors actually indicates that LP has great difficulty to express such idea. For instance, LP uses very limited expressions such as, *write down the ideas, note down their thoughts, lay down some regulations, lay down the plan, write down the news, get down to business, to settle down,* to indicate an inactive state or the metaphor INACTIVITY IS DOWN. By contrast, HP also used rather limited (albeit more) expressions such as *settle down*, *wrote down the questions, machine break down, society break down, break down habit, run down factory's reputation, break down, society fell down, company run down* to indicate the same idea that an inactive state is *down*. This is again probably due to the semantic property of *down* since learners have to decide to use a main verb first and then use *down* since the verb carried the main meaning to them.

Native English speakers, however, use a rich variety of verbs along with *down* to express one main metaphor mainly through one structure: Verb+ Adv. (*down*). Occasionally there are *down* used as an adjective to indicate an inactive state as in *this place is down*.

INACTIVE/INACTIVITY IS DOWN: *travel wore him down, settle down, let me down, turn him down, break down, shut down, winding down, put down, write down, close down, bring down, calm down, plunged down, melt down, let down* …

Compared with the English native speakers, ELL group use a rather limited verbs along *down* to expression an abstract idea. Their verbs only limited to some basic verbs such as *write, cut, take, get, go, set, drop, fall* while native English speakers use 35 different verbs, including *anchor, beat, bog, bore, break, bring, calm, close, come, chase, get, go, hold, let, melt, push, plump, put, play, set, put, slim, write, load, run, rip, settle, slow, shut, tear, tone, trickle, turn, weigh, wind.*

STATES: *xia*

Native Chinese speakers use 84% metaphors when *xia* is used a resultative complement to indicate an inactive/undesirable state. In other words, native Chinese speaker use *xia* as the function word to express metaphorical meanings. The rest 16% metaphors include 6% when *xia* is used as the main verb (e.g. *xiaban* 'get off work', *xiaxian* 'get off line') and 10% when *xia* is used as an adjective (e.g. *sixia* 'privately') to indicate INACTIVE IS XIA.

When analyzing the property of the word *xia* in these metaphors used by CLL learners, it is hard to do such analysis since the data is limited. LP and HP learners

together use only 13 cases of the STATES with 5 cases for LP and 8 for HP. Learners

used 留[12]下（3），打下（2）， 丢下家， 放下自由，遗下， 每况愈下，下结论，

下命令， 下课. It can be concluded that learners' use of xia as both the main verb and

the verb complement is extremely limited.

4.3.2.3 TIME

Figure 25 TIME

	up	shang	down	xia
L1	58.1	32	139.6	12
LP	94	56.9	0	398.3
HP	37.5	40.2	6.2	161.1
L2	32	58.1	12	139.6
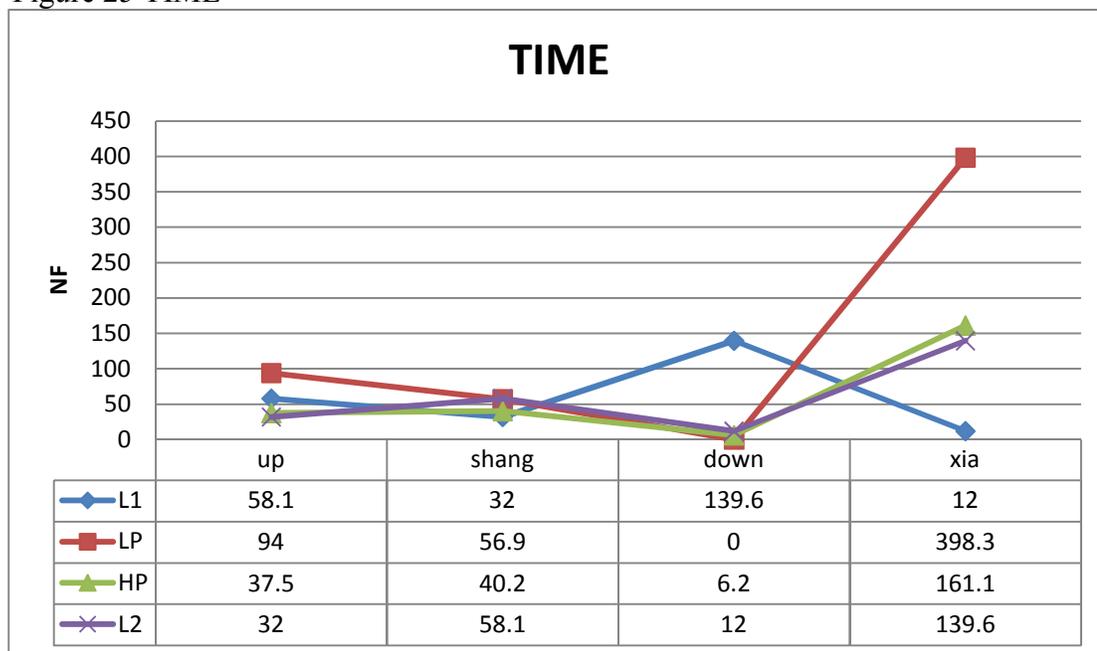
We will briefly discuss *xia* here since it is different from other cases. According

to the above figure, *down* and *xia* shows an interesting contrast to conceptualize TIME.

Both are statistically closer to L2 than to L1. Chinese and English share the metaphor,

AT/TOWARDS A LATER TIME IS DOWN. In English, the metaphor AT/TOWARDS

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[12] In one case, learners actually wrote 流下 (liuxia, literally means 'stream down'）， but it meant 留下 (liuxia, 'to leave') since the whole sentence was *流下很重的烟味 (liuxia henzhong de yanwei 'to leave a very strong smell of cigarette'）。Error in the first character is not the concern here but the conceptual metaphor.

A LATER TIME IS UP is more dominant (Lan, 2003), which explains why *down* is used less frequently in native English corpora than *xia* in native Chinese corpora as TIME. However, due to its less salient status in English compared to *up* for such a metaphor, ELL learners do not tend to use such metaphor, while CLL learners tend to overuse than the native Chinese speakers, especially LP. There are two situations in which *xia* is used as TIME in Chinese:

    i)   xiayidai 'next generation'   xiawu "afternoon"

    ii)   liuchuan xiaqu 'hand down', zou xiaqu '…down the road'
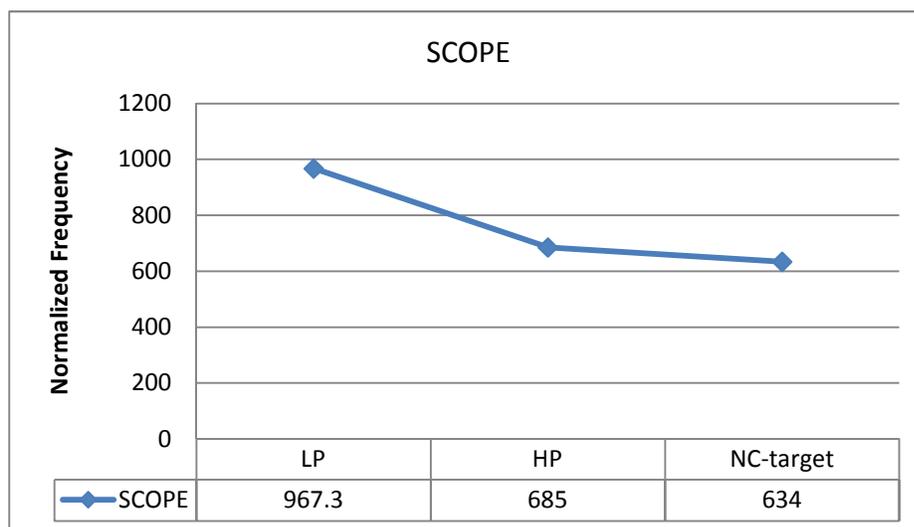
In case i), these expressions cannot be translated into a *down* phrase in English, while those in case ii) normally can. CLL learners (esp. LP) overuse the second case where *xia* is used to conceptualize a later time or future time and can be translated into '*down*' in English. Consequently, CLL learners overuse of the conceptual metaphor is strengthened by linguistic similarities.

4.3.3 Non-shared Metaphors

As listed previously, Chinese and English have some metaphors that are not overlapping by using the four specified lexical items *up, down, shang, xia*. There are three metaphors that are frequent /statistically significant in the current study: SCOPE, CONDITION, EVENT MEASURE.

SCOPE:

Figure 26 SCOPE

Figure with title "SCOPE", y-axis labeled "Normalized Frequency":

	LP	HP	NC-target
SCOPE	967.3	685	634

a. high frequency in target language

This metaphor is only available in Chinese. However, normalized frequency indicates that both LP and HP use it quite frequently, with both LP and HP overusing than the target language users. This is the case that proves learners still use metaphors that are not shared between the two languages if the metaphor is frequent and common in the target language. *Shang* used for RELEVANT SCOPE is very common in Chinese as in:

e.g. *lilun shang*: theory up, 'in theory'

   shiji shang: practice up, 'in practice'

   shishi shang: fact up, 'in fact' 'in essence'

   lishi shang: fact up, 'in fact'

   li shi shang: history up, 'in the history'

   yuanze shang: principle up, 'in principle'

   cong zhege yiyi shang: from this CL sense up, 'in this sense'

   cong zhege fangmian shang…: from this aspect, ' in this aspect/regard'

Such examples abound where *shang* is used in Chinese to indicate a defined scope while *in* is used in English. Both groups of learners use these expressions frequently. It seems that for this metaphor, English prefers 'in' while Chinese 'shang' (literally translated as 'up' or 'on'). In English, examples such as "in theory", "in practice" are the so-called "conduit metaphor", a concept proposed by Reddy (1979). It seems that this type of conduit metaphor in English correspond to the 'location metaphor' since Chinese uses *shang* 'up/on' for the same idea, as shown in the above examples. As is well noted in the literature, some metaphors are universal while others are culturally sensitive (Kövecses, 2005; Lakoff and Johnson, 1980; Lakoff, 1993). However, due to the cultural difference, learners are able to apply the metaphor frequently in Chinese even though it is absent from their first language and culture, probably due to its high frequency in the target language.

b. idiomatic nature

In addition to the frequency factor, the reason that learners' capability of using *shang* for SCOPE could also be a result of the idiomatic nature of the linguistic expressions or phraseology realizing these metaphors. Many of such expressions listed in the examples have been idiomaticized. Thus, the factor of frequency, coupled with the idiomatic nature of the linguistic structure, contributed to learners' overuse. LP again is more affected by these factors since they overuse more than HP learners.

CONDTION:

Figure 27 CONDITION

	CONDITION		
	LP	HP	NC-target
CONDITION	569	282	325.7
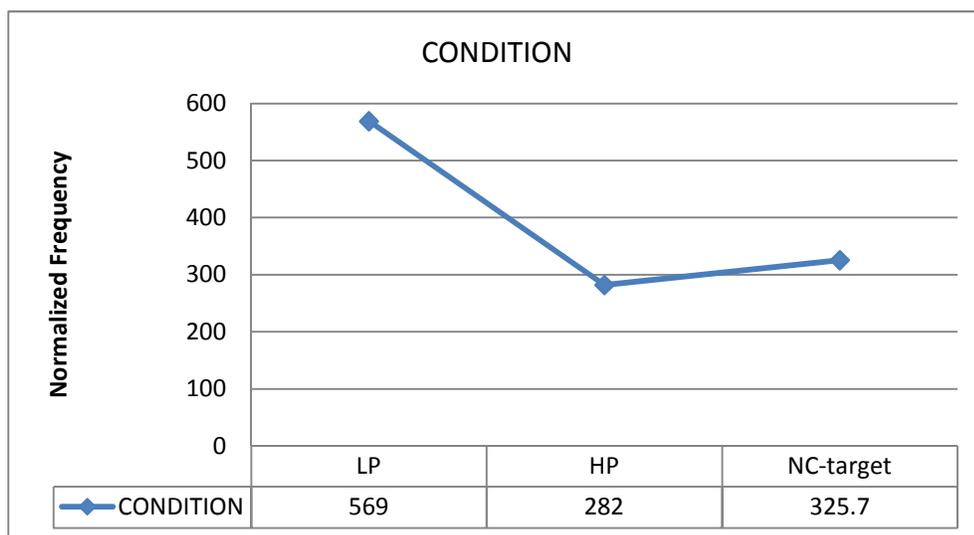
L1 conceptual transfer

It is worth pointing out that LP in CLL corpus overuse *xia* for specified condition In English, though there is not a metaphor that indicates a particular circumstance or condition by using *down*, there is the expression "under the circumstance of" in English, in this case, the conceptual metaphor is similar to the one in Chinese using *xia*. This is an example that English and Chinese use different synonyms for the same metaphor. However, this is only a subcategory that can be translated into English since there are other cases that cannot be translated into such expression using *under*. For instance,

E.g. zai jiaren de peitong *xia* 'in the company of (one's) family'

LP group's high frequent usage of this metaphor is a result of L1 transfer of the overlapping conceptual metaphors. This is particularly true for LP learners who overuse the following expressions.

E.g. zai zheyang de huanjing *xia* 'under such an environment'

zai daduoshu qingkuang *xia* 'under most circumstances'

Zai zhezhong qingkuang *xia* 'under such a circumstance'

The overuse of such a conceptual metaphor present in L1 (same concept but using different synonyms) also contributes to the overall rise of *xia* metaphors in LP as shown in earlier quantitative analysis.

EVENT MEASURE:

Figure 28 EVENT MEASURE
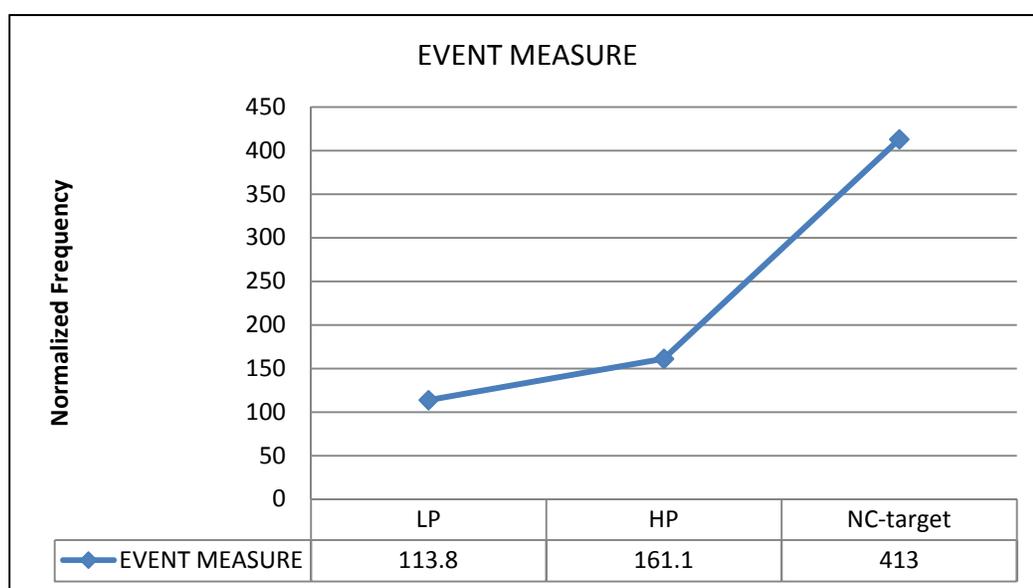
This is a strong case where learners use a metaphor that is not available in their language because it is relatively frequent in the target language. In such expressions, *xia* is used as a measure word to count events, or to indicate a short time period. This is another example showing that learners do not confine themselves to metaphors that are shared between the two languages. Similarly, HP shows more orientation toward the target language.

Thus, learners do not necessarily use metaphors or more metaphors that are shared between the two languages, which highlights the significant role of the frequency

effect of the metaphor in L2 and other factors such as L1 linguistic transfer and idiomatic nature of the metaphor, as illustrated above.

In summary, learners' acquisition is interplayed by several factors: the grammatical function of the metaphor key word, frequency of the metaphor in the target language, L2 proficiency, linguistic similarity between L1 and L2, coupled with secondary factors such as phraseology of the linguistic pattern realizing the metaphor, learners' familiarity with a topic associated with particular metaphorical expressions. First and foremost, the frequency rate of the metaphor in the target language has the most important effect on learners; acquisition of metaphor: learners tend to use more frequent metaphors no matter they are linguistically or culturally similar.

- If the metaphor is shared by L1 and L2 and is highly frequent, learners tend to use them in interlanguage more frequently than other metaphors that are shared but not frequent (e.g. STATES vs. other metaphors);

- If the metaphors are shared by the two languages and is NOT frequent in the target language, learners do not tend to use them frequently in interlanguage (e.g. TIME, HIERARCHY,);

- If the metaphors are NOT shared by the two languages and are frequent, learners also tend to use them frequently in interlanguage due to the prominent status of the metaphor in the target language; (e.g. SCOPE, MEASURE, CONDITION)

Secondly, learners use of metaphor are further influences by L2 proficiency & their first language.

- Learners demonstrated a pendulum effect affected by L2 proficiency: LP tends

to demonstrate a wider variation around the target language, being closer to L1, while HP less, showing more stability toward L2 when the metaphors are shared (e.g. STATES);

- LP also tends to show more variation than HP more stability when the metaphors are not shared culturally or linguistically but is frequent in L2 (SCOPE, MEASURE, CONDITION);

- LP learners are more subject to variation due to the idiomatic nature of the linguistic expression, learners' topic familiarity associated with a particular metaphor;

- Learners are affected by grammatical function of the metaphor word. For ELL learners, their use of *up* and *down* for spatial metaphors is constrained due to their limited use of main verbs that collocate with these two lexical items. For CLL learners, their use of metaphors containing *shang* and *xia* is affected by the grammatical function of these two words in the metaphorical expression. Different from native speakers, learners tend to use the metaphor words as the main semantic unit (main verb) instead of a function verb complementing the main verb as native speakers.

CHAPTER FIVE: CONCLUSION AND IMPLICATIONS

In this paper, it has been found that learners' use of spatial metaphors differ significantly from those of L2 speakers. Development of spatial metaphors is a dynamic process resulting from an interplay of several factors which corresponds nicely with the dynamic perspective of language development (De bot, 2008; Larsen-Freeman, 1997; Verspoor, 2008). The dynamic perspective suggests variability in learner language is viewed systematically and that both order and chaos are indicators of steps of language development. This is reflected in the current study through learners' overuse and underuse at different proficiency levels and across different metaphors.

My dissertation suggests that language development is nonlinear: learners show patterns of progression and regression. They may look chaotic over a short period of time but with time they become proficient. This is a natural part of language development.

The factors that affect learners' development of spatial metaphors are as follows:

First, learners are attracted to those conceptual metaphors that are highly frequent in both L1 and L2 and those that are frequent and only available in L2. This shows frequency of the conceptual metaphor is the most important factor. When the metaphors are frequent, learners tend to use them frequently whether or not they are shared between L1 and L2.

Second, the native-nonnative difference is aggravated by L2 proficiency level. Due to their lower proficiency level, LP learners tend to demonstrate a greater degree of

variation and more unpredictability compared with native speakers, while HP learners show more stability and less variation when compared with the native speakers.

Third, the difference is further complicated by linguistic reasons. LP learners tend to be more affected by the main semantic unit in the metaphorical expressions: in the *up* and *down* case, learners' use of the spatial metaphors are constrained due to limited use of verbs associated with these two lexical items; while in the *shang* and *xia* case, learners' use of spatial metaphors are affected by the grammatical function of the metaphor word. In particular, learners tend to use the word as the main verb in the metaphorical expressions instead of a function word as native speakers.

Finally, topic familiarity and the idiomatic nature of the metaphorical expressions can also affect learners' use of a particular metaphor.

Thus, learners' metaphoric competence shows a pendulum effect affected by multiple factors. Lower proficiency learners are more subject to the influence of the previously mentioned factors and display more deviation from the target language when compared with higher proficiency learners.

In conclusion, learners' language may not necessarily lack metaphor. Depending on the frequency of the metaphor and how the metaphor relates to their L1 and their L2 proficiency level learners may, in fact, overuse metaphor. They may overuse or underuse the metaphor due to the nature of the metaphor and how it is related to learners background and first language. For instance, lower-proficiency learners may overuse a metaphor if it is frequent or it shares certain L1-L2 similarities. Thus, learners' language does demonstrate metaphorical deficiency. It would be more suitable to describe learners'

interlanguage as 'metaphorically not proportional,' i.e., learner language is not proportional to the target language in terms of metaphorical composition. In other words, they tend to either overuse or underuse than native speakers in the process of acquisition and compensation over proficiency, metaphor types, and other interrelated linguistic factors. To put in a metaphor, learners' acquisition of metaphors is like making a dish, where all ingredients (i.e., various metaphors) should be balanced according to the recipe (i.e., the norm) in order to get an appetizing dish. However, due to learners' incapability, salt may be overused, or vinegar may be underused, the overall flavor of the dish will suffer. In other words, the balance of the metaphor variety and quantity is compromised due to learners' limited L2 proficiency.

Pedagogical Implications

1) *Language development as a dynamic process.* Teachers need to be aware that language development is a dynamic process and need not be obsessed with the local noise; instead, they should focus on the more general picture that shows language development.

2) *Avoidance strategy.* The overall metaphorical occurrence is low in the learner corpus. One reason is that the corpus sizes are relatively smaller than the native corpus. Another reason is learners are avoiding the phrases that include these four lexical items that are highly productive but semantically opaque. As demonstrated by Liao and Fukuya (2004), Chinese English learners avoid phrasal verbs due to the figurative nature and semantic difficulty. The low occurrence in the corpus might give us a

sense of the difficulty of the metaphorical meanings containing these words. This could also explain the low error rates of the identified lexical items in the corpora.

3) *Consciousness-raising.* Learners are attracted to those metaphors that are highly frequent. This implies a repeated exposure and awareness-raising could be an effective approach to introduce less frequent metaphors. Teachers could consciously draw learners' attention to metaphorical aspects of the target language, which would help learners understand the semantics of metaphorical phrases better. In addition, many metaphorical expressions tend to have restricted uses or a limited range of collocation so a fine sense of lexical possibilities also needs to be made explicit. It would be important to sensitize learners to different yet related senses that words have, and to the phraseological patterns that accompany these different senses.

4) *Small corpus size.* The learner corpora used in the study are small, particularly the Chinese learner corpus. A larger corpus would provide us with more insights. This also demonstrates the need to build larger learner corpora especially in the field of L2 Chinese research.

5) *Synonyms.* Due to limitations of corpus searching tools, this study has only limited to the four predetermined lexical items. However, spatial metaphors regarding verticality can be expressed by various linguistic expressions such as prepositions, adverbs, and verbs, though prepositions and adverbs might be the most typical ways to describe UP-DOWN schema (Boers, 1996, p. 10). For instance, in English, many verbs such as 'rise' 'fall' and adjectives such as 'high', 'low', 'near', 'far' can all express verticality. The present study can only be indicative of certain trends. Future

research should include all synonyms denoting the *up-down* image schema to gain a more general picture of how learners use such spatial metaphors using the up-down image schema.

6) *Identification of metaphor in a corpus.* Closely related to the previous point are methodological issues in corpus searching for metaphors. Future research should also explore methodological advancement in metaphor identification in corpus-based studies. As noted, corpus-based metaphor studies require tremendous manual check and are still at their initial stage in which "many methodological issues have to be (and are still being) sorted out, and many potential research issues have to be identified and tackled systematically and exhaustively" (Stefanowitsch & Gries, 2006, p.12). Technological advancement will make this approach more practical.

7) *Genre-based analysis.* Genre-based analysis includes written and interactive spoken discourse. The current study analyzes the differences between native speakers' general written language and learners' writings produced in timed exam settings. Future projects should focus on genre specific comparisons (e.g. English or Chinese for academic purposes). Further, metaphor research in interactive spoken discourse is emerging as another new area (e.g. Cameron, 2006), so future studies should also pursue this line of research.

8) *Teaching metaphorical competence***.** Research shows that learners tend to be motivated by conceptual approaches (e.g. Li, 2009; Robbins, 2004). For example, when comparing two approaches, introducing knowledge of conceptual metaphors and simple memorization of the target phrasal verbs, Robbins (2004) finds that

students were more motivated to learn those verbs. Kövecses (2001) has reported similar results. Students who were introduced to metaphorical knowledge (phrasal verbs containing *up* and *down*) by teacher-led explanations performed significantly better in the tests (including new phrases) than students who simply were given translations of the phrases. However, research into on how to teach learners' capability to acquire and use metaphors appropriately is still at its infancy. This calls for more systematic empirical and theoretical research on instructional materials and approaches as well practical classroom experiments.

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