Summer 2016

Comparison of the comprehension of three types of Chinese colloquial idioms by advanced Chinese L2 learners

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COMPARISON OF THE COMPREHENSION OF THREE TYPES OF CHINESE COLLOQUIAL IDIOMS BY ADVANCED CHINESE L2 LEARNERS

by

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Second Language Acquisition in the Graduate College of The University of Iowa

August 2016

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PH.D. THESIS

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Wenfang Tang
To all the people who are loving and kind to me
ABSTRACT

This study explores how comprehension strategies, first language (L1), and contextual information affect the comprehension and interpretation of three types of colloquial idioms by Chinese as a second language (L2) learners at an advanced level of proficiency. Three research questions are addressed: (1) to what extent does context affect the comprehension and interpretation of three types of Chinese colloquial idioms, (2) to what extent does the degree of L1–L2 similarity influence the comprehension and interpretation of the Chinese colloquial idioms, and (3) what strategies are employed by the learners in comprehending the Chinese colloquial idioms in isolation and in context, and which strategies contribute to better comprehension of the Chinese colloquial idioms in context.

To address these research questions, 30 advanced Chinese L2 learners at a Midwest University participated in the study. They were asked to comprehend 15 unknown colloquial idioms in and out of context. All of the participants were native speakers of English. The 15 target idiomatic phrases differed in terms of the degree of L1–L2 similarity, including 5 matching idioms, 5 partially matching idioms, and 5 non-matching idioms. In the decontextualized condition, the participants were given a list of the target colloquial idioms without contextual information, whereas in the contextualized condition, the target colloquial idioms were embedded in short paragraph context. For both tasks, the individual participants were required to verbalize their thought processes as they arrived at the meanings of the target colloquial idioms. Think-aloud protocols were employed to collect qualitative data.

It was discovered that context substantially facilitated the comprehension processes of the target colloquial idioms, especially with respect to the partially matching
category. The degree of L1–L2 similarity significantly affected the ease with which the participants understood the Chinese colloquial idioms in the decontextualized and contextualized tasks. In the decontextualized condition, the participants generally adopted a “part-to-whole and literal-to-figurative” approach to interpret the target items, whereas in the contextualized condition, the participants adopted a heuristic method and employed a wide range of strategies (e.g., sentence translation, component words, and background knowledge) to access meaning of the target idioms. Among the strategies identified, semantic processing and pre-existing knowledge were strong predictors of accurate idiom interpretation. Instead of using existing L1 idiom comprehension models to explain the comprehension of idioms in an L2, a tentative model of idiom comprehension was proposed. L2 learners appeared to undergo two stages in comprehending unknown Chinese colloquial idioms: an initial prediction stage and a verification stage.
PUBLIC ABSTRACT

An idiom is a fixed expression that has a figurative, or sometimes literal, meaning. An idiom’s figurative meaning is different from the literal meaning. When one says 柳暗花明 (a shade of a willow and bright flowers) in Chinese, one is not describing an enchanting sight in spring time, but rather one means that a favorable turn of fortune will often appear just when there seems to be no way out of trouble.

Across languages and cultures, idioms are widely used in people’s everyday communication, and their complexity and frequency pose a great challenge to second language (L2) learners. This study explores how L2 learners comprehend unfamiliar Chinese idioms. Thirty advanced Chinese L2 learners were asked to verbally report their thoughts as they arrived at the meanings of 15 unknown idioms in and out of context. English was their first language (L1). The 15 idioms differed in the degree of L1–L2 similarity, including 5 matching, 5 partially matching, and 5 non-matching idioms. The learners’ verbal reports were audio recorded and later analyzed.

Results showed that L2 learners used their L1 knowledge in comprehending unknown idioms, and context substantially facilitated the comprehension processes of all the target items, especially with respect to the partially matching type. Instead of using existing L1 idiom comprehension models to explain the comprehension of idioms in an L2, a tentative model of idiom comprehension was proposed. L2 learners appeared to undergo two stages in comprehending unknown Chinese colloquial idioms: an initial prediction stage and a verification stage.
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CHAPTER I
INTRODUCTION

1.1 Background

Idioms are fixed phrases that mean something other than what a literal interpretation of their individual words would indicate (Fraser, 1970; Katz & Postal, 1963; Weinreich, 1969). Therefore, it may be hard to derive the meaning of an idiom from its component parts. For example, in English to have a chip on one’s shoulder means to be aggressively sensitive about a particular thing or to bear a grudge, and to burn the candle at both ends means to work very hard and stay up very late at night. In Chinese, for example, 画龙点睛 (bring the painted dragon to life by putting in the pupils of its eyes) means to add a word or two to clinch the point, and 一箭双雕 (shoot two hawks with one arrow) means to do one action that accomplishes two goals.

Across languages and cultures, idiomatic phrases are widely used in people’s everyday communication. Research has shown that “most English speakers utter about 10 million novel metaphors per lifetime and 20 million idioms per lifetime. This works out to about 3,000 novel metaphors per week and 7,000 idioms per week” (Pollio et al., 1977, pp. 233–234). People like to use idioms because they add color and vividness to language by creating images that express meanings beyond the constituent words that make them up. For example, the English idiom bite the dust paints a vivid picture of someone falling down, wounded or dead, quite literally biting the dust (soil, ground, earth). 上西天 (go to the western sky) in Chinese portrays a peaceful Buddhist paradise that people go to after death.
Idioms are culturally grounded, providing a window into the history, culture, and mindset of a particular language community. Idioms reflect a culture and its development over time. For some idioms, the beliefs or practices leading to their creation and use may have ceased in history, while the idioms themselves have survived and continue to be used today.

1.2 Statement of the problem

The complexity and quantity of idioms poses a great challenge to second language (L2) learners (e.g., Cieślicka, 2006; Cooper, 1999; Irujo, 1986a; Lin, 2003; Liu, 2003; Nelson, 1992). Even though a full mastery of idioms in an L2 is almost unachievable, L2 learners still have to face the challenge, because idioms are so widely used in spoken and written language, and a grasp of them “can be a great asset to learners in acquiring a new language” (Celce-Murcia & Larsen-Freeman, 1999, p. 39).

In the field of Second Language Acquisition (SLA), the way in which L2 idioms are comprehended and acquired is clearly an area worthy of investigation. Prior research in light of models of L1 idiom processing has addressed questions such as in what fashion the underlying mechanism works in processing L2 idioms (e.g., Cieślicka, 2006; Liontas, 2002; Nelson, 1992), what comprehension strategies and resources are utilized in the comprehension of L2 idioms (e.g., Abdullah & Jackson, 1998; Irujo, 1986 & 1993; Laufer, 2000; Wu & Zhang, 2006), what factors affect the production of L2 idioms, and whether idioms can be incorporated into an L2 course syllabus (e.g., Charteris-Black, 2002; Irujo, 1984), and the way in which idiom acquisition can be facilitated in the L2 classroom (e.g., Bulut & Çelik-Yazici, 2004; Cooper, 1998; Lin, 2006).
In sharp contrast to the abundance of research on L2 idiom comprehension in general, however, studies on how L2 learners comprehend Chinese colloquial idioms are scant. In spite of a small number of studies, many questions remain to be addressed. Therefore, it is very necessary and important for Chinese as a Second Language (CSL) researchers to conduct in-depth research on this topic.

1.3 Brief introduction to Chinese idiomatic phrases

In Chinese, Shuyu (熟语 idiomatic phrases) fall into three categories: Chengyu (成语), Xiehouyu (歇后语), and Guanyongyu (惯用语).

Chengyu (成语) are a type of traditional Chinese set phrase, most of which consist of four characters (e.g., 南辕北辙 to try to go south by driving to the north, which means to act in a way that defeats one’s purpose). There are approximately 50,000 Chengyu, with 4,000–5,000 being commonly used. Chengyu were widely used in Classical Chinese and are still common in formal Chinese writing and in the spoken language today.

Xiehouyu (歇后语) are a type of two-part allegorical sayings, of which the first part, always stated, is descriptive, while the second part, sometimes unstated, carries the message (e.g., 泥菩萨过江——自身难保 means like a clay Bodhisattva fording a river – can't guarantee his own safety, let alone that of others). A pun is sometimes invoked in a Xiehouyu. In this case the second part is derived from the first through one meaning, but then another possible meaning of the second part is taken as the true meaning. Thus, a Xiehouyu in one dialect can be unintelligible to a listener who speaks another.

Guanyongyu (惯用语) are a type of colloquial idiomatic expressions, most of which consist of three characters (e.g., 走后门, to get in by the back door, which means
to pull strings, or to use influence with someone to get something done; 铁公鸡, iron rooster, which means a stingy person). Chinese colloquial idioms were created and formed by the general public over a long history of daily life activities. Due to their vividness, popularity, and colloquial features, Chinese colloquial idioms are very widely used by native speakers in their daily communication. Although there is no definitive source for the total number of Chinese colloquial idioms in the language, *A Dictionary of Chinese Colloquial Idioms* (2009) lists over 15,000 as commonly used.

1.4 Purpose of this study

As Chinese colloquial idioms appear in all forms of discourse, including conversations, movies, radio broadcasts, and television programs, and in all forms of print, such as newspapers, magazines, and books, as well as throughout the world of electronic communication, Chinese colloquial idioms cannot be neglected in CSL learning. However, due to the fact that Chinese colloquial idioms are created by people from different regions of China, most of them are embedded in strong local cultural content. This brings a great challenge to English-speaking learners of Chinese to comprehend them.

In the field of CSL, the way in which Chinese colloquial idioms are comprehended and interpreted among L2 learners is insufficiently researched. In spite of a small number of studies, many questions remain to be addressed such as: (1) whether L2 learners comprehend different kinds of Chinese colloquial idioms in the same manner, and whether the degree of L1–L2 similarity play a role, (2) what cognitive processing features are exhibited in this process of comprehension, and to what extent L2 idiom comprehension resembles L1 idiom comprehension, and (3) what strategies are
employed, and in what circumstances these strategies are used in the comprehension of L2 idioms.

The present study serves to address these questions and attempts to contribute to the existing understanding of how Chinese colloquial idioms are comprehended among L2 learners. This study aims to investigate how English-speaking learners of Chinese L2 at an advanced level of proficiency comprehend and interpret three types of colloquial idioms in and out of context. Based on the findings, pedagogical implications are provided.

1.5 Research questions

Responding to the research gaps mentioned, the present study implements two tasks (i.e., one decontextualized comprehension task and one contextualized comprehension task) to examine comprehension and interpretation of three types of Chinese colloquial idioms in different conditions by advanced L2 learners. The following are the three guiding research questions:

RQ 1: To what extent does context affect the comprehension and interpretation of three types of Chinese colloquial idioms?

Two sub-questions are addressed:

(1) Does a short paragraph context facilitate the comprehension and interpretation of the target Chinese colloquial idioms?

(2) Do the short paragraph contexts facilitate the comprehension of the three types of colloquial idioms in similar or different ways?
RQ 2: To what extent does the degree of L1–L2 similarity influence the comprehension and interpretation of the Chinese colloquial idioms?

Two sub-questions are addressed:

(1) In the decontextualized task, does the degree of L1–L2 similarity influence the comprehension of the target Chinese colloquial idioms?

(2) In the contextualized task, does the degree of L1–L2 similarity influence the comprehension of the target Chinese colloquial idioms?

RQ 3: What strategies are employed by the learners in comprehending the Chinese colloquial idioms in isolation and in context, and which strategies contribute to better comprehension of the Chinese colloquial idioms in context?

Three sub-questions are addressed:

(1) What strategies are utilized by the participants in comprehending the target Chinese colloquial idioms in the decontextualized task?

(2) What strategies are employed by the participants in comprehending the colloquial idioms in the contextualized task?

(3) In the contextualized task, which strategies contribute to better comprehension of the target idiomatic expressions?

1.6 Structure of this dissertation

This dissertation includes seven chapters.

Chapter 2 illustrates the research background and presents an introduction to the existing literature. Chapter 3 gives a detailed introduction to the methodological issues that are important for addressing the research questions in this study, including the design
of the study, developmental processes for the experimental materials, scoring and coding systems, and subsequent data analysis methods. Chapter 4 presents the results obtained from the two comprehension tasks that are implemented in this study. Both quantitative and qualitative analyses are presented. The findings are discussed in Chapter 5, based on the theoretical models and current literature reviewed in Chapter 2. Chapter 6 discusses difficulties involved in learning L2 idioms, and puts forward teaching techniques based in part on the results of this study. Finally, Chapter 7 summarizes the findings of this study and discusses their limitations as well as directions for future research.
CHAPTER II
REVIEW OF LITERATURE

Following the typology of researchers who have investigated idiom processing and instruction, this chapter introduces existing research in the following three aspects: representation and processing of idioms; idiom comprehension and instruction in an L2 other than Chinese; and processing and comprehension of Chinese colloquial idioms by native and nonnative speakers.

2.1 Representation and processing of L1 idioms

From the linguistic and psycholinguistic perspectives on idiom representation and models of idiom processing, two major approaches in defining the representation and processing characteristics of idioms have been put forward so far. One approach is the non-compositional approach and the other is the compositional approach.

2.1.1 The non-compositional approach

The non-compositional approach describes idioms as long words that syntactically and semantically behave as lexical entries. Models of idiom processing that take this approach all assume that the component words of an idiom do not influence or direct its interpretation. These models all agree that idiom comprehension simply requires retrieval of idiomatic meanings from memory. However, they vary in terms of when and how idiomatic meanings are holistically retrieved.

In the non-compositional approach, several specific hypotheses of idiom processing have been formulated by far: the idiom list model (Bobrow & Bell, 1973), the lexical representation model (Swinney & Cutler, 1979), and the direct access model (Gibbs, 1980, 1986).
The idiom list model

The idiom list model (Bobrow & Bell, 1973) proposes that there are distinct idiomatic and literal modes of sentence processing. When a native speaker encounters an idiom, the speaker first interprets the idiom literally. If the literal meaning does not fit with the context in which the idiom appears, the native speaker will search for the idiomatic meaning in a special mental idioms lexicon and then choose the figurative meaning.

This model was established on the basis of a study in which 414 undergraduate students were engaged in two experiments. The procedure for the two experiments was the same. The participants were first semi-randomly assigned to one of two conditions, the literal set condition or the idiomatic set condition. In the literal set condition, the participants were presented with a set of 4 literal sentences. In the idiomatic set condition, the participants were presented with a set of 4 sentences each containing an idiom. Then the participants under both conditions were asked to report whether the literal or the idiomatic meaning of an idiomatically ambiguous test sentence came to their mind first. Responses to the first sentence in the idiomatic set condition defined the baseline condition, since the interpretation of the sentence appearing first could not be influenced by the experimental set. The authors discovered that in the literal set condition the proportion of participants seeing the idiomatic meaning of the test sentence first was lower than the baseline, while in the idiomatic set condition this proportion was higher. It was claimed that the use of the two processing strategies (i.e., idiomatic and literal) was evidence for the existence of distinct processing modes for idiomatic and literal
interpretations. The literal meaning was accessed first. Only if the literal meaning was rejected was the idiomatic meaning retrieved.

However, as Swinney and Cutler (1979) pointed out, Bobrow and Bell (1973) relied exclusively upon post-perceptual measures for support of inferences about ongoing idiom comprehension processes. It may only reflect the final, conscious result of such processing, rather than the processes by which that final interpretation was achieved.

The lexical representation model

The second model for idiom processing is the lexical representation model (Swinney & Cutler, 1979). This model proposes that idioms are stored and accessed like any other words in the lexicon, not from a special idiom list that is distinct from the lexicon, nor by a special processing mode which comes into play when the literal processing fails. When a native speaker encounters an idiom, both the literal and idiomatic meanings of this expression are processed at the same time, which results in a competition between the two. The context in which the expression appears determines the more appropriate interpretation.

In both experiments that led to the formulation of this model, a phrase classification task was utilized with undergraduate students. Reaction times to determine as quickly as possible whether or not each of a series of short words formed a meaningful and natural phrase in English were measured. In addition to different categories of grammatical idiomatic expressions, the list included in random order of appearance idioms and literal phrases. It was discovered that classification times were significantly faster for the idioms than for the matched control phrases. Based on the findings, the authors confirmed their hypothesis that “idioms are stored and retrieved from the lexicon
in the same manner as any other word” (p. 525). They therefore refuted Bobrow and Bell’s (1973) idiom list hypothesis.

However, this model was challenged by Gibb (1979, 1980, 1986), as the results of this study did not necessarily indicate that people analyzed the literal meanings of idioms at the same time as they processed their idiomatic interpretations. People may comprehend the idiomatic meanings of idioms without any analysis of their literal interpretations.

In addition, Burt (1992) provided no support for the lexicalization of idioms. Burt (1992) found that high metaphoric transparency was associated with faster phrase classification time, which was inconsistent with the lexicalization view.

The direct access model

Similar to the lexical representation model, the direct access model (Gibbs, 1980, 1986) posits that idiomatic meanings have computational priority over literal meanings. When a native speaker comes across an idiom, the speaker rarely considers the literal meaning of the expression, but instead retrieves the idiomatic meaning directly from the mental lexicon.

Gibbs (1980) examined people’s understanding of and memory for idioms with three experiments. Experiment 1 examined the time it took the individual participants to comprehend the literal and idiomatic meanings of idiomatic expressions in and out of context. It was discovered that in a conversational context the participants took less time to comprehend the idiomatic meanings of idioms than the literal meanings. Experiment 2 required the participants to listen carefully to a series of stories used in Experiment 1. After an interval of 24 hours, the participants were asked to recall the stories and write
down the last line of each story. It was found that in this free recall task the literal interpretations of idioms were remembered better than the idiomatic meanings of these expressions. Experiment 3 implemented a cued recall task to examine the memory representation for the idiomatic and literal interpretations of idioms. The results demonstrated that when an unconventional use of an idiom is encountered, people tend automatically to analyze the conventional meaning of the expression before deciding that the literal meaning is appropriate. Given the findings in the three experiments, Gibbs (1980) argued that the traditional distinction between the literal and the metaphoric language was better characterized as a continuum between the conventional and the unconventional utterances.

To further evaluate the direct access model, Gibbs (1986) investigated whether people always analyze the literal meanings of idiomatic expressions in two experiments. In Experiment 1, the individual participants were asked to read stories that ended with either the literal or the idiomatic uses of the idiomatic utterances. Upon finishing reading each story, the participants made a sentence classification judgment for sentences that could be a literal, nonliteral, or unrelated paraphrase of the last story sentence. It was discovered that the participants took less time to comprehend the sentences idiomatically than to interpret them literally. “Participants’ responses to the nonliteral targets were facilitated when they read conventional uses of idioms. Responses to the literal targets, however, were not facilitated when conventional uses of idioms were read” (p. 24). Experiment 2 adopted the same design and procedure used in Experiment 1. The data were consistent with the idea that people first processed the conventional, idiomatic interpretations of the literal primes in Experiment 1. Based on the results in the two
experiments, the researcher posited that literal processing is not a default mode of comprehending idiomatic expressions. People appear to compute only the idiomatic meanings during idiom comprehension, without considering the literal meanings of the idiomatic expressions.

2.1.2 The compositional approach

In contrast to the non-compositional approach, which assumes that the meaning of an idiom is not a function of the meanings of its components, the compositional approach claims that the literal meanings of the component words of an idiom are critical to their interpretation. From this standpoint, idioms are semantically and syntactically analyzable, and interpretation of the idiomatic meaning is based upon the products of these literal analyses. Models of idiom processing that take this approach attempt to understand how idioms differ in terms of their internal semantic structures and what processing outcomes these differences bring about.

By far, three specific models of idiom processing have been proposed in this approach: the decomposition model (Gibbs & Nayak, 1989), the configuration model (Cacciari & Tabossi, 1988), and the hybrid model of idiom comprehension (Titone & Connie, 1999).

The decomposition model

Nunberg (1978) has suggested a typology for characterizing how the literal meanings of the component words in an idiom contribute to its overall idiomatic meaning. According to this system, idiomatic expressions fall into three different classes. “Normally decomposable idioms are expressions in which a part of the idiom is used literally (e.g., the question in pop the question). Abnormally decomposable idioms are
expressions where the referents of an idiom’s parts can be identified metaphorically (e.g., *buck* in the idiom *pass the buck*). Finally, semantically non-decomposable idioms fit the traditional definition because the idiomatical meaning is less likely to be compositionally derived from the component words of the idiom (e.g., *chew the fat*)” (Titone & Connine, 1999, p. 1661).

Using this typology, Gibbs and Nayak (1989) tested in a series of experiments the idea that the syntactic productivity of idioms depends quite specifically on their semantic composition in a series of experiments. In Experiment 1, the participants were presented with a series of idioms and were asked to decide whether the individual words in each expression made some unique contribution to the idiomatic meaning. The data demonstrated that the participants could distinguish between normally decomposable, abnormally decomposable, and semantically non-decomposable idioms. Experiment 2 required the participants first to read each of a series of different types of idioms that were syntactically manipulated and then determine how similar in meaning the idiom was to a sentence which was paraphrased idiomatically. It was discovered that the participants viewed normally decomposable idioms as being more syntactically productive than either abnormally decomposable or semantically non-decomposable idiomatic expressions. In Experiment 3, the participants were presented with idioms in pronominalized constructions and were asked to rate how similar in meaning these idioms were to sentences that were figuratively paraphrased. The results indicated that normally decomposable idioms retain their figurative meanings in pronominalized constructions better than either abnormally decomposable or semantically non-decomposable idioms do. In Experiment 4, the participants were presented with transparent and opaque idioms
in various syntactic forms. They were then required to judge whether these expressions were accepted as idioms. It was found that the transparent idioms were more syntactically productive than the opaque idioms. Experiment 5 required the participants to judge whether literally well-formed and ill-formed idioms maintain their figurative interpretations when syntactically transformed. It was discovered that the ill-formed idioms were actually perceived as more syntactically productive than the well-formed idioms. The last experiment presented the participants with a list of idioms that were used as stimuli in the previous experiments. The participants were asked to rate each idiom on its degree of semantic decomposition, metaphoric transparency, and literal well-formedness. After a regression analysis, the results suggested that semantic decomposition and metaphoric transparency were the best predictors of syntactic productivity in idioms. This experiment confirmed the idea that the more analyzable an idiom is the more likely that phrase can maintain its figurative meaning in a variety of syntactic formats. Given the findings, the researchers confirmed the decomposition model, stating that the syntactic productivity of idiomatic utterances is not arbitrary, but can be explained in terms of an idiom’s semantic decomposition. The more native speakers are aware of an idiom as being analyzable, the more likely that idiom will be viewed as syntactically productive.

The configuration model

According to the configuration model, the idiom meaning is not encoded as a separate lexical entry but as a meaning that is associated with a particular configuration of words. Specifically, the idiom meaning is encoded by the weights of connections between lexical nodes that compose the idiom. Idioms are processed literally until a
sufficient portion of the string is processed and the idiomatic meaning is activated. The term “idiomatic key” (Titone & Connine, 1994, p. 250) was used to refer to the point at which a sufficient portion of the string is processed and the idiomatic meaning emerges.

The configuration model was formulated on the findings of Cacciari and Tabossi (1988). This study investigated the access of idiomatic expressions in three cross-modal priming experiments. Experiment 1 implemented a lexical decision task, in which the individual participants were asked to decide whether strings that appeared on a computer screen were actual words or not, while they listened to sentences. The results suggested that when the idiomatic string was predictable, the participants were faster at performing a lexical decision to the idiomatically related targets than to the literally related targets. In Experiment 2, the individual participants first listened to a sentence containing an idiom. At the end of the idiomatic string, they were shown a target word, to which they were asked to perform a lexical decision task. The results showed that when the string was not recognizable as idiomatic until its completion, the participants were faster on the target literally related to the last word. Experiment 3 was identical to Experiment 2, except that target words were visually presented to the participants 300ms after the last word of the idiomatic expression. The findings indicated that when there was no bias towards the idiomatic completion of an idiomatic string, some time was needed before the meaning of the idiomatic expression could be activated. The findings from the three experiments were inconsistent with both the lexical representation hypothesis and the direct access hypothesis. Thus, the results of the study confirmed the configuration model, which postulates that activation of the idiomatic meaning takes place only after the idiomatic key. The point at which the idiomatic key occurs in a sentence determines which type of
meaning is going to be activated. “If the ‘key’ does not occur until the end of a sentence, both the literal and the figurative meanings will be activated. If, however, the ‘key’ occurs early in the sentence, the idiomatic meaning alone will remain activated by the end of the sentence” (Smolka, Rabanus, & Rösler, 2007, p. 215).

Titone and Connine (1994) further examined the configuration hypothesis and extended the findings of Cacciari and Tabossi (1988). The researchers utilized a cross-modal priming paradigm in which the participants listened to sentences containing idioms. They were then required to make lexical decisions in response to the visually presented targets. The results showed that the high predictable idioms were accessed faster than the low predictable idioms, which were best explained by the configuration model, in which idioms are represented in a distributed form. “However, for the configuration model to account for the entire pattern of data (predictability and literality effects), it must be assumed that early access of the idiomatic meaning does not terminate ongoing literal processing of the sentence” (Titone & Connine, 1994, p. 1135).

The hybrid model

After a comprehensive review of linguistic and psycholinguistic perspectives on idiom representation and models of idiom processing, Titone and Connine (1999) argued that neither the non-compositional approach nor the compositional approach alone adequately explains the existing body of data on idiom processing. They therefore proposed the hybrid model, which characterizes idioms both as unitary word configurations and compositional word sequences, thereby combining aspects of the non-compositional and compositional approaches. In this hybrid viewpoint, activation of the idiomatic meanings and activation and use of the literal meanings during comprehension
is a function of the degree to which idioms are conventional and compositional (Nunberg et al., 1994).

Titone and Connine (1999) tested the hybrid model with an experiment using eye movement recordings. The participants were asked to read a set of 16 non-decomposable and 16 decomposable idioms which were embedded in sentences. The sentences had biased contexts that preceded or followed the idiom, and they were biased towards either the idiomatic or the literal meaning. Using differences in reading time in the idiom and disambiguating regions of the sentences, this experiment determined the nature of the representation that was computed for the target idiomatic expressions. Consistent with the hybrid model, the results of the study confirmed that the reading rates differed as a function of the inherent decomposability of idioms in this eye tracking experiment.

In conclusion, models that account for the representation and processing of L1 idioms have to tackle a paradox, that is, how to characterize the unitary nature of idioms as well as the literal interpretation of the component elements that build up the idioms.

2.2 Idiom acquisition and instruction in an L2 other than Chinese

As idioms are commonly used in the daily life of target language speakers, it is inevitable for L2 learners to find idioms “in all forms of discourse: in conversations, lectures, movies, radio broadcasts, and television programs; in all forms of print, such as newspapers, magazines, and books; and throughout the world of electronic communication” (Cooper, 1999, p. 234). However, due to a lower level of linguistic competence, L2 learners are at a distinct disadvantage in understanding idiomatic phrases in the target language. As Thiel (1979) has pointed out “sooner or later, lack of precise
idiomatic usage will betray the foreign background even of a speaker with an excellent grammatical knowledge, vocabulary, and pronunciation. And just as surely command of idiom will generate confidence and respect” (p. 23). Thus, in the field of SLA how L2 learners comprehend idioms and how L2 instruction can effectively facilitate idiom comprehension are worthy of investigation.

Existing studies have provided insights on: (1) what the underlying mechanism at work is in comprehending L2 idioms (e.g., Cieślicka, 2006; Liontas, 2002; Nelson, 1992); (2) in what ways L2 idioms are comprehended and acquired (e.g., Irujo, 1986a, 1993; Laufer, 2000; Lin, 2003); (3) what factors affect the production of L2 idioms, and whether idioms can be incorporated into L2 syllabus (e.g., Charteris-Black, 2002; Irujo, 1984); and (4) what pedagogical insights for idiom instruction have been offered (e.g., Bulut & Çelik-Yazici, 2004; Cooper, 1998; Lin, 2006).

2.2.1 Models of L2 idiom comprehension

Research has been conducted to examine whether the theoretical models developed for L1 idiom processing could account for the comprehension of idioms in an L2. Studies can be characterized as varying in terms of how literal and figurative interpretations that accompany idiom comprehension are perceived.

Nelson (1992) examined the effect of six different orientation conditions on non-fluent bilingual speakers’ memory of metaphors. One hundred four intermediate French L2 and 93 intermediate Spanish L2 learners participated in the study. They were assigned to one of the six orientation conditions including: (1) translating metaphors figuratively; (2) translating metaphors literally; (3) translating metaphors (no specific instructions as to how to translate); (4) copying and counting the vowels and consonants of metaphors; (5)
translating non-metaphors; and (6) copying and counting the vowels and consonants of non-metaphors. After this session, the participants were required to complete two recall tasks. Nelson found out that when the participants encountered a metaphor, the processing of the figurative meaning was automatic. When forced to process the literal meaning first, normal processing was actually interrupted, resulting in poorer recall performance. Given the findings, it was concluded that L2 learners comprehend idioms by direct retrieval of their figurative meanings.

Liontas (2002) argued that L2 learners first process idioms literally and only then access their figurative meanings. He investigated the factors affecting the comprehension and interpretation of three types of vivid phrase idioms during contextualized and acontextualized readings. Sixty students enrolled in third-year Spanish, French, and German courses participated in this study. The participants were divided into two groups, a computer-mediated interactional task group and a computer-mediated interactional video task group. They were asked to write down their thought processes, reading strategies, and so on, as they arrived at the meanings of the target idioms with and without contextual support. The results showed that idiom variability and interpretation was context induced. The L2 learners utilized multiple kinds of inference (i.e., graphophonic, semantic, pragmatic, and cultural) to get to the idiomatic meanings under the condition of encoding (in context or out of context).

The model of dual idiom representation (DIR) was formulated in Abel (2003), in which 169 German learners of English were required to rate English idioms according to both their decomposability and familiarity. The judgment of idiomatic decomposability was compared with that of native speakers. The results showed that whereas native
speakers tend to judge idioms as non-decomposable, nonnative speakers tend to rely more on constituent lexical entries. The DIR model was introduced to explain the differences between the two groups. At the lexical level, the model affirms the coexistence of idiom entries and constituent entries. An idiom’s lexical representation depends on its degree of decomposability and how frequently the idiom is encountered. The author believes that if a decomposable idiom has no idiom entry, conceptual representations are accessed during comprehension. Since L2 learners encounter idioms in the target language less frequently than native speakers, L2 learners do not develop as many idiom entries as native speakers do.

Formulated by Cieślicka (2004), the literal–salience resonant model expands on Giora’s (2003) hypothesis of graded salience. It assumes the primacy of the literal over the figurative in online idiom processing. Comprehending an idiom needs to extend the original literal meanings of its components and involve the new figurative meaning. The literal salience assumption was tested in Cieślicka (2006) with 43 fluent English L2 speakers in Poland using a cross-modal lexical priming task. The participants were auditorily presented with sentences that contained familiar idioms and did not provide any clear bias towards the figurative meanings of the idioms. While listening to each sentence, the participants were visually presented with a word related to either the figurative meaning of the idiom or the literal meaning of the last word in the idiomatic expression. Visual targets occurred at one of two points: at the penultimate position of the idiom or at the offset position. Differences in the participants’ reaction times were taken to reflect the state of activation of the idiomatic and literal meanings at various points during the idiomatic processing. The findings showed more priming for the visual targets
related to the literal meanings of the constituent words of the idioms than for the targets related figuratively to the metaphoric interpretation of the idioms. The author confirmed the literal salience assumption that literal meanings enjoy processing priority over figurative meanings in the course of L2 idiom comprehension.

The studies of models in L1 idiom processing offer a starting point for examining the fundamental mechanism in L2 idiom comprehension, and for comparing the extent to which L2 idiom comprehension resembles that of L1. The studies introduced above have unearthed different models of L2 idiom comprehension using different research paradigms and methodology. Given these findings, one may argue whether L2 idiom comprehension is affected by the different linguistic and cultural backgrounds of L2 learners, and whether research methodology (e.g., instruments and materials) has a marked influence on the way in which L2 idioms are computed.

2.2.2 L2 idiom comprehension

Many earlier studies investigated the underlying linguistic and cognitive mechanisms at work in processing idioms among native speakers of English. It was only until recent years that researchers started paying attention to the comprehension of L2 idioms (e.g., Bulut & Çelik-Yazici, 2004; Cooper, 1999; Irujo, 1986a, 1986b, 1993; Laufer, 2000; Lin, 2003). In general, these studies centered on two major issues: the influence of L1 on L2 idiom comprehension, and the comprehension strategies employed by L2 learners in comprehending L2 idioms.

Influence of L1 transfer

A number of studies did not directly concern online processing issues, but rather focused on strategies of coping with L2 idioms. Research on the processing of L2 idioms
and figurative language has focused on the influence of L1 on L2 (e.g., Abdullah & Jackson, 1998; Irujo, 1986b, 1993; Kellerman, 1977).

Kellerman (1977) investigated how Dutch learners of English at various stages of proficiency dealt with Dutch idiomatic expressions that were translated into convincing English. In the study, the participants were presented with 20 Dutch-based idiomatic phrases and asked to decide whether they were correct in English or not. The results showed that the learners’ L1 played a role in their L2 idiom processing, even though the L2 learners were reluctant to transfer their L1 knowledge when they perceived the meaning as figurative. The author suggested that the strategy of transferring the L1 items into L2 was an active learner strategy, which depended on two factors: the typological distance between the learner’s L1 and the L2, and the markedness of the structure in the learner’s L1. When the L1 and the L2 are typologically distant, the two factors may prevent interference, whereas when L1 and L2 are typologically close, the facilitation of the transfer may be prevented by the two factors.

In the 1980s, Irujo (1986b) conducted a study to determine whether advanced English L2 learners in Venezuela utilized the knowledge of their L1 (Spanish) to comprehend and produce L2 expressions. Using a multiple-choice test and a definition test, she examined the participants’ comprehension of three groups of 45 English idioms, including 15 that were identical in form and meaning to their Spanish equivalents, 15 that were similar to their Spanish equivalents, and 15 that were different from the corresponding Spanish idioms. The participants’ production of the same 45 idioms was assessed by a discourse completion test and a translation test. The author found that English idioms identical to their Spanish equivalents were the easiest to comprehend and
produce. Similar idioms were comprehended almost as well as identical idioms; however, interference from L1 was prevalent in the production tests. Different idioms in the two languages were the hardest to comprehend and produce, but revealed less interference than similar idioms in the test results. She also noted that idioms that were comprehended and produced most correctly were those that were used frequently in everyday speech, had simple vocabulary and structure, and were metaphorically transparent.

Irujo (1993) extended Irujo (1986b) in investigating whether advanced speakers of an L2 would avoid using idioms if given an option. The participants were 12 fluent bilinguals whose L1 was Spanish and who had learned English as adults. The materials were the same as those used in Irujo (1986b). The participants were asked to translate passages containing idioms into everyday conversational English. It was discovered that the participants used their knowledge of English to produce many idioms, and the idioms that they produced most correctly were those that had identical equivalents in the L1. She also found that frequency of use made no difference at all in terms of how accurately the participants could produce the idioms. Semantic transparency may make an idiom slightly easier to learn, but this factor was not nearly as important as similarity to the L1 idioms.

Drawing on Irujo (1986b), Abdullah and Jackson (1998) investigated how Syrian advanced learners of English comprehend English idioms without contextual support. The participants were asked to take two comprehension tests and one production test, which were followed by an interview where they reported how they arrived at an interpretation of the target English idioms in the tests. The authors discovered that learners scored higher in the tests concerning cognate idioms due to positive language
transfer. When processing English idioms that had false cognate equivalents in Syrian Arabic, language transfer had a negative effect. However, when comprehending English idioms that had pragmatic equivalents and those that had no Syrian equivalents at all, the participants utilized a metaphoric association between the image created by the idiomatic form and their pragmatic knowledge of the world. Given the results, the study concluded that similarity to a native language idiom does not necessarily play a role in facilitating the process of L2 idiom comprehension. Not all comprehension problems can be traced to linguistic differences between L1 and L2.

Laufer (2000) also addressed the relationship between L1–L2 similarity and L2 idiom interpretation. Four degree of similarity were established through a three-dimensional (i.e., conceptual, formal, and distributional) framework for L1–L2 comparison. Twenty English L2 idioms were chosen for the investigation, consisting of five idioms that have exact Hebrew translation, five idioms that have partial Hebrew translation, five idioms that have different Hebrew idioms, and five idioms that do not have equivalents in Hebrew. The study engaged 56 university English majors of different proficiency levels in two translation tests. The researcher found that the idioms were not avoided as a category, and that the avoidance of specific idiom types was related to the degree of L1–L2 similarity. Specifically, partially translatable idioms and non-idioms in L1 were the least used idioms. The translation equivalents contained the largest number of idioms, but the use of totally different idioms was not significantly different from the use of the translation equivalents. The study also indicated that L2 proficiency was a factor in idiom avoidance.
In light of Irujo’s (1986b, 1993) findings, Lin (2003) recruited 80 non-English majors at a Chinese institute for a study that explored the role of cultural differences and L1 in L2 idiom comprehension. In isolation, the participants were required to write definitions for 10 English idioms within 15 minutes. The 10 English idioms were composed of words for common animals or typical Western food. Four categories were identified among the target idioms, including two with identical Chinese equivalents, two with close Chinese equivalents, four unique idioms with no Chinese equivalents, and two idioms that have close Chinese forms but different meanings. The results were in line with Irujo (1986b) in the sense that English idioms identical to their Chinese equivalents were the easiest to comprehend. The comprehension of the different and unique idioms interacted with interference from L1. The study also found that in general, English idioms that shared the same figurative theme with Chinese idioms were easier to comprehend than English idioms that had different figurative themes from the Chinese idioms.

Based on the previous studies, Cedar (2008) set out to examine the recognition of semantic congruity between L1–L2 idioms among advanced Thai learners of English using a survey. The participants were asked to judge whether the target Thai idioms had English equivalents or not, and they were also required to supply one English example for each given Thai idiom. The findings are in line with those in Irujo (1993) and Abdullah and Jackson (1998). The researcher discovered that the participants were able to produce more correct L2 idioms for the L1 idioms that were structurally similar than for those that were semantically similar.

From a language transfer perspective, the studies discussed here have brought to light that L1 plays a role in L2 idiom processing. However, investigations still need to be
conducted to solve puzzles such as whether the influence of L1 on L2 idiom processing varies depending on L2 learners’ linguistic and cultural backgrounds, whether L1 plays a role in comprehending the entire range of nonliteral expressions among L2 learners in equal measure, and whether L2 learners’ level of proficiency plays a part in the way L1 knowledge is transferred to L2 idiom comprehension.

**Comprehension strategies for L2 idioms**

Apart from exploring how L1 influences learners’ processing of L2 idioms, some researchers wonder whether other comprehension strategies are also involved and exactly how these strategies are being utilized in L2 idiom processing. Most of the research on this topic has utilized models of L1 idiom processing as a starting point, and it has also compared the extent to which models of L1 idiom comprehension apply to the comprehension of idioms by L2 learners (Bulut & Çelik-Yazici, 2004; Cooper, 1999; Lin, 2006).

Cooper (1999) investigated the online processing strategies used by 18 English L2 speakers from a variety of L1 backgrounds. The participants were asked to report their thoughts verbally as they arrived at the meanings of 20 frequently used idioms presented in a written context. The analysis revealed that upon encountering an unknown idiom, the L2 learners had to solve a comprehension problem by experimenting and evaluating possible answers or solutions through trial and error. In other words, L2 learners must develop an interpretive approach, a heuristic method, using a variety of strategies to solve the linguistic problem. It was also discovered that models of L1 idiom acquisition did not apply well to the comprehension of idioms by the L2 users. Cooper (1999) set a good example for further research on comprehension strategies in L2 idiom processing. Based
on his study, a few studies were conducted in L2s other than English (Bulut & Çelik-Yazici, 2004; Lin, 2006).

Bulut and Çelik-Yazici (2004) investigated the underlying processes of comprehending 20 frequently used idioms selected from Cooper (1999) and various online websites by 18 Turkish teachers of English who were highly experienced and practiced English L2 speakers. Based on a standardized English proficiency test, the participants were divided into two groups, advanced and low advanced. Think-aloud protocols were utilized so as to get evidence related to the comprehension processes of idioms in context. The findings of this study are in line with those of Cooper (1999) in the sense that L2 learners seem to apply a heuristic model while encountering an unknown idiomatic expression. In order to interpret the meaning of idioms, L2 speakers tend to rely upon the literal meaning conveyed in the context. Even when certain L2 idioms have L1 equivalents, they prefer interpreting them from context, treating them as “false friends” (p. 113).

Lin (2006) investigated the online processing of 10 English idioms in and out of context among 20 non-English majors at a Chinese institute. First, the participants were asked to think-aloud as they arrived at the meanings of the target idioms in and out of context. Then, a follow-up interview was implemented to investigate the comprehension processes further. The findings were in line with those of Cooper (1999). It was demonstrated that the participants applied a heuristic approach to comprehending unfamiliar English idioms. Models of L1 idiom comprehension did not apply well to the comprehension of L2 idioms. The author also discovered that context played a significant role in L2 idiom comprehension. And the process of comprehending the English L2
idioms was quite dynamic, including two main phases: “guessing and testifying/replacing, and reconstruction” (p. 11).

The aforementioned studies all employed think-aloud protocols to explore the online processing strategies used in idiom comprehension among L2 learners. They were in agreement that most L2 learners engage in a heuristic approach to idiom comprehension, employing a variety of strategies through trial and error to decipher the unknown idioms. Researchers in the future may consider exploring the role of context in comprehending L2 idioms. For example, presenting unfamiliar L2 idioms in non-supportive and supportive contexts to L2 learners might result in different uses of comprehension strategy.

2.2.3 L2 idioms production

In comparison with the existing literature on L2 idiom comprehension, research that particularly examines the production of L2 idioms is relatively scant. A few studies have investigated L2 idiom production in addition to the exploration of L2 idiom comprehension. Among the studies introduced below, some of them (Abdullah & Jackson, 1998; Charteris-Black, 2002; Irujo, 1984) took a cross-linguistic perspective to examine how L1 influence the ease of the production of different types of L2 idioms, while one study (Nezhad & Hashemian, 2007) investigates the feasibility and effectiveness of integrating metaphors in L2 syllabus. Research on the production of L2 Chinese idioms is as yet nowhere to be found.

Irujo (1984) investigated whether L2 learners use their L1 knowledge to comprehend and produce idioms in the L2. Twenty-four Venezuelan advanced L2 English learners were required to complete a series of tasks. Comprehension of 15
identical, 15 similar, and 15 different idioms was tested with a multiple-choice test and a definitions test. Production of the same 45 idioms was tested with a discourse completion test and a translation test. Results showed that identical idioms were the easiest to comprehend and produce. Different idioms were the most difficult to comprehend and produce, but showed less interference than similar idioms. Participants used both inter- and intra-lingual strategies to produce idioms they did not know. The study confirmed that the participants used their L1 knowledge in comprehending and producing L2 idioms.

L2 idiom production was also discussed in Abdullah and Jackson (1998). The researchers examined the comprehension and production of four types of English idioms (i.e., cognate idioms, false cognate idioms, idioms with pragmatic equivalents, and idioms with no equivalents) by advanced Syrian learners. A translation test was utilized to test production of English idioms. Findings showed that learners scored higher in the comprehension and production test of cognate idioms because of positive language transfer. Language transfer had a negative effect when processing English idioms, which has false cognate equivalent in Syrian Arabic. Metaphoric association and pragmatic knowledge of the world facilitated comprehension and production of the other two types of idioms. It was concluded that the degree of L1–L2 similarity does not necessarily help in the process of L2 idiom comprehension or production.

Based on the analysis and comparison of linguistic form and conceptual meaning, Charteris-Black (2002) examined L2 figurative proficiency with a group of 36 Malay-speaking female tertiary learners of English. Comprehension was tested with a 24-item multiple-choice task, while production was tested using a 22-item cued completion task.
Results concerning the production portion of the research showed that non-equivalence of linguistic form, intra-lingual strategy of transfer, and low frequency of exposure led to difficulties in producing L2 figurative units. Based on the results, the research argued in favor of a pedagogic strategy that identifies the conceptual bases of L2 figurative expressions in circumstances where they differ from those of the L1 rather than when the conceptual bases are similar.

Nezhad and Hashemian (2007) addressed whether Persian students majoring in English developed conceptual fluency and metaphorical competence in the target language after several years of study. To answer this question, the study adopted a pretest–posttest design and examined to what extent L2 learners understood and produced metaphors in English, and it also analyzed the metaphorical density of their written discourse. The findings showed that after classroom instruction, the participants not only produced and understood discourse that was conceptually and metaphorically appropriate in English, but also produced writings that were as metaphorically dense as those of native speakers. The researchers concluded that it is feasible to systematically incorporate metaphors into the L2 syllabus. L2 instructors should make learners aware of the conceptual system of the target language, and encourage them to apply metaphorical language in their everyday language use.

The aforementioned studies shed light on what factors affect the production of L2 idioms, as well as whether it is possible to incorporate metaphor in L2 instruction. Further investigations could continue with this research topic and address questions such as whether the nature of the tasks has a marked impact on the participants’ choice of strategies, and in what way L2 idiom production can be facilitated pedagogically.
2.2.4 Classroom instruction of idioms

Since idioms are conventionalized and are figurative expressions that do not mean what they literally transmit, interpreting and producing idioms poses a special challenge to all groups of language users, including young native speakers, bilingual students, and foreign language learners. In fact, Nipold (1991) stated “there seems to be no clear point in human development when it can be said that idioms have been mastered” (p. 101). As idioms are so frequently used in both spoken and written communication, they may involve a greater teaching and learning load than normal lexical items. However, as May (1979) reported, “idioms are often left until last or completely forgotten in language arts programs, perhaps partly because of their complex and diverse nature” (p. 682).

L2 idiom research has uncovered a number of findings that have pedagogical implications for idiom instruction. One strand of the research has proposed instructional plans or teaching suggestions generated upon examination of the nature and features of comprehending idioms by L2 learners (e.g., Cooper, 1998; Deignan, Gabryś, & Solska, 1997; Lennon, 1998). Another strand of research put forth pedagogical implications based on analyses of idioms used in contemporary speech corpora (Liu, 2003; Simpson & Mendis, 2003).

Idiom teaching approaches and techniques

Since the 1960s, a few studies have been dedicated to the issue of idiom teaching. Some of the studies have proposed systematic instructional plans or teaching techniques according to their research findings (Cooper, 1998; Deignan, Gabryś, & Solska, 1997; Lennon, 1998), whereas others have recommended useful classroom activities and effective learning strategies that were abstracted from their researchers’ language
teaching and learning experiences (Adkins, 1986; Bromley, 1984; Bush, 1979; Cornell, 1999; Foerster, 1974; Irujo, 1986a; Low, 1985; May, 1979; Yorio, 1980).

On the basis of the previous research findings on idiom acquisition, Cooper (1998) proposed a systematic plan for teaching idioms to all groups of language learners, including native speakers, bilingual students, and foreign language learners. The rationale is that students seem to benefit most from an instructional plan that incorporates a wide range of activities that appeal to multiple intelligences (Gardner, 1993), and by doing this, individual language learners are more likely to acquire idioms successfully than with an instructional plan that is restricted to linguistic exercises only.

Deignan, Gabryś, and Solska (1997) explored to what extent metaphorical expressions have equivalents across two languages, and whether metaphorical expressions create difficulties for L2 learners. This investigation required advanced Polish learners of English to translate English sentences containing metaphors into Polish and to discuss their thoughts with the researchers while completing the tasks. The researchers discovered that awareness raising through discussion and comparison of metaphors in L1 and L2 is an effective approach to helping learners comprehend and appropriately produce metaphors.

In the context of Bartlett’s (1932) principle of “effort after meaning” (p. 20), Lennon (1998) yielded pedagogical implications in terms of encouraging L2 learners to perform cognitive and problem-solving exercises as a means to uncover the underlying meanings of L2 idiomatic expressions. He also suggested that by comparing their native language to the target language, L2 learners become aware of which aspects the
conceptual metaphors in the L1 map to those in the L2 and where they differ. This view was also supported by MacLennan (1994).

A number of researchers have offered pedagogical insights and learning suggestions to tackle the teaching of idioms directly. Adkins (1968) encouraged students to relate any idiomatic items in the materials to their own actual experience, as an attempt to incorporate those language elements into their personal vocabulary. Foerster (1974) recommended classification activities with various types of idioms (e.g., idioms involving colors, animals, action, etc.) and provided idiom lists. Bush (1979) compiled a list of about 500 common English idioms. She suggested that teachers facilitate an “Idiom a Day” or “Idiom of the Week.” To increase students’ awareness of idioms throughout the school year, May (1979) advocated doing a project during the first months of the year. Bromley (1984) recommended having the class create a dictionary of idiomatic sayings. Through brainstorming, the class could compile a reference list of idioms, and each student could choose one or two to illustrate. Yorio (1980) suggested that in the early stage, idioms should be taught for recognition only, as idioms are complex and only very proficient L2 speakers seem to be able to use them correctly and comfortably. Low (1985) argued that multi-text activities are frequently preferable to single-text ones, because they provide greater scope for the material writer and a more productive learning context for the learner. Irujo (1986a) advocated activities that aid comparison and contrast between the literal and figurative meanings of idioms. She maintained that such activities enable L2 learners to recognize idiomatic usage and to interpret idioms accordingly. In addition, Cornell (1999) proposed that through guided autonomous learning, L2 learners can explore idioms themselves very profitably with
appropriate learning materials. He also pointed out the importance of setting up criteria to govern which idioms should be included in learning materials for specific groups of learners.

In conclusion, idioms are an aspect of nonliteral or figurative language that should not be left to chance or to the random exposure of learners to the language. Instead, learning idioms should be considered an integral part of vocabulary learning and it demands systematic instruction. So far, researchers and language teachers have put forth quite a few instructional plans and classroom activities based upon research findings and language teaching experiences. Depending on their views and experience, the target group they are teaching, and the time they have at their disposal, individual teachers and researchers have their own preferences in regard to how idioms should be taught.

Corpus-based research in L2 idiom instruction

According to Fernando (1996), “no translator or language teacher can afford to ignore idioms or idiomaticity if a natural use of the target language is an aim” (p. 234); thus, it is important for L2 educators and book designers to make informative decisions on which idioms should be selected for L2 learning from the vast inventory of idioms in a native speaker’s repertoire. A few studies have taken a corpus-based approach to researching idioms in specialized corpora (Grant, 2007; Liu, 2003; Simpson & Mendis, 2003).

Liu (2003) undertook a close concordance search and analysis of the idioms used in three contemporary spoken American English corpora: The Corpus of Spoken, Professional American English (Barlow, 2000); the Michigan Corpus of Academic Spoken English (MICASE) (Simpson, Briggs, Ovens, & Swales, 2002), and Spoken
American Media English (Liu, 2002). The search results were compared with information in nine major current idiom dictionaries. It revealed that most instructional and reference materials about English idioms are based mainly on the intuition of the material designers. Given the findings, Liu (2003) identified five areas for improvement in the teaching of idioms to ESL learners, including using examples from a corpus, consulting corpus-based lists of the most frequently used idioms in selecting idioms to teach, providing information on idiom variations, and so on.

Simpson and Mendis (2003) set out to examine MICASE. The purpose of the investigation was to check precisely how many idioms were found in the corpus and what functions they served. The authors argued that such a specialized corpus can provide rich resources for language teaching materials that allow teachers not only to adopt authentic examples of idioms in context, but also to consider larger issues, such as discourse and socio-pragmatics. As for pedagogical implications, the researchers demonstrated that in addition to designing teaching materials, corpus data can also be used to raise L2 learners’ awareness of the speech contexts in which idioms appear and the discourse functions they perform.

Two frequency comparisons were conducted by Grant (2007). The author first compared the figurative idioms which were identified in the two above-mentioned investigations with the spoken portion of the British National Corpus (BNC) to see whether they were more common in one country or the other. And then the same figurative idioms were compared to two British idiom dictionaries to see whether their frequency of occurrence in the BNC justifies their ‘frequent’ label. Grant suggested that
idiom teaching materials should be based on idioms’ frequency and range of occurrence in authentic language.

The learning materials about idioms for L2 learners often reflect the writers’ life experience rather than empirical data. Some materials of this kind suffer from the inclusion of seldom-used idioms, inappropriate description of usage, and unnatural examples. The three studies mentioned above have offered a plausible solution to address this problem: the corpus-based research of contemporary English idioms in specialized corpora. In sharp contrast to the research of idioms in English corpora, however, there is no empirical studies have been conducted about idioms in Chinese corpora.

2.3 Comprehension of Chinese colloquial idioms by native and nonnative speakers

Chinese colloquial idioms constitute an essential part of Chinese language and culture. Because their figurative meaning usually differs from the literal one, Chinese colloquial idioms present a special language learning problem for both native speakers and nonnative speakers. In comparison to research on English idioms, research on Chinese colloquial idioms is relatively new. It was not until the 1990s that researchers in the field of psycholinguistics and SLA started to pay attention to Chinese colloquial idiom comprehension among native and nonnative speakers.

2.3.1 Chinese colloquial idioms and studies of idiom comprehension by native speakers

Chinese colloquial idioms have been frequently and widely used in spoken and written discourses in Chinese people’s everyday life. In comparison with the
configuration and nature of idioms in alphabetic languages, Chinese colloquial idioms have some special features (She et al., 1998; Shi, 2007; Ruan, 2004).

According to She et al. (1998), the configuration of Chinese colloquial idioms embodies a high degree of flexibility, which can be observed in the following three respects:

1. Component elements in some Chinese colloquial idioms are loosely bound and separable, allowing additional modifiers to be inserted between, for example: 王老师开了整整一个月夜车 (Ms. Wang has been burning the midnight oil for a whole month). In this example, the Chinese colloquial idiom 开夜车 (to burn the midnight oil, which means to work studiously, especially late into the night) are separated, and 整整一个月 (a whole month) is inserted between 开 (verb) and 夜车 (noun phrase) to denote the duration of the action of 开夜车.

2. Some Chinese colloquial idioms have more than one form. Some component words can be replaced by their synonyms, for example: 拖 (to drag) in 拖后腿 (to drag one’s hind legs, which means to be a drag on someone) can be replaced by 拉 (to pull) to constitute 拉后腿, which bears the same idiomatic meaning.

3. Word order in some Chinese colloquial idioms is not rigid, for example: 夜车不要开得太多 (don’t burn too much midnight oil). In this example, the word order in the Chinese colloquial idiom 开夜车 (to burn the midnight oil,
which means *to work studiously, especially late into the night*), which bears a verb–object structure, is reversed and results in a topic–comment construction.

Most Chinese colloquial idioms are composed of three characters. However, a good number of them are longer phrasal strings, consisting of between four and nine characters (Ruan, 2004), for example: 打小算盘 (*to play a little abacus*, which means *to be concerned with one's self interest*), 一锤子买卖 (*a hammer business*, which means *a one-time deal*), 刀子嘴豆腐心 (*knife-mouth and tofu-heart*, which means *to seem hard and intimidating, but be kind at heart*), 敬酒不吃吃罚酒 (*toast-wine-not-drink-drink forfeit-wine*, which means *to acquiesce to something after having refused someone’s first overture*), 睁一只眼闭一只眼 (*open one eye and shut one eye*, which means *with one eye closed, or to turn a blind eye*), and 搬起石头砸自己的脚 (*lift up a stone and smash one’s own foot*, which means *to fall into a pit of one’s own digging, or to plan to make somebody miserable but end up getting hurt oneself*).

In terms of Chinese colloquial idiom structures, Shi (2007) has examined 1,565 items, which were composed of three characters, in 现代汉语惯用语规范词典 (*A Standard Dictionary of Modern Chinese Colloquial Idioms*) (Li, 2001). Depending on the semantic bonds among component elements in Chinese colloquial idioms, the researcher uncovered a few major structure types, including verb–object (49.3%), modifier–noun (34.2%), adverbial–verb (6.0%), subject–predicate (5.3%), verb–complement (2.4%), serial verb (0.6%), combinative (0.4%), and others (1.9%). It is concluded that verb–
object and modifier–noun are the top two most common structure types, which account for 83.5% of the three-character Chinese colloquial idioms.

In the field of psycholinguistics, a series of studies have tested whether models of L1 idiom processing, which were formulated for alphabetic languages, can account for the mechanisms in representing and processing Chinese colloquial idioms. Specifically, the research has been focused on whether the comprehension of Chinese colloquial idioms is a compositional or non-compositional process, and whether Chinese colloquial idioms processing entails some distinctive attributes.

Perhaps Gu and Miao’s study (1995) was the first study to address the issue of how Chinese colloquial idioms are processed by native speakers. The participants were asked to judge whether the 48 three-character target items and the 48 three-syllable nonsense items were meaningful. The 48 target items consisted of (1) eight Chinese colloquial idioms with verb–object structure, which have both literal and figurative meanings; (2) eight phrases with verb–object structure; (3) eight Chinese colloquial idioms with modifier–noun structure, which have both literal and figurative meanings; (4) eight phrases with modifier–noun structure; (5) eight Chinese colloquial idioms with verb–object structure, which have figurative meaning only; and (6) eight random words. Gu and Miao found no significant difference among the reaction time (RT) to all types of Chinese colloquial idioms. Generally, the RT to the Chinese colloquial idioms was longer than the RT to the words and shorter than the RT to the phrases. The study basically confirmed the simultaneous processing and comprehension model constructed in Swinney and Cutler (1979), but maintained that the figurative meanings were processed faster than the literal meanings for the familiar Chinese colloquial idioms.
Given that the configuration of Chinese colloquial idioms embodies a high degree of flexibility, She et al. (1998) hypothesized that the literal meanings of the constituent elements impact the figurative interpretation, and the comprehension of Chinese colloquial idioms is a compositional process. The researchers set out to test this hypothesis using two priming experiments. In Experiment 1, the priming stimuli consisted of 6 Chinese colloquial idioms with high predictability and 6 Chinese colloquial idioms with low predictability. The target stimuli were two-character words, which facilitated interpretations of the figurative or the literal sense of the target Chinese colloquial idioms. The participants were presented with these materials and were asked to determine whether the stimuli were Chinese colloquial idioms or nonsense words. The lexical decision task was also implemented in Experiment 2. The priming stimuli were the first two characters of the Chinese colloquial idioms, and the target stimuli were two-character words, which helped participants interpret the idiomatic meanings of the Chinese colloquial idioms. The two priming experiments confirmed their hypothesis, and also supported the configuration model (Cacciari & Tabossi, 1988). The researchers concluded that Chinese colloquial idioms are represented in the mental lexicon as nodes, and the comprehension of Chinese colloquial idioms is a compositional process.

Another study by She, Song, and Zhang (2000) explored the effect of predictability and semantic bias on Chinese colloquial idiom comprehension in different contexts, using two moving window experiments. For both experiments, first the individual participants were asked to read, character by character, sentences containing the target Chinese colloquial idioms, and then to finish one comprehension question with regard to the content of each sentence. The results in Experiment 1 showed that the
literally biased Chinese colloquial idioms were restrained in the figurative context, whereas the figuratively biased idioms were restrained in the literal context. The results in Experiment 2 demonstrated that Chinese colloquial idioms with low predictability were restrained in the figurative context and Chinese colloquial idioms with high predictability were restrained in the literal context. Overall, the researchers denied the “dead metaphor” viewpoint (p. 203) and supported Cacciari and Tabossi’s configuration model (1988). It was confirmed that the comprehension of Chinese colloquial idioms is a compositional process.

In recent years, the hybrid model (Titone & Connine, 1999), which envisaged idioms both as unitary word configurations and compositional word sequences, has gained popularity in the field of psycholinguistics. However, Ma and Zhang (2008) pointed out that this model did not characterize exactly how the constituent morphemes influenced the comprehension of the idioms. They therefore undertook two priming experiments to investigate the effect of morphemes on the processing of three-character Chinese colloquial idioms. It was found that the effect of morphemes on the processing of Chinese colloquial idioms was different on account of different semantic bias of the Chinese colloquial idioms, and the higher the frequency of the morphemes, the greater the effect of the morpheme on Chinese colloquial idioms.

To sum up, since the 1990s, researchers in the field of psycholinguistics began to pay attention to the cognitive mechanisms at work in processing Chinese colloquial idioms among native speakers. Using the existing models of L1 idiom processing and experimental paradigms, research has focused on whether the comprehension of Chinese colloquial idioms is a compositional or non-compositional process. However, consensus
has not been reached among researchers. Some questions still remain, such as what role semantic decomposability plays in understanding Chinese colloquial idioms, and whether different modes exist for comprehending different structure types of Chinese colloquial idioms.

2.3.2 Studies on Chinese colloquial idiom comprehension by nonnative speakers

Idioms constitute a very challenging aspect of L2 acquisition because they are conventionalized expressions, often unpredictable in meaning and specific to a language community (Liu, 2008). In sharp contrast to the abundance of research on idiom comprehension in an L2 other than Chinese, however, comprehension of Chinese colloquial idioms by L2 learners is insufficiently researched. Only a small number of research studies have touched upon issues such as the effects of contextual information and semantic transparency on comprehending Chinese colloquial idioms among L2 learners, and what comprehension strategies L2 learners employ during this process (Li, 2005; Li, 2011; Wu & Zhang, 2006).

Drawing on Cooper (1999), Li (2005) investigated the effect of semantic transparency on Chinese colloquial idiom comprehension and strategy use among intermediate and advanced Chinese L2 learners of Korean. The participants in the experimental group were asked to report verbally in Chinese their thoughts as they arrived at the meanings of the target idioms in sentences, whereas the participants in the control group were required to write down in either Chinese or Korean their interpretations of the target idioms in sentences. It was discovered that semantic transparency significantly affected L2 learners’ comprehension of the Chinese colloquial
idioms and their uses of comprehension strategies. The idioms with higher semantic transparency were easier to understand than the ones with lower semantic transparency. Additionally, six comprehension strategies were identified in the comprehension of the target Chinese colloquial idioms, including sentence contexts, literal meanings, repetition, asking for information, native language, and background knowledge. Among these strategies, the use of sentence contexts, literal meanings, repetition, and asking for information was significantly influenced by the semantic transparency of the target Chinese colloquial idioms.

Based on the existing research on how Chinese college students comprehend Chinese idioms, Wu and Zhang (2006) set out to explore how Chinese L2 learners comprehend the literal and figurative meanings of Chinese colloquial idioms in different types of contexts: zero context, neutral context, and full context. The participants from various L1 backgrounds were asked to take a multiple-choice test, in which they selected the best interpretations of the target words (i.e., 24 Chinese colloquial idioms and 12 filler words) presented in one of the three types of contexts. The researchers found that in general the participants comprehended the literal meanings of the target Chinese colloquial idioms in zero and neutral contexts, but the figurative meanings in strong context. It was concluded that only strong context facilitates the figurative interpretation of the Chinese colloquial idioms. This view was also supported by Li (2011).

2.4 Summary of the literature review

In light of the models of L1 idiom processing, previous research on L2 idioms in general has focused on the following four aspects: (1) what is the underlying mechanism at work in processing L2 idioms, and whether the L1 models can account for L2 idiom
comprehension; (2) what role L1 plays in comprehending L2 idioms, and what other strategies and recourses are also used in this process; (3) what factors affect the production of L2 idioms, and whether idioms can be incorporated into L2 syllabus; and (4) what pedagogical implications the existing studies have brought about, and how idioms can be approached in SLA.

In contrast, the acquisition and instruction of colloquial idioms among L2 learners still has not received sufficient attention in the field of CSL. Given then small number of studies, many issues still need to be resolved, including whether L2 learners comprehend different types of Chinese colloquial idioms in the same manner, what processing features are exhibited in the process of comprehension, and to what extent Chinese L2 colloquial idiom comprehension resembles L1 idiom comprehension. The present study attempts to contribute to the existing understanding of Chinese L2 colloquial idiom comprehension, and serves to address these questions.

Within a language, words can have formal (phonological [P] and orthographic [O]) and/or semantic [S] overlap (e.g., content/content [−P, +O, −S], bear/bear [+P, +O, −S], couch/sofa [−P, −O, +S]). In different languages, words can also have such overlap. For example, the English idiom *pour cold water* and the Chinese colloquial idiom 浊冷水 (*pour-cold-water*) overlap a great deal in terms of S, since both languages use the same linguistic elements (i.e., pour, cold, and water) to express the intended meaning of ‘to be discouraged or negative about someone’s ideas or hopes.’ However, there is no semantic overlap between the Chinese colloquial idiom 上西天 (*up-west-sky*, which figuratively means *go to heaven*) and the English idiom ‘bite the dust,’ as the two languages use different linguistic elements to express the intended meaning of ‘go to heaven.’
The degree of semantic overlap, or what we refer to as the degree of L1–L2 similarity, is a crucial aspect of the present research. The study aims to discover whether the degree of L1–L2 similarity influences the processing of unknown colloquial idioms by English-speaking learners of advanced Chinese L2. To explore this issue, three types of Chinese colloquial idioms (i.e., matching, partially matching, and non-matching) are used as the target items for the participants to comprehend.

Matching colloquial idioms means that both English and Chinese use the same linguistic elements to convey the idiomatic meaning. An example of this category is the Chinese colloquial idiom 拐马蜂窝 (stir up-a-hornet’s nest), and it matches its English translation equivalent ‘stir up a hornet’s nest.’ Another pair of idiomatic expressions that fits this category is the Chinese colloquial idiom 只见树木不见森林 (only-see-trees-not-see-forest) and the English idiom ‘not see the forest for the trees.’ Partially matching colloquial idioms represent the cases when similar linguistic elements are adopted by the two languages to express the same idiomatic meaning. For example, the Chinese colloquial idiom 热锅上的蚂蚁 (have ants on a hot pan) and the English idiom ‘have ants in one’s pants,’ and the Chinese colloquial idiom 开夜车 (drive-night-car) and the English idiom ‘burn the midnight oil.’ Non-matching colloquial idioms means that both languages use totally different linguistic elements to convey the same metaphorical meaning. One example of this category is the Chinese colloquial idiom 万金油 (ten thousand-gold-oil). Its functional translation in English is ‘jack of all trades.’ Another example is that the Chinese uses 出气筒 (release-anger-pump) to convey the idea of ‘punching bag’ in English.
The present research aims to investigate the effects of the degree of L1–L2 similarity on the comprehension and interpretation of unknown colloquial idioms by Chinese L2 learners. Specifically, this study investigates the comprehension strategies employed by the English-speaking learners of advanced Chinese L2 when they attempt to interpret the meanings of the three types of Chinese colloquial idioms (i.e., matching, partially matching, and non-matching) in isolation and in short paragraph context.
CHAPTER III

METHODOLOGY

The present study explores how comprehension strategies, learners’ L1, and contextual information affect the comprehension and interpretation of three types of Chinese colloquial idioms by English-speaking learners. The three types of colloquial idioms are categorized according to their degree of L1–L2 similarity (see pp. 45–47 for explanation), including matching colloquial idioms between Chinese and English (e.g., 一口气 in one breath; 开绿灯 give the green light), partially matching colloquial idioms between Chinese and English (e.g., 小道消息 small-street-news, which means words on the street; 开夜车 drive-night-car, which means burn the midnight oil), and non-matching colloquial idioms between Chinese and English (e.g., 有眼光 have-eye-light, which means have good taste; 费口舌 waste-mouth-tongue, which means beat a dead horse).

To address the three research questions presented in Chapter 1, this chapter presents an overview of the methodological issues which are important for this study, including the design of this study, developmental processes for the experimental materials, scoring and coding systems, and subsequent data analysis methods.

3.1 Overview of the research questions

Before discussing details of the methodology adopted in this study, this section presents a brief overview of how the three research questions are addressed in this study.

RQ 1: To what extent does context affect the comprehension and interpretation of three types of Chinese colloquial idioms?
Two sub-questions are addressed:

(1) Does a short paragraph context facilitate the comprehension and interpretation of the target Chinese colloquial idioms?

(2) Do the short paragraph contexts facilitate the comprehension of the three types of colloquial idioms in similar or different ways?

The first research question is intended to examine whether the short paragraph context aids the comprehension and interpretation of colloquial idioms by advanced Chinese L2 learners in general, and whether the effects of the short paragraph context vary across the three types of colloquial idioms. To address this research question, the researcher asked the participants to complete two tasks, one decontextualized comprehension task followed by one contextualized comprehension task. Data collected by think-aloud protocols were quantitatively analyzed, and the statistical results were utilized to address sub-questions 1 and 2.

RQ 2: To what extent does the degree of L1–L2 similarity influence the comprehension and interpretation of the Chinese colloquial idioms?

Two sub-questions are addressed:

(1) In the decontextualized task, does the degree of L1–L2 similarity influence the comprehension of the target Chinese colloquial idioms?

(2) In the contextualized task, does the degree of L1–L2 similarity influence the comprehension of the target Chinese colloquial idioms?

The second research question is intended to investigate whether idiom type, in terms of the degree of L1–L2 similarity, makes a difference in terms of Chinese
colloquial idiom comprehension; that is, whether the mean scores the three types of Chinese colloquial idioms received in the two comprehension tasks were significantly different from each other. To address this research question, the data gathered in both tasks were quantitatively analyzed, and the statistical results were used to address the two sub-questions.

RQ 3: What strategies are employed by the learners in comprehending the Chinese colloquial idioms in isolation and in context, and which strategies contribute to better comprehension of the Chinese colloquial idioms in context?

Three sub-questions are addressed:
(1) What strategies are utilized by the participants in comprehending the target Chinese colloquial idioms in the decontextualized task?

(2) What strategies are employed by the participants in comprehending the colloquial idioms in the contextualized task?

(3) In the contextualized task, which strategies contribute to better comprehension of the target idiomatic expressions?

The third research question is intended to uncover the comprehension strategies the participants employ to complete each comprehension task. To answer this question, the think-aloud protocols collected in the decontextualized task were coded and qualitatively analyzed to address sub-question 1. The think-aloud protocols collected in the contextualized task were first coded and qualitatively analyzed to answer sub-question 2, and then the data were quantitatively analyzed, and the statistical results were used to address sub-question 3.
3.2 Design of this study

In accordance with the research questions reviewed in the previous section, this section discusses in detail the design of this study, the participants, the construction of the experimental materials, the scoring and coding systems, the procedure of the investigation, and the data analysis methods.

3.2.1 Participants

Thirty students enrolled in the advanced Chinese class in the Chinese program at a Midwest university participated in this study during three consecutive semesters. The background information of the 30 participants was collected using a survey that was administered via email (Appendix A). A summary of the participants’ background information is presented in Table 1.

All of the participants—9 males (30%) and 21 females (70%)—were regularly enrolled undergraduate students at the university. They were all native speakers of English. Fifteen (50%) of the participants were non-heritage learners, and the remainder (50%) were heritage Chinese learners. Sixty percent of them had studied abroad in a Chinese-speaking region before the data collection. The length of study-abroad experience ranged from one summer to two semesters. At the completion of the study, each participant received 10 dollars in compensation.
Table 1 Background of participants

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3.2.2 Instrumentation

Decontextualized comprehension task

This task was used to explain how the learners comprehended three types of Chinese colloquial idioms in a decontextualized condition. Fifteen Chinese colloquial idioms were chosen as the target items. The 15 items, which differed in the degree of L1–L2 similarity, were first selected based on a survey. The survey consisted of 55 Chinese colloquial idioms along with their English equivalents (Appendix B). The 55 Chinese colloquial idioms and their English equivalents were drawn from 汉语惯用语词典 (2009) (A Dictionary of Chinese Colloquial Idioms), Cambridge Dictionary of American Idioms (2003), and In the Loop: A Reference Guide to American English Idioms (2010). They were chosen according to the following criteria: (1) Both English and Chinese have expressions to convey the intended meanings; and (2) the same metaphorical idea is expressed in both languages. Five Chinese Ph.D. students in SLA and Foreign Language Education were asked to categorize these 55 Chinese colloquial idioms based on their degree of L1–L2 similarity into the three types: matching, partially matching, and non-matching (see pp. 45–47 for explanation). Based upon the rating given by the five Ph.D. students on this survey, 44 Chinese colloquial idioms were identified as belonging in one of the three categories, including 19 matching idioms, 15 partially matching idioms, and 10 non-matching idioms.

To finalize the list of the target Chinese colloquial idioms, two instructors of the advanced Chinese class were asked to read through the 44 items and then to select five items from each category that met the following criteria: (1) the items were unfamiliar to
the participants; and (2) all the component characters of the chosen items had been taught to the participants. Since only four items were qualified for the partially matching type, 走老路 (walk-old-path, which means follow in someone's footsteps) was added to the list, after discussion with one of the instructors. Table 2 presents the final 15 Chinese colloquial idioms chosen and includes each particular idiom, its classification type, literal translation, and its English equivalent.

Table 2 Fifteen target Chinese colloquial idioms

<table>
<thead>
<tr>
<th>Target Idioms</th>
<th>Literal Translation</th>
<th>English Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>气气气</td>
<td>in one breath</td>
<td>in one breath</td>
</tr>
<tr>
<td>看树木不见森林</td>
<td>not see the forest for the trees</td>
<td>not see the forest for the trees</td>
</tr>
<tr>
<td>泼冷水</td>
<td>pour cold water</td>
<td>pour cold water</td>
</tr>
<tr>
<td>开绿灯</td>
<td>give the green light</td>
<td>give the green light</td>
</tr>
<tr>
<td>拉长脸</td>
<td>pull a long face</td>
<td>pull a long face</td>
</tr>
<tr>
<td>工作消息</td>
<td>news from a small source</td>
<td>word on the street</td>
</tr>
<tr>
<td>走老路</td>
<td>walk the old path</td>
<td>follow in somebody's footsteps</td>
</tr>
<tr>
<td>开夜车</td>
<td>drive a midnight car</td>
<td>burn the midnight oil</td>
</tr>
<tr>
<td>二把手</td>
<td>the second hand</td>
<td>second-in-command</td>
</tr>
<tr>
<td>红眼病</td>
<td>red-eye disease</td>
<td>green-eyed monster</td>
</tr>
<tr>
<td>击马屁</td>
<td>pat a horse's butt</td>
<td>polish the apple</td>
</tr>
<tr>
<td>有眼光</td>
<td>have foresight</td>
<td>have good taste</td>
</tr>
<tr>
<td>对牛弹琴</td>
<td>play music before cattle</td>
<td>cast pearls before swine</td>
</tr>
<tr>
<td>费口舌</td>
<td>waste words</td>
<td>beat a dead horse</td>
</tr>
<tr>
<td>上西天</td>
<td>go to the western sky</td>
<td>bite the dust</td>
</tr>
</tbody>
</table>

Note: M = matching, PM = partially matching, NM = non-matching

Contextualized comprehension task

To examine whether contextual information affected the comprehension of the Chinese colloquial idioms, a short paragraph was created for each of the 15 target Chinese colloquial idioms included in the decontextualized task. The 15 short paragraphs
were created with reference to 汉语口语习惯用语教程 (2003) (*A Course in Chinese Colloquial Idioms*) (Appendix C). The short paragraphs were composed according to the following criteria: (1) The short paragraphs were naturally written Chinese texts; (2) the short paragraphs were more than one sentence long, and each one included one of the 15 target Chinese colloquial idioms; (3) in each short paragraph the target Chinese colloquial idiom was underlined and only appeared once; and (4) in each short paragraph, the participants had previously learned all of the characters, vocabulary items, and grammatical structures except for the target Chinese colloquial idiom. On average, there were 49.3 characters and 2.4 sentences in each short paragraph. Here is one example:

今天小丽很高兴，因为她正式成为了学校女生足球队的队员。没想到妈妈却给她泼了一头冷水，说足球是男孩子的运动，女孩子不应该踢球。

(*Xiaoli is very happy today because she has officially joined the girls’ soccer team in her school. Surprisingly, her mom pours cold water on this idea, saying: “Soccer is a boys’ game. Soccer is not for girls.”*)

Thus, the Contextualized Chinese Colloquial Idiom Comprehension Task was created.

3.2.3 Data collection methods

The participants were required to complete the decontextualized comprehension task, followed by the contextualized comprehension task. Figure 1 outlines the data collection sequence. The participants completed the two tasks individually. There was no time limit set for completing the two tasks. They were allowed to proceed at their own
pace. On average, the first task took approximately 10 minutes, while the second task took about 35 minutes to complete.

Prior to the two tasks, the researcher gave directions (oral and written) to individual participants in English. To collect data while the participants completed each task, think-aloud (TA) protocols were employed.

**Decontextualized comprehension task**

This task determined the strategies the participants used in comprehending the 15 target Chinese colloquial idioms in the absence of contextual support. During data collection, the individual participants were required to analyze the 15 Chinese colloquial idioms and at the same time reported verbally in either Chinese or English their interpretations of the meanings of the 15 target items (Appendix D). Their verbal reports were audio recorded for later data analysis.

**Contextualized comprehension task**

This task examined what strategies were employed by the participants to decode the meanings of the 15 target Chinese colloquial idioms in short paragraphs, and which strategies contributed to better comprehension. To complete this task, the individual
participants were presented with each of the 15 target Chinese colloquial idioms in a short paragraph (Appendix E). The sequence of the presentation of the 15 target Chinese colloquial idioms was different from the one in the previous task. To complete this task, the participants were asked to read each short paragraph aloud first and then verbalize their thought process in either Chinese or English as they arrived at interpretations of the target Chinese colloquial idiom underlined in the short paragraph. The entire process was audio recorded for later data analysis.

Think-aloud (TA) protocol

According to Ericsson and Simon (1993), in the course of a TA protocol, each participant is asked to introspectively verbalize their thoughts while completing a cognitive task such as solving a mathematical problem or comprehending a reading passage. TA protocols in SLA studies have been mainly used to examine the cognitive strategies L2 learners employ while reading an L2 text and the potential effect of use of particular strategies on subsequent comprehension (e.g., Block, 1986; Carrell, 1989).

To investigate the comprehension strategies in interpreting the 15 target Chinese colloquial idioms, TA protocols were implemented to collect the data while the participants completed both tasks. The focus of TA protocols in the present study, based on the typology of verbal reports in Ericsson and Simon (1984 & 1993), was to require the participants to verbally report their thoughts per se while performing cognitive tasks rather than providing additional metalinguistic information, such as explanations and justifications.
Prior to implementing TA protocols to complete both tasks, the researcher gave the individual participants clear instructions (Appendix F). A warm-up session was then conducted to accustom the participants to thinking aloud while performing the tasks.

3.2.4 Procedure

Data transcription

The audio recording collected from both tasks was transcribed verbatim. T-unit analysis was used for data transcription. A T-unit refers to the minimal terminable unit, which was described by Hunt (1970) as “one main clause plus any subordinate clause or non-clausal structure that is attached to or embedded in it” (p. 4). According to Hunt, “cutting a passage into T-units will be cutting it into the shortest units which it is grammatically allowable to punctuate as sentences… Any complex or simple sentence would be one T-unit, but any compound or compound-complex sentence would consist of two or more T-units” (p. 4). For example, in the following excerpt from the transcription regarding 拉长脸 (pull a long face), each T-unit was numbered.

1) Okay so 王先生 (Mr. Wang) is obviously upset/ 2) so this is probably a negative meaning of the idiom/ 3) I guess it is just probably something similar to the English meaning of having a long face/ 4) which is like you are disappointed or upset/ 5) so like 拉长脸 (pull a long face) yeah something along those lines/ 6) like the facial expression you have when you drop your chin down/ 7) you’re kind of disappointed
Each T-unit was later analyzed and marked according to the idiom comprehension strategy employed by the participant.

Scoring procedure

The same scoring procedure was applied to both tasks. Comprehension of the 15 target Chinese colloquial idioms by the participants was evaluated first based on their accuracy. A score of 2 was given for those target Chinese colloquial idioms that were defined correctly, for a maximum score of 30 points in each task. For example:

Short Paragraph

王先生每天吃晚饭的时候都会喝一点儿酒。今天吃晚饭的时候，王先生看见饭桌上没有酒就很生气。他拉长脸，坐在一边，一句话也不说。

(Mr. Wang likes to have some wine with dinner every day. Today when he found out there was no wine on the dinner table, he pulled a long face, sat at the table, and didn’t say anything.)

TA Protocol

1) 拉长脸 (pull a long face) is sad maybe/ 2) because he is upset that he doesn’t get to drink his beer at night

The TA protocol above shows that the participant correctly interpreted the target colloquial idiom 拉长脸 (pull a long face) as ‘sad,’ by judging the linguistic context in which this target expression was embedded.
A score of 1 was given for those cases that were defined only partially correctly.

For example:

**Short Paragraph**

华盛顿这个月15号同意使同性恋婚姻合法化。华盛顿将成为美国第六个为同性恋婚姻开绿灯的地方。

*(On the 15th of this month, Washington, DC legalized same-sex marriage, putting the capital on course to become the sixth state or region in the U.S. to give the green light to gay marriage.)*

**TA Protocol**

1) So in here 开绿灯 (give the green light) means something you can do / 2) based on the context it says that same-sex marriage / 3) Washington, DC is finally you know/ 4) they can finally get married there

The TA protocol shows that the participant understood the general idea of the linguistic context. However, when defining the target colloquial idiom 开绿灯 (give the green light), the participant could not provide an exact definition for the target item, interpreting it as ‘something you can do’ rather than ‘give permission for something to happen.’ It appears that the participant was unable to set apart the target colloquial idiom and its surrounding context.

A score of 0 was given for the Chinese colloquial idioms that were defined completely incorrectly or not translated at all. For example:
Short Paragraph

At age 15, John Smith wrote 127 great goals in one breath in his diary. Forty-four years later, he accomplished 106 of the 127 goals.

TA Protocol

1) No idea/ 2) 一口气 (in one breath) something out of thin air/ 3) I don’t know/ 4) I don’t know

It seems that this participant tried to figure out the meaning of the target colloquial idiom 一口气 (in one breath) through analyzing its component characters. He was able to recognize the character 气 (air; breath). However, he was not able to utter a definition for this target item. Therefore, the participant earned zero points for comprehending this particular item.

To examine the reliability of the researcher’s scoring, a second rater, who was an experienced CSL teacher, was trained to score the participants’ interpretations of the target Chinese colloquial idioms in both tasks by going over examples of correct, partially correct, and incorrect interpretations. After the training, the second rater independently scored participants’ interpretations of the target Chinese colloquial idioms in both tasks. Inter-rater reliability analysis was then implemented. The number of agreements between the second rater’s responses and the researcher’s responses was divided by the number of agreements plus disagreements, and this value was multiplied.
by 100. Inter-rater agreement was 92.11% for the scoring. All disagreements were subsequently resolved through discussion, so that 100% agreement was attained.

The mean scores achieved from comprehending the three types of Chinese colloquial idioms in the two tasks were later examined and analyzed quantitatively.

3.2.5 Data analysis

Qualitative data analysis

The transcripts of the interpretations of the 15 target Chinese colloquial idioms in the decontextualized comprehension task were subjected to a process of qualitative content analysis through which a range of reading strategies were identified and then categorized based on emerging patterns.

The transcripts generated in the contextualized comprehension task were coded for the strategies the participants utilized in comprehending the 15 target Chinese colloquial idioms in context. The coding system employed in this study was formulated with reference to two studies (Cooper, 1999; Lawson & Hogben 1996) and further refined with analysis of trial transcripts.

Lawson and Hogben (1996) applied a coding system of 15 strategies to represent broad classes of vocabulary learning events. Most of the 15 strategies matched with the focus of the present study, except for writing word and meaning, spelling, use of suffixes, testing, and mnemonic. Cooper (1999) implemented a coding system to evaluate strategies of L2 idiom comprehension in context. Among the 8 strategies, only one, “RI: Requesting information about this idiom or context,” was irrelevant to the present study.

According to these two coding systems, preliminary codes were developed. Analysis of trial transcripts was undertaken to identify the extent to which the
preliminary codes represented the output of participants’ transcripts. The codes were refined until they could represent all the verbal report data. During the analysis of the trial transcripts, it was discovered that some radicals were used to decipher constituent characters of the target colloquial idioms. For example, 木 (the ‘tree’ radical) was used by a participant to decode 森 (forest), one of the component characters of the target colloquial idiom 只见树木不见森林 (not see the forest for the trees). Thus, a strategy of using radical knowledge to decipher component characters of the target colloquial idioms was added to the taxonomy. The finalized coding system is presented in Table 3. To identify what strategies were employed by the participants to decode the target Chinese colloquial idioms in the contextualized task, the T-units were analyzed and marked in accordance with this coding system.

To examine the reliability of the researcher’s coding of the comprehension strategies utilized, the same second rater was trained to categorize the participants’ interpretations of the target Chinese colloquial idioms by going over each item in Table 3. After the training, the second rater independently coded the T-units from the TA protocols. Inter-rater reliability was then analyzed in the same manner it was examined for the scoring. The number of agreements between the second rater’s responses and this researcher’s responses was divided by the number of agreements plus disagreements, and this value was multiplied by 100. Inter-rater agreement was 96.79 % for the coding. All disagreements were subsequently resolved through discussion, so that 100% agreement was attained.
Table 3 Strategies used in the contextualized comprehension

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI: Repeating the Chinese colloquial idiom without giving an interpretation</td>
<td>“Not really sure. 上西天 (<em>bite the dust</em>), yeah, no idea. 上西天, 上西天…”</td>
</tr>
<tr>
<td>RW: Making use of words that are related to the Chinese colloquial idiom by reading them aloud as an aid to learning the Chinese colloquial idiom</td>
<td>“… so 一把手 is some higher level indicated in this context. 二把手 (<em>second-in-command</em>) maybe it means that… maybe it’s like a mid-level or lower-level position…”</td>
</tr>
<tr>
<td>ST: Translating the Chinese sentences surrounding the Chinese colloquial idiom in the short paragraph</td>
<td>“Mr. Wang always drinks a bit of alcohol when he eats. But when he went to eat today, there wasn’t any alcohol. So he was mad. He made… he was 拉长脸 (<em>pull a long face</em>)…”</td>
</tr>
<tr>
<td>CC: Discussing and analyzing the component characters of the Chinese colloquial idiom</td>
<td>“费口舌 (<em>beat a dead horse</em>)… from the context, 费 (<em>waste</em>) should not mean waste. So it should be 费, like 学费 (<em>tuition fee</em>)…”</td>
</tr>
<tr>
<td>BK: Using background knowledge to figure out the meaning of the Chinese colloquial idiom</td>
<td>“[上西天 (<em>bite the dust</em>)] I know there is some connection between west and death in Chinese. So maybe it’s saying my body is still good. I have a long time to die.”</td>
</tr>
<tr>
<td>L1–I: Referring to an idiom in the L1 to understand the Chinese colloquial idiom</td>
<td>“It’s easier for me because of the English equivalent ‘not see the forest for the trees’.”</td>
</tr>
<tr>
<td>LS: Linking the Chinese colloquial idiom to another Chinese word based on its visual similarity</td>
<td>“[二手 (<em>second hand</em>)] maybe it’s same as 二手 (<em>second hand</em>), second handed?”</td>
</tr>
<tr>
<td>SC: Linking the meaning of one word to another through the similar sound</td>
<td>“I’m not sure if this 拉 (<em>lā; pull</em>) is like 辣 (<em>là; spicy</em>)…”</td>
</tr>
<tr>
<td>RK: Using radical knowledge to decipher characters in the Chinese colloquial idiom</td>
<td>“[森林 (<em>forest</em>)] It makes me think of forest, because there are so many more trees, tree radicals. I still think it is see the forest, don’t see the tress.”</td>
</tr>
</tbody>
</table>
Quantitative data analysis

The quantitative data in both tasks were entered for conducting one-way analysis of variance (ANOVA) using SPSS Statistics to determine whether there were differences among the participants in comprehending different types of Chinese colloquial idioms. The types of Chinese colloquial idioms were independent variables, which had three levels: matching, partially matching, and non-matching. The mean scores achieved for comprehending each type of the Chinese colloquial idioms were dependent variables. Please see Figure 2.

![Diagram showing variables for one-way ANOVA analysis]

Figure 2 Overview of the variables for the one-way ANOVA

Next, group comparisons were conducted to determine whether the context affected the comprehension and interpretation of each type of Chinese colloquial idiom. The quantitative data the individual participants obtained from comprehending the target
items in both tasks were subjected to paired sample $t$-tests using SPSS Statistics. The types of context were independent variables: decontextualized and contextualized. And the mean scores of comprehending the target Chinese colloquial idioms in each condition were entered as dependent variables. Please refer to Figure 3 for the variables used in the group comparisons.

Figure 3 Overview of the variables for the paired sample $t$-tests

Finally, to ascertain which of the nine strategies identified in the contextualized comprehension task contributed to better comprehension of the target Chinese colloquial idioms, the quantitative data were subjected to a multiple regression analysis followed by a stepwise selection procedure using SPSS Statistics. The independent variables were the strategy types employed to comprehend the target Chinese colloquial idioms in the
contextualized task, whereas the dependent variable was the overall score each target Chinese colloquial idiom received in this condition.

3.3 Summary of the chapter

To address the three research questions revisited at the beginning of this chapter, thirty advanced Chinese L2 learners were required to comprehend fifteen unknown colloquial idioms in decontextualized and contextualized conditions. All of the 30 participants were native speakers of English. The 15 target colloquial idioms differed in terms of the degree of L1–L2 similarity, including five matching, five partially matching, and five non-matching colloquial idioms. Data were collected using think-aloud protocols. This chapter provided detailed information about the design of this study, the participants, the construction of the experimental materials, the scoring and coding systems, and the procedure of the investigation. Finally, data analysis methods were presented.

The following chapter presents the data collected from the decontextualized and contextualized comprehension tasks. It also explains the data analyses intended to answer the research questions that are pursued in this study.
CHAPTER IV
RESULTS AND ANALYSIS

This chapter presents the data collected from the decontextualized and contextualized tasks and the data analyses intended to answer the research questions pursued in this study. The chapter discusses the results of the quantitative analyses, which were designed to illuminate research questions 1 and 2, as well as findings of the quantitative and qualitative analyses, which were intended to derive answers to research question 3.

4.1 Effects of context

The comprehension of the 15 target Chinese colloquial idioms by the 30 participants was first evaluated. Table 4 lists the mean and standard deviation of the participants’ comprehension of each colloquial idiom presented in the decontextualized and the contextualized comprehension tasks. The table shows that in the decontextualized task, the participants’ comprehension of 12 of the 15 colloquial idioms had a mean score lower than 1. Among the 15 items, 只见树木不见森林 (not see the forest for the trees) proved to be the easiest for the participants to understand (mean comprehension of 1.58), whereas 小道消息 (word on the street) and 二把手 (second-in-command) proved to be the most difficult for the participants to comprehend (mean comprehension of 0.14). In the contextualized task, the participants rated 10 out of the 15 Chinese colloquial idioms a mean score greater than 1 point. Among the 15 items, 拉长脸 (pull a long face) received the highest possible score (e.g., all the participants fully understood or correctly interpreted the colloquial idiom), whereas 二把手 (second-in-command) and 费口舌
(beat a dead horse) received the lowest (0.79). Overall, the participants were more successful with the interpretation of the target colloquial idioms in the contextualized condition than in the decontextualized condition.

### Table 4 Means and standard deviations for comprehension of the individual Chinese colloquial idioms

<table>
<thead>
<tr>
<th>Colloquial Idiom</th>
<th>Decontextualized Task</th>
<th>Contextualized Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td>1. 一口气</td>
<td>0.78</td>
<td>0.94</td>
</tr>
<tr>
<td>2. 只见树木不见森林</td>
<td>1.58</td>
<td>0.86</td>
</tr>
<tr>
<td>3. 泼冷水</td>
<td>0.77</td>
<td>0.91</td>
</tr>
<tr>
<td>4. 开绿灯</td>
<td>0.86</td>
<td>0.92</td>
</tr>
<tr>
<td>5. 拉长脸</td>
<td>1.47</td>
<td>0.91</td>
</tr>
<tr>
<td>6. 小道消息</td>
<td>0.14</td>
<td>0.50</td>
</tr>
<tr>
<td>7. 走老路</td>
<td>1.17</td>
<td>0.50</td>
</tr>
<tr>
<td>8. 开夜车</td>
<td>0.48</td>
<td>0.74</td>
</tr>
<tr>
<td>9. 二把手</td>
<td>0.14</td>
<td>0.59</td>
</tr>
<tr>
<td>10. 红眼病</td>
<td>0.17</td>
<td>0.61</td>
</tr>
<tr>
<td>11. 拍马屁</td>
<td>0.26</td>
<td>0.70</td>
</tr>
<tr>
<td>12. 有眼光</td>
<td>0.38</td>
<td>0.72</td>
</tr>
<tr>
<td>13. 对牛弹琴</td>
<td>0.60</td>
<td>0.73</td>
</tr>
<tr>
<td>14. 费口舌</td>
<td>0.34</td>
<td>0.66</td>
</tr>
<tr>
<td>15. 上西天</td>
<td>0.33</td>
<td>0.63</td>
</tr>
</tbody>
</table>

$M$ of item means 0.63 1.28

Note:
$N = 30$

一口气= in one breath; 只见树木不见森林= not see the forest for the trees; 泼冷水= pour cold water; 开绿灯= give the green light; 拉长脸= pull a long face; 小道消息= word on the street; 走老路= follow in someone’s footsteps; 开夜车= burn the midnight oil; 二把手= second-in-command; 红眼病= green-eyed monster; 拍马屁= polish the apple; 有眼光= have good taste; 对牛弹琴= cast pearls before swine; 费口舌= beat a dead horse; 上西天= bite the dust
A summary of the rates of accuracy with which the participants interpreted the target colloquial idioms in both comprehension tasks and the increase in accuracy rate from the decontextualized to contextualized conditions are presented in Table 5.

Table 5 Accuracy rate of idiom interpretation in the two comprehension tasks

<table>
<thead>
<tr>
<th>Type</th>
<th>Decontextualized Task (%)</th>
<th>Contextualized Task (%)</th>
<th>Increase in Accuracy Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matching</td>
<td>48.33</td>
<td>72.67</td>
<td>24.34</td>
</tr>
<tr>
<td>Partially Matching</td>
<td>17.33</td>
<td>49.33</td>
<td>32.00</td>
</tr>
<tr>
<td>Non-matching</td>
<td>16.67</td>
<td>45.33</td>
<td>28.67</td>
</tr>
<tr>
<td>Group Total</td>
<td>27.44</td>
<td>55.78</td>
<td>28.34</td>
</tr>
</tbody>
</table>

Note: N = 30

The three most noteworthy findings concerning the accuracy of idiom interpretation under the decontextualized condition are as follows (Table 5). First, in the absence of context, the matching colloquial idioms were processed, comprehended, and interpreted more successfully (48.33%) than either the partially matching (17.33%) or the non-matching (16.67%) colloquial idioms. Accuracy rate was higher for idioms in the matching category than for those in the partially matching and non-matching categories combined. Second, only a slight difference in the accuracy of idiom interpretation occurred between the partially matching and non-matching colloquial idioms. Third, the overall accuracy rate of idiom interpretation in the decontextualized condition was only 27%.

With respect to the contextualized condition (Table 5), the short paragraph context facilitated the comprehension and interpretation of all three types of Chinese
The increase in accuracy rate in idiom interpretation from the decontextualized to the contextualized tasks was least pronounced for the matching category (24.34%). This increase was most pronounced for the partially matching category (32.00%), whereas a considerable increase occurred in the non-matching category (28.67%). These results indicate that the introduction of context enabled the highest improvement in interpreting the partially matching colloquial idioms. Nevertheless, the overall accuracy rate for idiom interpretation was only 55.78%.

The evaluation of idiom interpretation during the decontextualized and contextualized tasks confirmed that the short paragraph context aided the comprehension of Chinese colloquial idioms. This assertion is also supported by the paired sample t-tests performed on the data. The results of the tests are provided in Table 6.

Table 6 Results of the paired sample t-tests

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>N</th>
<th>SD</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 1 –</td>
<td>.63</td>
<td>15</td>
<td>.47</td>
<td>.000***</td>
</tr>
<tr>
<td>Task 2</td>
<td>1.28</td>
<td>15</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 1 –</td>
<td>1.09</td>
<td>5</td>
<td>.40</td>
<td>.020*</td>
</tr>
<tr>
<td>Task 2</td>
<td>1.64</td>
<td>5</td>
<td>.22</td>
<td></td>
</tr>
<tr>
<td>Pair 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 1 –</td>
<td>.42</td>
<td>5</td>
<td>.44</td>
<td>.002**</td>
</tr>
<tr>
<td>Task 2</td>
<td>1.15</td>
<td>5</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Pair 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 1 –</td>
<td>.38</td>
<td>5</td>
<td>.13</td>
<td>.031*</td>
</tr>
<tr>
<td>Task 2</td>
<td>1.07</td>
<td>5</td>
<td>.39</td>
<td></td>
</tr>
</tbody>
</table>

Note:
Pair 1 = matching category, Pair 2 = partially matching category,
Pair 3 = non-matching category
*p < .05, **p < .01, ***p < .001

As indicated in Table 6, an overall significant difference occurred in the mean scores for comprehending the three types of Chinese colloquial idioms in the
decontextualized (M = .63, SD = .47) and contextualized (M = 1.28, SD = .40) tasks; that is, t (14) = 7.43, p < .001. With respect to the matching Chinese colloquial idioms (Pair 1), a significant difference was found between the mean scores generated in the decontextualized (M = 1.09, SD = .40) and contextualized (M = 1.64, SD = .22) tasks; that is, t (4) = 3.74, p = .020. The analyses also reveal a significant difference in the mean scores between the decontextualized (M = .38, SD = .13) and contextualized (M = 1.07, SD = .39) settings for the non-matching Chinese colloquial idioms (Pair 3); that is, t (4) = 3.25, p = .031.

4.2 Effects of degree of L1–L2 similarity

In the decontextualized and contextualized tasks, the three types of target Chinese colloquial idioms were characterized by varying degree of difficulty, thereby causing the participants to achieve different rates of accuracy in interpreting the colloquial idioms. Table 7 presents the generated scores, which illuminate distinctions in the levels of comprehension for the three types of colloquial idioms in the decontextualized and contextualized tasks. Among the three idiom pairs, the matching colloquial idioms received the highest comprehension scores on both tasks, with 48.33% generated in the decontextualized task and 72.67% in the contextualized task. This finding indicates that the idiomatic meanings of the matching colloquial idioms were comprehended with greater ease than those of the partially matching or non-matching category. The partially matching and non-matching colloquial idioms received 52 and 50 points, respectively, in the decontextualized task. In the contextualized task, the partially matching category received 148 points, and the non-matching category received 136 points.
Table 7 Idiom type scores in the decontextualized and contextualized tasks

<table>
<thead>
<tr>
<th>Type</th>
<th>Decontextualized Task</th>
<th>Contextualized Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>PM</td>
</tr>
<tr>
<td>Accuracy</td>
<td>145</td>
<td>52</td>
</tr>
<tr>
<td>Percentage</td>
<td>48.33%</td>
<td>17.33%</td>
</tr>
</tbody>
</table>

Note:
M = matching, PM = partially matching, NM = non-matching
*Total = 300 for each subtype in each condition

4.2.1 Effects of degree of L1–L2 similarity in the decontextualized task

To ascertain whether the degree of L1–L2 similarity significantly influenced the comprehension and interpretation of the Chinese colloquial idioms in the decontextualized task, the mean scores were subjected to a one-way ANOVA. The results (Table 8) show that the three types of target items exhibited statistically significant differences in mean scores for comprehension in the decontextualized task ($F(2, 12) = 6.43, P = .013$).

Table 8 Results of the one-way ANOVA of the decontextualized comprehension

<table>
<thead>
<tr>
<th>Accurate idiom interpretation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.60</td>
<td>2</td>
<td>.80</td>
<td>6.43</td>
<td>.013*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.49</td>
<td>12</td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.08</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
*p < .05

Tukey multiple comparison tests were performed to identify which specific groups differed. The results (Table 9) reveal a statistically significant difference between
the mean scores for comprehending the matching and partially matching categories \((p = .027)\), and between the matching and non-matching categories \((p = .020)\). However, no significant difference in mean scores was found between the partially matching and non-matching categories \((p = .984)\).

<table>
<thead>
<tr>
<th>(I) Type</th>
<th>(J) Type</th>
<th>Mean Difference (I–J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>PM</td>
<td>.67</td>
<td>.22</td>
<td>.027*</td>
<td>.08</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>NM</td>
<td>.71</td>
<td>.22</td>
<td>.020*</td>
<td>.12</td>
<td>1.30</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>M</td>
<td>.67</td>
<td>.22</td>
<td>.027*</td>
<td>1.27</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>NM</td>
<td>.03</td>
<td>.22</td>
<td>.984</td>
<td>.56</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>NM</td>
<td>M</td>
<td>.71</td>
<td>.22</td>
<td>.020*</td>
<td>1.30</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>NM</td>
<td>PM</td>
<td>.04</td>
<td>.22</td>
<td>.984</td>
<td>.63</td>
<td>.56</td>
<td></td>
</tr>
</tbody>
</table>

Note: M = matching, PM = partially matching, NM = non-matching
*The mean difference is significant at the .05 level.

In summary, the results of the one-way ANOVA and Tukey multiple comparisons analyses indicate that in the absence of context, the comprehension of the Chinese colloquial idioms may have depended on idiom type; that is, the degree of L1–L2 similarity significantly affected the ease with which the participants understood the Chinese colloquial idioms in the decontextualized condition. The participants more easily processed the matching colloquial idioms than the partially matching and non-matching colloquial idioms, and statistically comprehending the partially matching category was almost as difficult as understanding the non-matching category when contextual information was withheld.
4.2.2 Effects of degree of L1–L2 similarity in the contextualized task

To determine whether the degree of L1–L2 similarity significantly influenced the comprehension and interpretation of the Chinese colloquial idioms in the contextualized comprehension task, the mean scores were first subjected to one-way ANOVA using SPSS. The results of the one-way ANOVA (Table 10) reveal that the target items differed significantly in terms of mean scores for comprehension ($F(2, 12) = 4.22, P = .041$).

Table 10 Results of the one-way ANOVA of the contextualized comprehension

<table>
<thead>
<tr>
<th>Accurate idiom interpretation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.95</td>
<td>2</td>
<td>.47</td>
<td>4.22</td>
<td>.041*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.35</td>
<td>12</td>
<td>.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.29</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $*p < .05$

Table 11 Results of the multiple comparisons of the contextualized comprehension

Dependent variable: Accurate idiom interpretation

<table>
<thead>
<tr>
<th>Type</th>
<th>Type</th>
<th>Mean Difference (I–J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>J</td>
<td></td>
<td></td>
<td></td>
<td>95% Confidence Interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Upper Bound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>PM</td>
<td>.49</td>
<td>.21</td>
<td>.094</td>
<td>.08</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NM</td>
<td>.57</td>
<td>.21</td>
<td>.049*</td>
<td>.00</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>M</td>
<td>.49</td>
<td>.21</td>
<td>.094</td>
<td>1.05</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NM</td>
<td>.08</td>
<td>.21</td>
<td>.925</td>
<td>.48</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>NM</td>
<td>M</td>
<td>.57</td>
<td>.21</td>
<td>.049*</td>
<td>1.13</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>.08</td>
<td>.21</td>
<td>.925</td>
<td>.64</td>
<td>.48</td>
<td></td>
</tr>
</tbody>
</table>

Note: M = matching, PM = partially matching, NM = non-matching

*The mean difference is significant at the .05 level.
The results of the Tukey multiple comparisons test (Table 11) point to a significant difference between the mean scores of comprehending the matching and non-matching pairs \((p = .049)\). By contrast, no significant difference was found between the mean scores for comprehending the matching and partially matching pairs \((p = .094)\), or between the mean scores for the partially matching and non-matching categories \((p = .925)\).

On the basis of the one-way ANOVA and the follow-up Tukey multiple comparisons analyses, neither the colloquial idiom type nor the degree of L1–L2 similarity significantly affected the ease of colloquial idiom comprehension. The matching colloquial idioms that had an exact equivalent in English L1 posed only a slight decoding problem for the Chinese L2 learners. In contrast, comprehending the other two types of colloquial idioms necessitated considerably greater mental effort. This finding is particularly true for the non-matching category. Compared with the statistical results obtained in the decontextualized condition, those derived in the contextualized setting indicate that context substantially facilitated the comprehension and interpretation of the target colloquial idioms, especially with respect to the partially matching category. These findings suggest that guessing the idiomatic meaning of an unknown colloquial idiom that does not have a clear L1 equivalent requires clear context-specific text and situational cues.

### 4.3 Idiom comprehension strategies

This section presents analysis and results of the following three parts: (1) comprehension strategies exhibited in the decontextualized condition, (2) strategies
utilized in the contextualized comprehension task, and (3) strategies that contributed to better comprehension in the short paragraph context.

4.3.1 Comprehension strategies in the decontextualized task

Following a tradition in qualitative research, data analysis was primarily inductive: Categories and themes emerged from the collected data. The researcher first repeatedly read through the transcripts of the TA protocols that were gathered from the 30 participants in the decontextualized task, and then marked initial categories. Next, the researcher compiled all the identified categories in a list and constantly compared the list against the transcripts of TA protocols to make sure that no categories related to the research were omitted.

Analysis of the participants’ TA protocols revealed a range of comprehension strategies. Table 12 offers a summary of all the strategies utilized by the participants in the decontextualized comprehension. All data are given first in numeric values of total tallies, followed by the total percent that each strategy occupies in the total scheme of strategies.

The list of strategies provided by these participants is by no means exhaustive. Nevertheless, the information captured in Table 12 not only enriches the decontextualized data in important ways, but it also enhances our understandings with regard to the process of L2 Chinese colloquial idiom comprehension in isolation. A more detailed examination of data revealed that in the absence of contextual support, the majority of the participants employed predominantly the literal meaning of the target colloquial idioms (34.43%), the syntactic and semantic analyses of the lexical unit (27.36%), their translation skills from
L2 to L1 and vice versa (12.89%), and their knowledge and experience with L1 (9.75%) as the main guides in reaching a definition. These four strategies combined were used approximately five times more frequently than the remaining five strategies listed in Table 12. The combined strategy use observed is 84.43% and 15.57% respectively.

Table 12 Strategies used in the decontextualized comprehension

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Frequency</th>
<th>% of All Uses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzing component words or characters</td>
<td>174</td>
<td>27.36%</td>
</tr>
<tr>
<td>Literal translation</td>
<td>301</td>
<td>12.89%</td>
</tr>
<tr>
<td>Relating to known Chinese words</td>
<td>4</td>
<td>0.63%</td>
</tr>
<tr>
<td>Using literal meaning</td>
<td>219</td>
<td>34.43%</td>
</tr>
<tr>
<td>Referring to L1 expressions</td>
<td>62</td>
<td>9.75%</td>
</tr>
<tr>
<td>Inventing meaning</td>
<td>22</td>
<td>3.46%</td>
</tr>
<tr>
<td>Prior knowledge</td>
<td>21</td>
<td>3.30%</td>
</tr>
<tr>
<td>No interpretation given</td>
<td>29</td>
<td>4.56%</td>
</tr>
<tr>
<td>Unable to figure out</td>
<td>23</td>
<td>3.62%</td>
</tr>
</tbody>
</table>

Note: *Total strategy uses on all items = 636

The identified strategies were anchored in the broad range of TA protocols generated by the 30 participants during the decontextualized task. Table 13 below captures the most representative comments made by the participants regarding their interpretations.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Supporting TA Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzing component words or characters</td>
<td>“[小道消息 (word on the street)] 道 is used for arriving; 消息 looks vaguely familiar; I think 息 might be part of relax…”</td>
</tr>
<tr>
<td>Literal translation</td>
<td>“[开夜车 (burn the midnight oil)] open an evening car, to drive an evening car, I don’t know…”</td>
</tr>
<tr>
<td>Relating to known Chinese words</td>
<td>“[一口气 (in one breath)] … if you compare 口气 with 脾气, it always has something to do with tones maybe. I don’t know…”</td>
</tr>
<tr>
<td>Using literal meaning</td>
<td>“费口舌 (beat a dead horse), probably wasting words, like saying something that’s unnecessary…”</td>
</tr>
<tr>
<td>Referring to L1 expressions</td>
<td>“拉长脸 (pull a long face), I also don’t know this one, but I guess it’s like English “having a long face…”</td>
</tr>
<tr>
<td>No interpretation given</td>
<td>“[小道消息 (word on the street)], skip it.”</td>
</tr>
<tr>
<td>Unable to figure out</td>
<td>“二把手 (second-in-command), this one I’m really not sure. 二把手, not so clear to me…”</td>
</tr>
<tr>
<td>Inventing meaning</td>
<td>“上西天 (bite the dust), it makes me think of cats having 9 lives. So they can die 9 times before officially dead…”</td>
</tr>
<tr>
<td>Prior knowledge</td>
<td>“[对牛弹琴 (cast pearls before swine)], I’ve heard this one before, but I am not 100% sure. I think it means something like doing something for somebody. That person is not able to appreciate it.”</td>
</tr>
</tbody>
</table>
The analysis of the qualitative data revealed a general pattern in the participants’ comprehension process, that is, a “part-to-whole and literal-to-figurative” approach to interpreting the target Chinese colloquial idioms in isolation. Specifically, the participants tended to start first with an analysis of the component characters or literal meanings of the target Chinese colloquial idioms, and then they attempted to figure out the figurative meanings by using a range of sources of information or knowledge, including the knowledge gathered on the literal level, their prior knowledge, L1 expressions, and so on.

4.3.2 Comprehension strategies in the contextualized task

To determine the strategies employed by the participants in comprehending the Chinese colloquial idioms in the short paragraph context, the transcripts of TA protocols, which were collected in the contextualized task, were examined and coded against the coding system formulated in the previous chapter. It was found that the participants employed a range of strategies to derive the meanings of the target Chinese colloquial idioms in context. The nine strategies in the coding system were utilized to varying degree by the 30 participants.

Participants tended to use several strategies in the process of comprehending one single colloquial idiom (Table 14). The bottom row of Table 14 summarizes the frequency of use of each strategy across the 15 colloquial idioms.
Table 14 Frequency of strategies used in the contextualized comprehension task, by idiom

<table>
<thead>
<tr>
<th>Strategy</th>
<th>RI</th>
<th>RW</th>
<th>ST</th>
<th>CC</th>
<th>BK</th>
<th>L1–I</th>
<th>RK</th>
<th>LS</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>拉长脸</td>
<td>3</td>
<td>7</td>
<td>22</td>
<td>9</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>红眼病</td>
<td>5</td>
<td>8</td>
<td>26</td>
<td>11</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>上西天</td>
<td>5</td>
<td>16</td>
<td>25</td>
<td>17</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>费口舌</td>
<td>2</td>
<td>15</td>
<td>23</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>二把手</td>
<td>0</td>
<td>17</td>
<td>18</td>
<td>12</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>开绿灯</td>
<td>4</td>
<td>4</td>
<td>17</td>
<td>9</td>
<td>1</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>泼冷水</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td>10</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>开夜车</td>
<td>3</td>
<td>3</td>
<td>19</td>
<td>5</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>对牛弹琴</td>
<td>1</td>
<td>3</td>
<td>18</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>有眼光</td>
<td>2</td>
<td>6</td>
<td>16</td>
<td>11</td>
<td>1</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>走老路</td>
<td>0</td>
<td>6</td>
<td>21</td>
<td>18</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>只见树木不见森林</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>一口气</td>
<td>7</td>
<td>5</td>
<td>13</td>
<td>4</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>小道消息</td>
<td>8</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>拍马屁</td>
<td>3</td>
<td>4</td>
<td>16</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>110</td>
<td>276</td>
<td>160</td>
<td>11</td>
<td>107</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

% of all uses* 6.42% 15.34% 38.49% 22.32% 1.53% 14.92% 0.56% 0.28% 0.14%

*Total strategy use on all the items = 717

- RI= repeating the Chinese colloquial idiom; RW= reading of related words; ST= sentence translation; CC= component characters; BK= using background knowledge; L1–I = referring to an idiom in the L1; LS= looking for similarity; SC= making sound connections; RK= using radical knowledge

- 拉长脸= pull a long face; 红眼病= green-eyed monster; 上西天= bite the dust; 费口舌= beat a dead horse; 二把手= second-in-command; 开绿灯= give the green light; 泼冷水= pour cold water; 开夜车= burn the midnight oil; 对牛弹琴= cast pearls before swine; 有眼光= have good taste; 走老路= follow in someone’s footsteps; 只见树木不见森林= not see the forest for the trees; 一口气= in one breath; 小道消息= word on the street; 拍马屁= polish the apple
Figure 4 presents the percentage of use of each strategy in the contextualized comprehension task. It is demonstrated that the two most frequently used strategies were sentence translation (38.49%) and component characters (22.32%). These two strategies combined accounted for approximately 60% of all the instances of strategy use. Reading of related words (15.34%), and referring to an idiom in the L1 (14.92%) were each used about 15% of the time. Each of the rest of the strategies, including repeating the Chinese colloquial idiom (6.42%), using background knowledge (1.53%), using radical knowledge (0.56%), looking for similarity (0.28%), and making sound connections...
(0.14%), was used no more than 10% of the time. Below, the nine strategies in their rank order based on their frequency of use are discussed individually.

**Sentence translation (ST): 38.49%**

Before arriving at a definition of a Chinese colloquial idiom, the participants usually translated or attempted to translate the Chinese sentences surrounding the target colloquial idiom. This strategy may have given the participants a way of buying more time to clarify their thoughts before coming up with an interpretation. An example follows:

**Short Paragraph**

王先生每天吃晚饭的时候都会喝一点儿酒。今天吃晚饭的时候，王先生看见饭桌上没有酒就很生气。他拉长脸，坐在一边，一句话也不说。

*(Mr. Wang likes to have some wine with dinner every day. Today when he found out there was no wine on the dinner table, he pulled a long face, sat at the table, and didn’t say anything.)*

**TA Protocol**

1) I think this one, the first half of the sentence is that every day he drinks liquor with his meal/ 2) and when he was eating, he realized that he didn’t have liquor/ 3) so he became angry/ 4) so 拉长脸 (pull a long face)/ 5) so there is the idiom/ 6) and then 坐在一边一句话 (sat by the side and one word)/ 7) I am not quite sure
the second half of the sentence/ 8) so didn’t talk/ 9) maybe 拉长脸 (pull a long face) just means angry without talking/ 10) I’m not sure

Segments 1 through 3 in the TA protocol above show that the participant translated the entire short paragraph sentence by sentence into English before uttering a possible definition of the target colloquial idiom 拉长脸 (pull a long face).

Component characters (CC): 22.32%

The participants often talked in general about the Chinese colloquial idiom and the short paragraph context before venturing an interpretation. They sometimes analyzed the component characters so as to decode the target colloquial idiom. In employing this strategy, they exercised their skills of logical thinking to solve the linguistic puzzle represented by the unknown Chinese L2 expression. For example:

Short Paragraph

我习惯每个周末复习功课，所以考试前有时间休息。可是，我们班大部分同学和我不一样，他们都喜欢在考试前开夜车，考完以后大睡三天。

(I usually review during the weekend so I always have time to rest before the test. But most of my classmates are different. They like to burn the midnight oil before tests, and sleep for three days after tests.)
TA Protocol

1) 开夜车 (burn the midnight oil) means/ 2) so 夜 (night) I think is night/ 3) so 开夜车 (burn the midnight oil) means to be like not literally driving in the night/ 4) but the students stay up all night in order to study for the exam/ 5) and then they sleep for three days/ 6) instead this person, he’s studying throughout the whole week in order to study for the exam/ 7) so 开夜车 (burn the midnight oil) not literally means to be driving at night, but to be staying up at night

This TA protocol above indicates that when encountering the target colloquial idiom 开夜车 (burn the midnight oil) in context, the participant started with the literal meaning of its constituent characters (segments 2–3). Then based on the content of the linguistic context, the participant was able to move beyond the character-by-character translation to reach the intended meaning of this phrase (stay up at night).

Reading of related words (RW): 15.34%

Sometimes a specific part in the short paragraph context was the key to the meaning of the target Chinese L2 expression. The participants often made use of this relevant piece of information by analyzing them as an aid to learning the target item. Below is one example of this strategy:

Short Paragraph

妈妈说：“你哥哥从小学习就不努力。他现在的样子你都看到了，你要是不想走他的老路，就得从现在开始努力学习。”
(Mom says: “Your older brother has never worked hard. You’ve seen what he is like now. If you don’t want to follow in his footsteps, you should work hard from now on.”)

TA Protocol

1) Okay so this, this has to do with following somebody’s path/ 2) I thought maybe it was following maybe old traditions/ 3) but now I see 他的 (his) in front of 老路 (old path)/ 4) it could be to follow somebody else’s ways/ 5) maybe at least in this case it’s a negative thing I don’t know/ 6) but it could be

It seems that the participant at first was not quite certain what 走老路 (old path) referred to in the target colloquial idiom 走老路 (follow in someone’s footsteps). After reading the short paragraph, the relevant word 他的 (his) in front of 老路 (old path) helped the participant determine what this target phrase meant, and how it fit with the context (segments 3–4).

Referring to an idiom in the L1 (L1–L): 14.92%

Sometimes the participants remembered English idiomatic expressions that were identical or similar enough to the Chinese colloquial idioms to aid in their interpretation. Sometimes the participants were able to derive the meaning of the Chinese L2 expression from the short paragraph context successfully. In the end, however, they still liked to use the English idioms to back up their interpretation of the target colloquial idiom within the context. For example:
Sometimes we see a lot of people who only think of themselves or only work for their own interests instead of the common interests of the community. Of course they could not see the forest for the trees.

TA Protocol

1) Not being able to see the bigger picture/ 2) only think for yourself/ 3) it’s easier for me/ 4) because of the English equivalent ‘not seeing the forest for the trees’

The TA protocol above shows that the participant was able to get the general idea of the target colloquial idiom (not see the forest for the trees) within this context (segments 1–2). At the end, he briefly commented how he used the English equivalent expression (not see the forest for the trees) to support his interpretation of this Chinese expression (segments 3–4).

Repeating the Chinese colloquial idiom (RI): 6.42%

Some participants employed the strategy of repeating the Chinese colloquial idiom to help anchor the expression in mind before they came up with a definition. This strategy could be a way to gain time before a possible interpretation came to mind. For example:
Short Paragraph

老张说：‘前两天我和大民出去，赶上了大雨。大民回来后感冒了好几天。我呢，什么事也没有。我的身体我知道，离上西天还早着呢！’

(Mr. Zhang says: ‘Da Min and I went somewhere together the other day. It rained so heavily that Da Min caught a cold and was sick for several days. Me? I am very well! I know about my health. It’s way too soon for me to bite the dust!!’)

TA Protocol

1) Not really sure/ 2) I think it has something to do with travelling/ 3) yeah no idea/ 4) 上西天 (bite the dust) / 5) 上西天 (bite the dust) / 6) they went out/ 7) so maybe he knows what his body is capable of/ 8) then he didn’t get sick but everybody else did/ 9) not really sure what 上西天 (bite the dust) is

As seen in segments 4 and 5 in the TA protocol above, the participant repeated the target colloquial idiom 上西天 (bite the dust) a couple of times before she tried to translate the linguistic context (segments 4–5). Possibly by doing so, the participant could gain time and search relevant information in her memory to facilitate her interpretation. However, at the end she was still unable to venture a definition of the target expression.

Using background knowledge (BK): 1.53%

This strategy refers to participants’ making use of their prior knowledge and experience to explain and clarify the Chinese colloquial idiom and its short paragraph
context. Sometimes they derived understandings of the colloquial idiom from their
general knowledge about Chinese language and culture. Below is one TA protocol
exemplifying this strategy at work.

Short Paragraph

老张说：“前两天我和大民出去，赶上了大雨。大民回来后感冒了好几天。我呢，
什么事也没有。我的身体我知道，离西天还早着呢！”

(Mr. Zhang says: “Da Min and I went somewhere together the other day. It rained so
heavily that Da Min caught a cold and was sick for several days. Me? I am very well! I
know about my health. It’s way too soon for me to bite the dust!!”)

TA Protocol

1) I have no idea on this one/ 2) so it’s like my health I know/ 3) my health is very
good/ 4) compared to be going/ 5) let me think it’s the heaven/ 6) like the
Amitābha Buddha’ western paradise in Pure Land Buddhism/ 7) so my health is
very good/ 8) far away from heaven/ 9) I wanna say that

As seen in this TA protocol, the participant related his prior knowledge, that is,
Pure Land Buddhism, to the linguistic context in which the target colloquial idiom 上西
天 (bite the dust) was embedded (segment 6). Accessing his prior knowledge helped him
understand the meaning of the target colloquial idiom.
Using radical knowledge (RK): 0.56%

Sometimes the participants had difficulties recognizing the constituent characters of the target colloquial idioms. Therefore, they tended to make use of their radical knowledge to decipher the unrecognizable characters. For the participants at such a high level of proficiency, this strategy was only rarely used. One example follows:

Short Paragraph

老板的太太最近开了个饭馆卖早饭。小王就每天都去那家饭馆吃早饭。大家都觉得小王这么做是为了拍老板的马屁。

(The wife of Xiao Wang’s boss recently opened a restaurant to sell breakfast. Xiao Wang has breakfast in that restaurant every day. Everybody thinks Xiao Wang is polishing the apple.)

TA Protocol

1) 大家都觉得小王这么做是为了 (everyone thinks Xiao Wang does this because) 2) because 拍老板的马屁 (sucking up to the boss) 3) 拍 (pat) has a hand radical 4) and that’s 白 (white) 5) that’s gonna for pronunciation 6) and hand doesn’t have 买 (buy) 7) so he doesn’t buy his horse 8) so he grabs his horse 9) oh 拍 he rode his horse 10) he rides his horse

Segments 3–6 in this TA protocol show that the participant had trouble figuring out 拍 (pat), one of the component characters of the target colloquial idiom 拍马屁 (pat-horse-butt; polish the apple). Therefore, he employed his radical knowledge of 扌 (a
semantic indicator) and わ (a phonetic indicator) to decipher this character, which did not help him much understand the target colloquial idiom.

**Making sound connections (SC): 0.28%**

When discussing and analyzing the Chinese colloquial idiom, the participants linked the meaning of parts of the target item to another known Chinese word or character through their similar sounds. Similar to the strategy of using radical knowledge, this strategy was used only once by one participant. Below is the one incident of this strategy:

**Short Paragraph**

王先生每天吃晚饭的时候都会喝一点儿酒。今天吃晚饭的时候，王先生看见饭桌上没有酒就很生气。他拉长脸，坐在一边，一句话也不说。

*(Mr. Wang likes to have some wine with dinner every day. Today when he found out there was no wine on the dinner table, he **pulled a long face**, sat at the table, and didn’t say anything.)*

**TA Protocol**

1) Oh yeah it’s like make a face 2) so here he is just very angry coz he doesn’t have any wine 3) so he sits on one side 4) he doesn’t talk 5) so maybe he is like doing a long face 6) as if he has like eaten something really bad 7) I am not sure this **拉** is like spicy 8) but in this case there is definitely reference to the face 王先生 is doing 9) it’s like a long face 10) as if he’s eaten something bad probably
This TA protocol shows that the participant could not recognize 拉 (pull), one of the constituent characters of the target colloquial idiom 拉长脸 (pull-long-face; pull a long face). She therefore interpreted this character as ‘spicy,’ since the character which represents ‘spicy’ in Chinese (辣 là) shares a similar pronunciation as the character 拉 (lā) (segment 7). However, as shown in this case this strategy did not help the participant to successfully interpret the target colloquial idiom.

**Looking for similarity (LS): 0.14%**

The participants occasionally linked the component character(s) of the Chinese colloquial idiom to other Chinese character(s) based on their visual similarity. This is one of the rarely used strategies, and it indicated that the participants at the advanced proficiency level still had difficulty recognizing characters. For example:

**Short Paragraph**

老板的太太最近开了个饭馆卖早饭。小王就每天都去那家饭馆吃早饭。大家都觉得小王这么做是为了拍老板的马屁。

*(The wife of Xiao Wang’s boss recently opened a restaurant to sell breakfast. Xiao Wang has breakfast in that restaurant every day. Everybody thinks Xiao Wang is polishing the apple.)*

**TA Protocol**

1) 拍老板的马屁 (suck up to the boss)/ 2) oh okay maybe 拍 (pat) is like afraid of/ 3) he is afraid of his boss/ 4) I don’t know
The TA protocol above shows that the participant was not able to distinguish 拍 (pat), one of the component characters of the target colloquial idiom 拍马屁 (pat-horse-butt; polish the apple), from the character 怕 (be afraid of). He mistakenly used the meaning of 怕 (be afraid of) (segment 2); therefore, he did not manage to get to the correct interpretation of the target colloquial idiom.

4.3.3 Strategies that contributed to better comprehension in the contextualized task

To answer this research question, the nine comprehension strategies were first classified into three core strategy categories in accordance with their nature and characteristics. The core strategy categories were semantic processing (SP), pre-existing knowledge (PK), and orthographic analysis (OA) (Table 15).

<table>
<thead>
<tr>
<th>Category</th>
<th>Strategy</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>Repeating the colloquial idiom, Reading of related words, Sentence translation</td>
<td>Relating syntactic structures to their semantic meanings to facilitate comprehension of the colloquial idiom</td>
</tr>
<tr>
<td>PK</td>
<td>Referring to an idiom in the L1, Using background knowledge</td>
<td>Making use of external knowledge sources and associations to explain and clarify the colloquial idiom and its context</td>
</tr>
<tr>
<td>OA</td>
<td>Component characters, Looking for similarity, Making sound connections, Using radical knowledge</td>
<td>Applying orthographic knowledge to decipher the constituent elements of the colloquial idiom</td>
</tr>
</tbody>
</table>

Note: SP = semantic processing, PK = pre-existing knowledge, OA = orthographic analysis
The SP category comprises three sub-strategies, namely, repeating the Chinese colloquial idiom (RI), reading of related words (RW), and sentence translation (ST). The underlying rationale that these three strategies were put together was that they were used to relate syntactic structures from the levels of phrases, clauses, and sentences to their semantic meanings, as a means to facilitate comprehension of the target colloquial idiom.

Two sub-strategies, namely, using background knowledge (BK) and referring to an idiom in the L1 (L1–I), both refer to participants making use of external knowledge sources and associations to explain and clarify the colloquial idiom and its context. The participants have already acquired this type of knowledge before participating in the study. These sub-strategies were therefore classified as being of PK type.

Four sub-strategies, namely, component characters (CC), looking for similarity (LS), making sound connections (SC), and using radical knowledge (RK), were categorized as OA approaches, because these entail the application of orthographic knowledge to decipher the constituent elements of the target colloquial idioms.

Next, the relationship between the frequency of using a certain strategy category and its accurate idiom interpretations needs to be examined.

Table 16 Distribution of the strategy categories used, correct idiom interpretation, and percentage for idiom interpretation accuracy

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>SP</th>
<th>PK</th>
<th>OA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies Used</td>
<td>432</td>
<td>118</td>
<td>167</td>
<td>717</td>
</tr>
<tr>
<td>Correct Idiom Interpretation</td>
<td>294</td>
<td>118</td>
<td>109</td>
<td>521</td>
</tr>
<tr>
<td>Rate for Correct Idiom Interpretation (%)</td>
<td>68.06%</td>
<td>100%</td>
<td>65.27%</td>
<td>72.66%</td>
</tr>
</tbody>
</table>

Note: SP = semantic processing, PK = pre-existing knowledge, OA = orthographic analysis
Table 16 shows the distribution of the strategy categories used, correct idiom interpretations, and accuracy of idiom interpretation achieved in the contextualized task. Overall, the core strategy categories were attempted 717 times, among which 521 facilitated accurate idiom interpretations. In terms of specific frequencies, the participants attempted SP 432 times, of which 294 facilitated accurate interpretations. The accuracy rates achieved with PK and OA were 100% and 65.27%, respectively. As can be seen, the accuracy rates achieved with the three core strategy categories were all above 50%, indicating that the interpretations were at a level higher than random guessing.

A multiple regression analysis with a stepwise method was conducted to evaluate which of the three core strategy categories could best predict accurate idiom interpretation. At step 1 of the analysis, PK and SP were both entered for analysis (Table 17.1). The results show that these two categories of strategies significantly contributed to accurate interpretation of the target colloquial idioms. Judging from the value of $R^2$ (Table 17.2), PK was the strongest predictor ($R^2 = .47$), and it explained 47% variance of accurate idiom comprehension, and SP was the second strongest predictor ($R^2 = .22$), which contributed 22% variance to accurate idiom interpretation. At step 2 of the analysis, the OA category was not entered into the equation ($t = .78, p > .10$; Table 17.3); that is, OA was not a strong predictor of accurate idiom interpretation. Below is the regression equation used to predict accurate idiom interpretation (Table 17.4).

Predicted accurate idiom interpretation = 1.93 PK + 0.71 SP + 4.48
Table 17 Summary statistics, and the results of multiple regression analysis

Table 17.1 Variables entered/removed

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PK</td>
<td></td>
<td>Stepwise (Criteria: Probability-of-F-to-enter &lt;= .050, Probability-of-F-to-remove &gt;= .100).</td>
</tr>
<tr>
<td>2</td>
<td>SP</td>
<td></td>
<td>Stepwise (Criteria: Probability-of-F-to-enter &lt;= .050, Probability-of-F-to-remove &gt;= .100).</td>
</tr>
</tbody>
</table>

Note:
Dependent Variable: Accurate idiom interpretation
1. Variables entered: PK = pre-existing knowledge
2. Variables entered: SP = semantic processing

Table 17.2 Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adj. $R^2$</th>
<th>$R^2$ Change</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.68</td>
<td>.47</td>
<td>.42</td>
<td>.47</td>
<td>.005**</td>
</tr>
<tr>
<td>2</td>
<td>.83</td>
<td>.69</td>
<td>.64</td>
<td>.23</td>
<td>.011*</td>
</tr>
</tbody>
</table>

Note:
1. Predictors: (Constant), PK = pre-existing knowledge
2. Predictors: (Constant), PK = pre-existing knowledge, SP = semantic processing

$p < .05$, $**p < .01$

Table 17.3 Excluded variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta In</th>
<th>$T$</th>
<th>Sig.</th>
<th>Partial Correlation</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>SP</td>
<td>.49</td>
<td>2.98</td>
<td>.011*</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>OA</td>
<td>.25</td>
<td>1.18</td>
<td>.262</td>
<td>.32</td>
</tr>
<tr>
<td>2</td>
<td>OA</td>
<td>.18</td>
<td>.78</td>
<td>.451</td>
<td>.23</td>
</tr>
</tbody>
</table>

Note:
Dependent Variable: Accurate idiom interpretation
1. Excluded Variables: OA = orthographic analysis, SP = semantic processing
2. Excluded Variables: OA = orthographic analysis

$p < .05$
### Table 17.4 Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>20.44</td>
<td>4.44</td>
<td></td>
<td>4.60</td>
</tr>
<tr>
<td>PK</td>
<td>1.66</td>
<td>.49</td>
<td>.68</td>
<td>3.36</td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>4.48</td>
<td>6.40</td>
<td></td>
<td>.70</td>
</tr>
<tr>
<td>PK</td>
<td>1.93</td>
<td>.40</td>
<td>.79</td>
<td>4.83</td>
</tr>
<tr>
<td>SP</td>
<td>.71</td>
<td>.24</td>
<td>.49</td>
<td>2.98</td>
</tr>
</tbody>
</table>

Note:
Dependent Variable: Accurate idiom interpretation
1. Predictors: (Constant), PK = pre-existing knowledge
2. Predictors: (Constant), PK = pre-existing knowledge, SP = semantic processing
* p < .05, ** p < .01, *** p < .001

### 4.4 Summary of the chapter

This chapter presented the data collected from the decontextualized and contextualized tasks and the data analyses intended to answer the research questions. It was found that the short paragraph context significantly facilitated the comprehension of the three types of Chinese colloquial idioms, especially with respect to the partially matching category. The degree of L1–L2 similarity significantly affected the ease with which the participants understood the target idiomatic expressions in both conditions. Overall, the participants adopted a heuristic approach and employed a wide variety of strategies to access meaning of the target colloquial idioms. Among the strategies identified in the contextualized task, pre-existing knowledge and semantic processing were strong predictors of accurate idiom interpretation.

The next chapter discusses the major findings with respect to the research questions and presents the interpretation of the results in relation to the literature reviewed in Chapter 2.
CHAPTER V

DISCUSSION

The present study explores how comprehension strategies, learners’ native language, and contextual information influence the comprehension and interpretation of three types of Chinese colloquial idioms by advanced English-speaking learners. It also discusses whether the existing models of L1 idiom comprehension account for the processing of L2 idioms. This chapter elaborates on the major findings with respect to the research questions and presents the interpretation of the results in relation to the literature reviewed in Chapter 2.

5.1 Effects of context

The study revealed that overall, the advanced Chinese L2 learners comprehended the 15 target colloquial idioms more successfully in the contextualized task than in the decontextualized task. With reference to the comprehension of the three sub-types of colloquial idioms (i.e., matching, partially matching, and non-matching), in both tasks, the matching type was the easiest to comprehend, whereas statistically speaking, the partially matching type was almost as difficult as the non-matching type to understand. Additionally, all of the sub-types of colloquial idioms received more comprehension points in the contextualized condition than in the decontextualized condition, with the participants exhibiting the highest improvement in comprehending the partially matching category. The statistical analyses performed on the data confirmed that the comprehension of all the Chinese colloquial idioms, particularly the partially matching
category, was significantly facilitated by the short paragraph context in which the target colloquial idioms were embedded.

This facilitative effect can be explained by schema theory (Anderson, 1984; Bartlett 1932; Rumelhart, 1983; Widdowson, 1983), which proposes that word inference can be seen as a process of searching for and using of relevant schemata to identify unfamiliar verbal stimuli. Widdowson (1983) stated that schemata serve as frames of reference that provide a basis for prediction and allow for the organization of information in long-term memory. The search for likely candidate schemata is, by nature, sensitive to the context in which the process occurs (Rumelhart & Ortony, 1977).

In this research, the short paragraph context provided background information that aided predictions about a Chinese colloquial idiom’s meaning. The context not only advanced memory searches for information that can define the figurative sense of a colloquial idiom, but it also provided the materials for appropriate inferential processes. When comprehending the target Chinese colloquial idioms in isolation, however, the participants had no supporting contextual information that could help them either confirm or revise any of their predictions regarding particular colloquial idioms. This challenge resulted in an overall low accuracy rate (27.44%) for their comprehension.

The conclusions drawn in the current study are consistent with those presented in previous studies (e.g., Levorato, 1993; Li, 2011; Liontas, 2002; Wu & Zhang, 2006) that examined the effects of context on idiom comprehension. Similar to the present study, Liontas (2002) required participants to write down their interpretations and the thought processes involved in comprehending 45 unfamiliar L2 idioms in one zero-context task.
and one full-context task. The results showed that context (or lack thereof) significantly affected the comprehension of the target L2 idioms.

Wu and Zhang (2006) and Li (2011) discussed the effects of different types of contexts on the comprehension of L2 idioms. Wu and Zhang employed a multiple-choice task and asked 62 participants of various L1 backgrounds to comprehend 24 unfamiliar Chinese colloquial idioms in zero-, neutral-, and full-context conditions. The authors found that the participants primarily comprehended the literal meaning of the target colloquial idioms in the zero and neutral contexts, and they understood the figurative meaning of the idioms under the full-context condition. The researchers concluded that only strong context promotes the comprehension of the figurative meanings of Chinese colloquial idioms. Li (2011) arrived at similar conclusions. The author asked 20 advanced Chinese L2 learners of Korean and 20 advanced Chinese L2 learners of American English to verbalize their thoughts as they determined the meanings of 20 Chinese colloquial idioms in both strong and weak contexts. The author found that the participants more accurately comprehended the target idioms in the strong context than in the weak context. This finding supports previous studies concerning the role of context in L1 idiom comprehension (e.g., Levorato, 1993; Levorato & Cacciari, 1992, 1995), wherein context was the superior variable in the computation and comprehension of different types of idioms.

In an experiment conducted by Levorato (1993), first and fourth graders were asked to comprehend unfamiliar English idioms in two conditions. In Condition 1, the idioms were embedded in a linguistic context consisting of a short narrative, whereas in Condition 2, the idioms were presented in isolation and out of context. Comprehension
was evaluated by a multiple-choice test. The results confirm that the linguistic context in which an idiom is embedded plays a key role in the acquisition of figurative meaning.

Context is one of the most relevant variables to consider when probing into the comprehension of idiomatic expressions in an L2. Future research can examine how context interacts with other factors to determine the comprehension and acquisition of idiomatic meanings. The issue that can be addressed include the extent to which context facilitates L2 idiom comprehension when the degree of L1–L2 similarity systematically vary, and the manner by which task type or the richness of contextual information affects the comprehension of idioms in an L2.

5.2 Effects of degree of L1–L2 similarity

The findings reveal that idiom type, operationalized in this study as the degree of L1–L2 similarity, significantly affected the comprehension and interpretation of the three types of Chinese colloquial idioms. In the decontextualized and contextualized conditions, the matching colloquial idioms were the easiest to comprehend and accurately interpret, whereas the statistical analyses revealed that the partially matching idioms were almost as difficult as the non-matching colloquial idioms. The ease with which the matching colloquial idioms were understood is unsurprising, given that the expressions in this category formally resemble their English equivalents, whereas those belonging to the two other categories are formally dissimilar from their English counterparts. The findings suggest that the participants used their knowledge of corresponding idioms in their native language (English) to comprehend and interpret the unknown L2 idiomatic phrases. To grasp these, the participants generalized the meanings in their L1 to the meanings in their
L2 when linguistic forms are identical. This strategy is ineffective when dealing with dissimilar forms.

The conclusions drawn in this regard are inconsistent with previous studies on the effects of L1 on L2 learners’ comprehension of L2 idioms. Irujo (1984) and Liontas (2001) obtained results similar to those of the present study, with the authors discovering that L2 learners used L1 knowledge as basis for comprehending idioms in their L2, and that the learners processed matching idioms considerably more easily than non-matching idioms. Jordens (1977) and Kellerman (1977), however, detected reluctance to transfer L1 knowledge as a strategy to understand L2 idioms.

Irujo (1984) conducted a multiple-choice test and a definition test to examine how Venezuelan advanced learners of English comprehended identical, similar, and different idioms. Consistent with the current study, the author found that the participants used their knowledge of Spanish (L1) to comprehend the target English idioms, with the participants most easily comprehending the identical idioms. A contrasting elements of Irujo’s work is that it also determined an almost identical level of comprehension for similar and identical idioms; the different idioms were the most difficult to comprehend.

In two experiments, Liontas (2001) employed a zero-context task, followed by a full-context task, to investigate the comprehension of Modern Greek phrasal idioms by third-semester L2 learners. In both tasks, the participants were required to define a target idiom before providing its English equivalent. In correspondence with the present study, Liontas found that under both conditions, matching phrasal idioms were processed much easier than non-matching phrasal idioms, and non-matching phrasal idioms presented some processing problems, especially when the phrases are semantically opaque. Note
that this study explored only the comprehension of matching and non-matching L2 idioms and did not address the comprehension of partially matching idioms.

The findings of the current research also differ from those of Jordens (1977) and Kellerman (1977), who conducted two experimental studies involving L2 learners in the Netherlands but employed very different tasks. In Jordens’s work, German L2 learners were asked to complete one grammaticality judgment test, followed by a specificity test. The materials consisted of L2-specific expressions, namely, correct L2 expressions with Dutch equivalents, incorrect L2 expressions with Dutch equivalents, and correct L2 expressions without Dutch equivalents. The author also used natural L2 expressions, such as correct L2 expressions with Dutch equivalents. In Kellerman’s study, the learners drawn from years 1, 2, and 3 of English programs at the University of Nijmegen were given a list of sentences. And they were asked to underline the segments of each sentence that they deemed incorrect. The sentences could be described in the following manners: (1) sentences containing a Dutch-like idiomatic expression that remains comprehensible when directly translated to English; (2) sentences containing a Dutch-like idiomatic expression that is non-transferrable to English; (3) sentences containing idioms that are impossible to translate into Dutch; and (4) sentences containing idioms that do not have equivalents in either Dutch or the foreign language. The results indicate that L2 learners tended to judge idioms with L1 equivalents as ungrammatical, thus motivating a reluctance to transfer them to the L2; L2 learners with high proficiencies, however, used their acquired knowledge of English (L2) as basis for carrying out evaluations (Jordens, 1977; Kellerman, 1977). These findings contradict those obtained in the present work.
The degree of L1–L2 similarity is instrumental in comprehending idiomatic phrases in an L2. Future research can recruit diverse linguistic and cultural groups as participants and examine the extent to which linguistic and cultural variables influence L2 idiom comprehension, and determine whether the effects are consistent across multiple linguistic and cultural populations.

5.3 Idiom comprehension strategies

As previously stated, the participants tended to use multiple strategies for comprehending a given Chinese colloquial idiom. The findings align with those of previous studies concerning strategies for L2 idiom comprehension (e.g., Cooper, 1999; Li, 2011; Lin, 2006; Liontas, 2002) in that upon encountering an unknown idiomatic expression, L2 learners employed a variety of strategies in a guess-and-check fashion to interpret target expressions.

In the decontextualized condition, the participants drew on knowledge acquired at the literal level, prior knowledge, L1 knowledge, and so on, to acquire the meanings of the target colloquial expressions. Among the strategies generated in the TA protocols, four—analyzing component words or characters, carrying out literal translations, using literal meaning, and referring to L1 expressions—were used frequently (approximately 85% of the time). By contrast, reliance on the five remaining strategies—withholding an interpretation, failing to determine meaning, inventing meaning, using prior knowledge, and relating to known Chinese words—was considerably less frequent (only about 15% of the time).
Literal-level processing, which involves analyzing component words or characters, carrying out a literal translation, and using literal meaning, occupies such a central role that this essentiality suggests heavy influence from literal meanings; that is, in the absence of supporting contexts, comprehending and interpreting an unknown Chinese colloquial idiom are substantially affected by the literal meaning of its constituent characters or words. Referring to L1 expressions is also facilitative of comprehension, with the Chinese L2 learners adopting this strategy to construct interpretative predictions regarding the definitions of target expressions.

In the contextualized condition, a ranking of strategy use yields the sequence sentence translation (ST), component characters (CC), reading of related words (RW), referring to an idiom in the L1 (L1–I), repeating the Chinese colloquial idiom (RI), using background knowledge (BK), using radical knowledge (RK), looking for similarity (LS), and making sound connection (SC), indicating that the short paragraph context substantially influenced the comprehension of the Chinese colloquial idioms. The participants employed several sources of information or knowledge to build a coherent representation of the content of the short paragraphs. In other words, context served as a general framework that allowed the integration of information sources and therefore enabled the comprehension of the colloquial idioms.

The results of the multiple regression analyses followed by stepwise selection suggest that pre-existing knowledge (PK) (i.e., BK and L1–I) and semantic processing (SP) (i.e., RI, RW, and ST) significantly contributed to the better comprehension of the target idiomatic phrases, whereas orthographic analysis (OA) (i.e., CC, LS, SC, and RK) was not as effective as PK or SP.
PK served as an essential source of information in comprehending unfamiliar idiomatic phrases. In applying PK, the participants actively leveraged what they already knew in examining the linguistic materials wherein the unknown idiom was situated. By making connections from their background knowledge and idioms in their L1 to the short paragraph they were asked to read, they had a foundation, or scaffolding, upon which to place new ideas and concepts regarding the target colloquial idiom. The statistical result that PK was the strongest predictor of accurate idiom interpretation is crucial. It suggests that what L2 learners already knew is an essential component in comprehending colloquial idioms, because it effectively facilitates the L2 learners to make sense of new concepts by relating to their experiences.

In addition to PK, SP also served as basis for predictions about an unknown idiomatic expression’s meaning. In a specific linguistic context, the participants analyzed the situation in which the unfamiliar colloquial idiom was embedded, which clearly referred to the situation of deriving the intended meaning. This context-level processing was necessary, because it provided crucial materials and cues for appropriate inferential processes. As the second strongest predictor of accurate idiom interpretation, SP type of strategies together with PK type of strategies greatly facilitated interpretations of the unknown colloquial expressions.

Unlike the literal-level processing in the decontextualized condition, OA was not directly involved in inferring unknown colloquial idioms in the short paragraph context. The fact that OA strategies mainly helped decipher literal information is understandable that the participants heavily relied on this information to grasp the target items presented in isolation. In the contextualized condition, however, the target items were presented
with their surrounding informative contexts, and the participants could search for the contextual cues that were necessary to construct a coherent representation of a text. Under this condition, OA could facilitate only literal-level computation as a means through which the participants could more clearly understand the constituent elements of the target items. As such, OA was minimally contributory to the integration of each local information into a global representation of text meaning. Although OA category of strategies was not a strong predictor for comprehending the figurative meaning of an idiom, they were important for learners to access the literal meaning of the idiom.

Direction for future research on the comprehension of L2 idioms can involve exploring the role of contexts in which unfamiliar idioms are presented. For instance, presenting unknown idioms in a non-supportive context to examine which strategies may illuminate a different perspective on how L2 learners deal with idiomatic phrases. Another issue worth attending to is the relationship between background or external factors and knowledge of L2 idioms. Scholars can delve into how the degree of identification with an L2 community and culture contributes to the understanding of idioms in the target language.

5.4 Idiom comprehension models revisited

In completing the decontextualized comprehension task, the participants attempted to comprehend the target Chinese colloquial idioms in their literal sense until this strategy was no longer effective. Under this condition, the strategy alone did not ensure appropriate interpretations of the idiomatic meaning even though literal-level processing was employed for a given item. Extra computation beyond understanding the
literal meaning of a target phrase was necessary. In this setting, however, the participants were provided only with a particular phrase. To attempt extra computation, the participants could only resort to L1 expressions, previous knowledge, familiar Chinese words, wild guessing, and critical thinking. Among the several strategies employed in this condition, literal-level processing and referring to L1 expressions were used most frequently.

In comparison, the supporting information available in the contextualized condition significantly facilitated the comprehension and interpretation of the target Chinese colloquial idioms. To complete this task, the participants employed a wide range of strategies to formulate plausible interpretations; these strategies included CC, ST, BK, and L1–I. Put differently, the participants applied an experimental approach—a heuristic method—to decode the target Chinese colloquial idioms in context. Among the strategies identified, the most effective were PK and SP.

The comprehension of L2 Chinese colloquial idioms is a complex process, and the existing models of L1 idiom comprehension in both non-compositional and compositional approaches are too limited in scope to account for such a process.

As illustrated in Chapter 2, the non-compositional approach recognizes idioms as long words that syntactically and semantically behave as lexical entries. Under this approach, the idiom list, lexical representation, and direct access models all operate under the premise that during idiom processing, the component words of an idiom do not influence or direct its interpretation. This notion contrasts with the ideas that emerged in the present study. Most of the time, the participants did not view an idiomatic phrase as a whole. Instead, they tended to rely on OA in guessing the meanings of the target
colloquial idioms. This inclination was especially pronounced in cases wherein contextual support was withheld and component characters were the only information given. As an important strategy, analyzing component words or characters was used 27.36% of the time in the decontextualized task; in the contextualized task, the four OA sub-strategies (i.e., CC, RK, LS, and SC) were used 23.29% of the time. The direct access model may, in a sense, account for the instances when the participants uttered the correct meaning of an idiom without referring to any comprehension strategy. This correctness, however, may be attributed to the fact that the participants had previously encountered the colloquial idioms, thereby enabling reliance on previous knowledge or retrieval from long-term memory. Another possibility is that the participants simply did not explicitly identify the strategies that helped them interpret the colloquial idiom.

As proposed in literature review, the compositional approach is consistent with the processing features that were discovered in the two tasks. Models such as the decomposition and configuration models enable the recognition of an idiom’s analyzability and are based on the premise that the literal meanings of an idiom’s component words are critical to its interpretation. Both models may apply to cases wherein participants analyze the character-level features of target items before uttering an interpretation. Nevertheless, these models assumed that participants are aware of both the literal and figurative meanings of an idiom—a case that does not apply in the current work.

Existing L1 models inadequately explain the comprehension of L2 idioms. As determined in this research, the participants employed domains of knowledge and information other than those provided by character-level strategies to derive the meanings
of the target colloquial idioms. In the contextualized condition, for instance, the participants referred to PK (16.46%) strategies, including the use of background knowledge about the target language and culture and L1 knowledge. This strategy category was one of the strongest predictors of accurate idiom interpretation. In the decontextualized condition, both L1 knowledge (14.92%) and prior knowledge (1.53%) were used. The participants’ use of SP type of strategies (i.e., RW, ST, and RP) in the contextualized condition could not be explained by the theoretical models of L1 idiom comprehension. In the contextualized task, the participants sometimes paid particular attention to parts of a context (e.g., related words, and the clause in which the colloquial idiom was embedded) after reading a complete short paragraph to better understand an underlined target item. These comprehension strategies are inconsistent with observations on L1 idiom processing. In processing L1 idioms, native speakers easily understand an entire sentence in which an idiom is embedded. L2 learners, however, are compelled to solve linguistic puzzles prior to deriving the meaning of a target L2 idiom.

In short, unlike native speakers, Chinese L2 learners experience difficulty in deriving literal and figurative meanings when they encounter unknown colloquial idioms. During comprehension, the participants employed multiple domains of knowledge and information to derive meaning via a guess-and-check approach. The theoretical models of L1 idiom comprehension cannot elucidate L2 idiom comprehension. Thus, instead of using existing L1 idiom comprehension models to explain the comprehension of idioms in an L2, this research puts forward a tentative model for Chinese colloquial idiom comprehension. This model is discussed in the following section.
The comparison of the idiom performances exhibited in the two comprehension tasks suggests a standard developmental route from the out-of-context to the in-context conditions. The L2 learners appeared to undergo two stages in comprehending unknown idioms: an initial prediction stage and a verification stage. The prediction stage represents the major comprehension features that emerged in the decontextualized condition, whereas the verification stage characterizes the ones identified in the contextualized condition. Without any contextual cues, using literal-level processing and L1 expressions can serve as an initial strategy that enables L2 learners to formulate a number of predictions about the idiomatic meaning of a particular L2 idiom. At this point, they have no means of deciding which prediction is plausible and which is not, unless they have previously encountered the target phrase. Next, when given a linguistic context, the L2 learners can evaluate intended meaning against the context. In addition to employing SP (e.g., RP, RW, and SW), L2 learners can also apply prior knowledge to narrow down their predictions and verify the one that best fits a specific context. If none of the predictions are satisfactory under a provided context, new predictions will then be formulated on the basis of contextual information and pre-existing knowledge. This two-stage model is illustrated in Figure 5.
Figure 5 A tentative model: Two-stage L2 Chinese idiom comprehension
5.5 Summary of the chapter

This chapter started with a presentation of the major findings with respect to the research questions. It was then followed by the interpretation and discussion of the results in relation to the literature reviewed in Chapter 2. Finally, a tentative model of idiom comprehension was proposed: L2 learners appeared to undergo an initial prediction stage and a verification stage in comprehending unknown Chinese colloquial idioms.

The next chapter discusses pedagogical implications of this study by starting with a discussion about some of the difficulties involved in learning L2 idioms, followed by suggestions on teaching techniques and activities that could be incorporated into the instruction of Chinese colloquial idioms to L2 learners.
CHAPTER VI
APPLICATIONS TO CHINESE L2 INSTRUCTION

It is widely accepted in the field of SLA that idioms are an intrinsic part of language use at both formal and conversational levels. The extent of an L2 learner’s grasp of idioms is a good indicator of his or her language proficiency level (Yorio, 1989). Research indicates that the number of idioms (and formulaic sequences at large) acquired is positively correlated with the degree of success on communicative tasks, suggesting a close connection between idiom acquisition and communicative ability (e.g., Duquette, 1995; Schmitt, 2004; Wray, 1999, 2002).

According to Liu (2008), many L2 learners, especially intermediate and advanced students, yearn to learn idioms. These learners, with many years of language learning experience, have learned to recognize the value and the importance of idioms. They also begin to understand that the extent of an L2 learner’s use of idioms is a good indicator of the person’s language proficiency. This love for L2 idioms also works as a strong motivator for learners in continuing pursuing the target language.

To help L2 learners gain mastery over this important aspect of Chinese vocabulary, instructional materials and teaching techniques should be based on understandings of how L2 learners comprehend idioms. This chapter discusses some of the difficulties involved in learning L2 idioms, and then proposes teaching methods and activities to be used for Chinese colloquial idiom instruction.
6.1 Difficulties in learning L2 idioms

Idioms are “notoriously difficult” for their “rigid structure, quite unpredictable meaning, and fairly extensive use” (Liu, 2003, p. 45). In addition to these fundamental features of idioms, other factors contribute to L2 learners’ difficulties in learning them. These have to do with a lack of idiomatic expressions in language input and inadequate idiom learning materials.

6.1.1 Lack of authentic linguistic environments

The acquisition of idiomatic phrases in an L2 is somewhat different from the mastery of other components of language proficiency in that idiomatic phrases are “so closely linked to the everyday reality of the target language culture that it cannot be learnt effectively unless the learner integrates, at least partly, into the particular culture” (Dörnyei, Durow, & Zahran, 2004, p. 87). However, it is not easy for L2 leaners to have such an authentic linguistic environment all the time.

It has been observed that native speakers tend to use foreign talk, adjusting their speech in conversation with nonnative speakers. Therefore, nonnative speakers do not hear idioms frequently in language input. In contrast, TV programs, film, and newspapers abound with idioms, but input without interaction is not sufficient for language acquisition (Long, 1981). These language materials do not provide opportunities to negotiate for meaning or to give feedback on language use. In other words, most L2 learners have little exposure to idiomatic expressions in interactive situations, which is essential for the acquisition to occur.
6.1.2 Absence of L2 idiom learning materials

Many L2 learners still maintain their artificial, and textbook-like proficiency even after several years of language study. One of the causes might be the fact that many L2 learning materials ignore idioms. A survey of five CSL idiom textbooks (Stellard, 2011) revealed the limitations of these textbooks. First, some exercises focus on understanding the idioms rather than on using them in context. Second, some of the idioms included in these textbooks appear not to be frequently used ones. Third, in some cases there are no proper explanations or example sentences for the selected idioms. Based on this survey, it is clear that one of the difficulties in learning L2 Chinese idiomatic expressions is the lack of adequate materials for L2 learners.

6.2 Methods for teaching L2 Chinese colloquial idioms

As Chinese colloquial idioms are widely used in native speakers’ daily communication, there is a definite need to help CSL learners deal with the comprehension of colloquial idioms, and also to help them continue to acquire colloquial idioms inside and outside formal classroom instruction. However, teaching the meanings of Chinese colloquial idioms helps in only a limited way. It is necessary to teach CSL learners the nature of colloquial idioms and to help them develop their abilities to independently comprehend unfamiliar colloquial idioms by using appropriate strategies.

6.2.1 Using think-aloud protocols to facilitate idiom comprehension process

First, it is sufficient to have CSL learners know what comprehension strategies are useful for understanding colloquial idioms. Think-aloud protocols (TA), the data
collection method in the present study, can be adapted for idiom instruction to facilitate the idiom comprehension process. According to Gunning (1996), TA can be used to model comprehension processes such as making predictions, creating images, linking information in a text with prior knowledge, monitoring comprehension, and overcoming problems with word recognition or comprehension. In TA, the CSL instructor verbalizes his/her thoughts while reading orally, modeling for the CSL learners how the process of comprehension works. The goal of the TA strategy is that eventually the CSL learners are able to develop similar thought processes when they try to comprehend unfamiliar colloquial idioms on their own.

![Diagram of Think-aloud Guided Practice](image)

Primarily CSL instructor
- Explains what the strategy is, when, how, and why to use it.
- Models thought processes & comprehension strategies (using TA).

CSL Instructor & Learners
- Reminds learners of strategies.
- Demonstrates examples of effect strategy use.

Primarily CSL Learners
- Learner-directed inferencing.
- Group/Pair work: Review materials, cite supporting evidence, explaining the reasoning, etc.

Gradual release of responsibility


Figure 6 Overview of a think-aloud exercise
Figure 6 presents the three major steps that are involved in a think-aloud exercise. First, the instructor introduces comprehension strategies and models his/her own thinking and strategy use for the learners. Next, guided by the instructor the learners make inferences about the meanings of unfamiliar colloquial idioms by using comprehension strategies. The instructor may still need to suggest appropriate strategies or provide good examples in this step. Finally, the learners implement their think-aloud processes and strategies to decipher target colloquial idioms independently. Overall, it is a process of releasing responsibility to the learners.

6.2.2 Encouraging students to guess meaning from context

On the basis of various empirical results showing that idiomatic expressions are better understood when embedded in informative contexts (e.g., Colombo, 1993; Gibbs, 1987, 1991), guessing from context should be an essential strategy and skill L2 learners should acquire. To assist Chinese L2 learners to infer meanings of unknown Chinese colloquial idioms from context, a couple of teaching techniques are useful.

(1) Using cloze exercises

In a cloze exercise, L2 learners are presented with a short story with the target Chinese colloquial idiom omitted. The short story establishes a specific context, and the learners are asked to complete the short story with a word or phrase that fits the context. When the learners have correctly guessed the meaning, the target colloquial idiom is introduced. The learners are then guided to study this colloquial idiom in this context. If necessary, further explanation concerning the figurative meaning and cultural connotation of this colloquial idiom should also be provided.
(2) Hypothesizing meanings of colloquial idioms

In this exercise, L2 learners are guided as they read a paragraph or watch a video clip. There is an unfamiliar Chinese colloquial idiom in this language input, and the learners are asked to pay attention to the unfamiliar colloquial idiom and hypothesize what it means by referring to the contextual cues. The learners can also be asked to substitute another expression for this target idiomatic expression. At the end, the instructor should evaluate the learners’ responses and provide the definition of the target expression or any clarification as needed.

(3) Creating new contexts

This should be an open-ended exercise, in which Chinese L2 learners can produce their own dialogues or situational contexts for the newly taught colloquial idiom. Through examining and discussing the learners’ work with the instructor, the learners can better understand the idiomatic meaning of this particular colloquial idiom and how it works in context. This exercise is not only beneficial to the learners, but also to the instructors. According to Lattey (1986), the learners’ work can provide interesting insights “about the conventional restrictions associated with this particular expression that native speakers have no salient appreciation of” (p. 230).

6.2.3 Guiding students to compare literal and figurative meanings

One source of difficulty in learning idioms in an L2 is that their meanings are not transparent, that is, an idiom’s literal meaning is different from the figurative meaning.
Several teaching techniques could be used to compare the literal and figurative meanings of Chinese colloquial idioms.

(1) Cartoon strips

“Cartoon strips are a popular source of idioms because they can readily illustrate the incongruence of literal and figurative meaning with the use of humor” (Koloski & Trosky, 1992, p. 23). A number of activities could be implemented based on cartoon strips. For example, the Chinese L2 instructor can ask learners to explain the colloquial idiom in the cartoon strip or to provide its corresponding literal meaning.

(2) Making up stories

Chinese L2 instructors and learners can make up funny stories using the literal meanings of the colloquial idioms, or they can create dialogues showing how misunderstandings can occur if the literal meaning of the colloquial idiom is used instead.

(3) Drawing pictures

Chinese L2 learners can draw literal and figurative meanings on different cards. They could challenge each other to match up the literal and figurative meanings for a particular colloquial idiom. This exercise is particularly effective for younger learners.

6.2.4 Facilitating students to use L1 knowledge in L2 idiom comprehension

The findings of this study reveal that learners use their knowledge of idiomatic expressions in the L1 to aid the interpretation of unknown colloquial idioms. Thus, colloquial idiom instruction can start with expressions that have transparent equivalent
expressions in the learners’ L1; and then incorporate idioms that are similar in both languages. Those that are very different are usually the hardest for the learners and will require more practice time and explanation.

Below are some Chinese colloquial idioms selected from Jiao and Stone (2014). These colloquial idioms are arranged according to their degree of similarity to English expressions.

**Identical Items: Teach First**

插马蜂窝 (stir up a hornet’s nest)

双刃剑 (double-edged sword)

纸老虎 (paper tiger)

**Similar Items: Teach Second**

小菜一碟 (a small plate of food = a piece of cake)

脚踩两只船 (a foot steps in two boats = have a foot in both camps)

开夜车 (drive-night-car = burn the midnight oil)

**Different Items: Teach Last**

炒鱿鱼 (fry squid = give someone the sack)

戴高帽 (put on a high hat = oversell someone)

猴年马月 (monkey-year-horse-month = God knows when)

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1 The example sentences in this chapter were all selected from Jiao and Stone (2014).
6.2.5 Motivating students to make cross-cultural comparisons

Figurative meanings are culturally determined. “A well-understood metaphor in one culture may have entirely different meanings in another part of the world” (Hayakawa, 1974, p. 105). For instance, the figurative meaning of 西天 (western sky) in Chinese language is death. This conventional association between western sky and death might not be the same for L2 learners of other cultures. Therefore, CSL learners may need to be aware of such an association in order to make sense of the idiomatic phrase like 上西天 (go to the western sky = bite the dust).

Chinese L2 instructors need to sensitize students to the cultural significance that accrues to particular colloquial idioms, while they also encourage the students to compare these associations with those in their own language and culture. Two sample activities in Lazar (1996) and Deignan, Gabryś, and Solska (1997) can be adapted for the purpose of practicing Chinese colloquial idioms. The purpose of these exercises is to guide Chinese L2 learners to note that they need to be aware of the cultural dimension of figurative language when they make sense of idiomatic expressions.
Exercise 1
Look at the following list of sentences, which can be used in Chinese to talk about guanxi (i.e., the system of social networks and influential relationships that facilitate business and other dealings). Use a dictionary to check the meaning of the underlined expressions.

1. 她工作上没什么本事，但是拉关系、走后门很有一套。(She is not particularly capable at her job, but she is quite good at establishing connections and using them to her advantage.)

2. 她既有工作能力，又善于拍上司的马屁，所以提升很快。(She’s a good worker and she’s good at sucking up to her superior, so she was promoted quickly.)

3. 现在的领导见了面，都是互相戴高帽，吹嘘了别人，也吹嘘了自己。(When today’s leaders meet, it’s all patting each other on the back. They boast about themselves while boasting about others.)

4. A: 新领导刚上台，他就不停地拍马屁。(The new leader has just taken office and he is constantly sucking up.)
   B: 他这个人就是善于抱大腿。(That guy is just good at cozying up to powerful people.)

Exercise 2
In your own language write down a sentence about guanxi. Can you translate it into Chinese? Is it the same as or different from any of the sentences in Exercise 1?

Another example below is also useful for teaching and learning Chinese colloquial idioms. In this task, Chinese L2 learners are encouraged to discuss idiomatic expressions from a particular semantic field, that is, the word eye. Also, they are encouraged to compare these expressions with the ones in their L1.
6.3 Summary of the chapter

This chapter first discussed the difficulties that L2 learners encountered in learning idioms in the target language, and then proposed teaching strategies and techniques for alleviating difficulties and for increasing efficiency during learning Chinese colloquial idioms. The next chapter presents a brief summary of the overall findings of this study followed by a discussion on the limitations of this study and directions for future research.
CHAPTER VII

CONCLUSION

This chapter concludes the present study by summarizing the overall findings in accordance with the research questions. This chapter also discusses the limitations of this study and directions for future research.

7.1 Summary of the overall findings

This study explores comprehension of Chinese colloquial idioms by CSL learners. Thirty advanced L2 learners were asked to comprehend 15 unknown Chinese colloquial idioms in and out of context. All of the participants were native speakers of English. The 15 target idiomatic phrases differed in terms of their degree of L1–L2 similarity, including five matching idioms, five partially matching idioms, and five non-matching idioms. In the study, the participants were required to verbalize their thought processes as they arrived at the meanings of the target colloquial idioms. Think-aloud protocols were used to collect the data.

The first research question concerns the extent to which context facilitates the comprehension of the target Chinese colloquial idioms. Results showed that the short paragraph context had a facilitative impact on the comprehension and interpretation of all types of Chinese colloquial idioms (i.e., matching, partially matching, and non-matching). In addition, with the introduction of context, the partially matching colloquial idioms showed the most improvement in interpretation of all idiom types.

The second research question asks whether idiom type, operationalized in this study as the degree of L1–L2 similarity, affects the comprehension of the target Chinese
colloquial idioms. Results of statistical analyses revealed that the degree of L1–L2 similarity significantly affected the ease with which the participants comprehended the Chinese colloquial idioms in both the decontextualized and contextualized conditions. Among the three types, the matching colloquial idioms were processed with greater ease than the partially matching and non-matching colloquial idioms. Statistically speaking, there were no differences for participants to process the meanings of the partially matching and the non-matching colloquial idioms.

The third research question examines the strategies employed by the participants in comprehending the target Chinese colloquial idioms in isolation and in context, as well as which strategies contributed to better comprehension of the target items in context. Results of qualitative analyses showed that in the decontextualized condition the participants adopted a “part-to-whole and literal-to-figurative” approach to interpreting the target Chinese colloquial idioms. A variety of strategies were employed during this process, including literal level analysis, using prior knowledge, associating to L1 expressions, and so on. In the contextualized condition the participants adopted an experimental approach, a heuristic method, and they employed a wide range of strategies to interpret the target Chinese colloquial idioms. Among the core strategy categories identified, semantic processing and pre-existing knowledge contributed to better comprehension in the contextualized condition.

Finally, the study discusses whether the theoretical models of L1 idiom comprehension can account for the comprehension of L2 Chinese colloquial idioms. It is found that the existing L1 models were too limited in scope to explain the comprehension of idioms in an L2. Instead of using the L1 models, a tentative model was proposed. L2
learners appeared to undergo two stages in comprehending unknown Chinese colloquial idioms: an initial prediction stage and a verification stage.

7.2 Limitations of this study

There are a few limitations to this study. First, the sample size is relatively small (only 30 participants were involved). A larger sample size might be able to achieve more power in inferential statistics, and thus provide more generalizable results. Second, the participants in this study represent only one linguistic background. A variety of linguistic groups should be useful to help flesh out the picture that has emerged from the studies reported here regarding the extent to which the degree of L1–L2 similarity affects L2 idiom comprehension. Three, the short paragraphs utilized in the present study were formulated in accordance with 汉语口语习惯用语教程 (2003) (A Course in Chinese Colloquial Idioms), rather than authentic materials. The context effects may reveal other dimensions, if authentic materials are employed. Finally, this study included Chinese L2 learners at only an advanced level of proficiency. To further investigate the idiom comprehension patterns and the development of idiom acquisition along with the development of L2 competence, future research could invite learners at multiple proficiency levels (i.e., novice, intermediate, and advanced) to take part.

7.3 Suggestions for future research

The comprehension strategies uncovered in this study are unlikely to exhaust those that the participants can bring to the tasks. Further investigations could continue with this research topic by addressing questions such as whether the nature of the tasks has a marked impact on the participants’ choice of strategies; what underlying
mechanisms are at work in comprehending and acquiring the full range of figurative language, including idioms, proverbs, metaphors, similes, collocations, common sayings, and so on; and how idiomatic competence develops, that is, the ability to understand and use idioms appropriately and accurately in a variety of sociocultural contexts, in a manner similar to that of native speakers, and with the least amount of mental effort.

In addition, possible future research can expand the investigation from foreign language learning environments to target language learning contexts, such as study abroad settings. This study was situated in the foreign language setting (i.e., it examined how contextual information, L1 knowledge, and comprehension strategies influenced the comprehension of unknown colloquial idioms by learners who study Chinese as a foreign language). Although most of the learners in this study have brief study abroad experiences, it remains unclear whether these experiences play a significant role in how these learners comprehended the colloquial idioms. As Collentine and Freed (2004) proposed, it is important to integrate individual cognitive abilities and the differential aspects of learning contexts. Further studies could explore research concerning whether learners who study Chinese in a target language learning context deal with unfamiliar colloquial idioms in the same fashion as learners who study Chinese in a foreign language learning environment, and whether study abroad experience changes Chinese L2 learners’ preferences of comprehension strategies or learning styles.
REFERENCES


APPENDIX A

Background information survey

1. Gender: ____.

2. Country of Birth: ____________.

3. What is your native language? 1) English; 2) Chinese; 3) Other______.

4. What language(s) do you speak at home? 1) English; 2) Chinese; 3) Other______.
   If more than one, with whom do you speak each of these languages? Please specify:

5. Have you ever been to a Chinese-speaking region for the purpose of studying Chinese? Circle one: Yes/ No
   If yes, when? _____________. Where? ______________.

   For how long? A) 1 semester or less; B) 2 semesters; C) more than 2 semesters
APPENDIX B

Questionnaire: Categorizing 55 Chinese colloquial idioms into three types

Directions:

This questionnaire consists of 55 Chinese colloquial idioms along with their English equivalents. Please help categorize these 55 Chinese colloquial idioms into three subtypes (matching, partially matching, & non-matching) by following the criteria and three Spanish-as-a-second-language examples as below:

<table>
<thead>
<tr>
<th>Spanish Idioms</th>
<th>Type</th>
<th>Literal Translation</th>
<th>Meaning in English</th>
</tr>
</thead>
<tbody>
<tr>
<td>yo creo que mis ojos eran más grandes que mi estómago</td>
<td>matching idioms between L1 &amp; L2</td>
<td>the eyes are bigger than one’s stomach</td>
<td>the eyes are bigger than one’s stomach</td>
</tr>
<tr>
<td>echar leña al fuego</td>
<td>partially matching idioms between L1 &amp; L2</td>
<td>to throw wood on the fire</td>
<td>to add fuel to the fire</td>
</tr>
<tr>
<td>sacar las castañas del fuego a alguien</td>
<td>non-matching idioms between L1 &amp; L2</td>
<td>to pull the chestnuts out of the fire for someone</td>
<td>to save someone’s neck</td>
</tr>
</tbody>
</table>

Please mark the choice that applies under each Chinese colloquial idiom.

Thanks very much!
1. 热锅上的蚂蚁 – have ants in one’s pants
   □ matching    □ partially matching    □ non-matching

2. 一口气 – in one breath
   □ matching    □ partially matching    □ non-matching

3. 万金油 – jack of all trades
   □ matching    □ partially matching    □ non-matching

4. 只见树木不见森林 – not see the forest for the tree
   □ matching    □ partially matching    □ non-matching

5. 哭笑不得 – not know whether to laugh or cry
   □ matching    □ partially matching    □ non-matching

6. 二把手 – play second fiddle (to someone/ something) (fiddle: a music instrument of the violin family)
   □ matching    □ partially matching    □ non-matching

7. 晴雨表 – straw in the wind
   □ matching    □ partially matching    □ non-matching
8. 泼冷水 – throw cold water on/ pour cold water on something
   □ matching  □ partially matching  □ non-matching

9. 剥洋葱皮 – peel the onion
   □ matching  □ partially matching  □ non-matching

10. 宝塔尖 – high on the totem pole
    □ matching  □ partially matching  □ non-matching

11. 被牵着鼻子走 – lead someone by the nose
    □ matching  □ partially matching  □ non-matching

12. 冰山一角 – a tip of the iceberg
    □ matching  □ partially matching  □ non-matching

13. 跺钢丝 – walk a tightrope
    □ matching  □ partially matching  □ non-matching

14. 沧海一粟 – a drop in the ocean
    □ matching  □ partially matching  □ non-matching
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>嚐苦果 – the bitter fruits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>16.</td>
<td>丑小鸭 – an ugly duckling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>17.</td>
<td>出冷汗 – break out in a cold sweat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>18.</td>
<td>从背后插一刀– Stab someone in the back</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>19.</td>
<td>血汗钱 – blood sweat and tears</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>20.</td>
<td>趁热打铁 – strike while the iron is hot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
<tr>
<td>21.</td>
<td>开绿灯 – give someone/ something the green light</td>
<td></td>
</tr>
<tr>
<td></td>
<td>matching</td>
<td>partially matching</td>
</tr>
</tbody>
</table>
22. 唯书本 – crack a book
   - matching
   - partially matching
   - non-matching

23. 冷肩膀 – cold shoulder
   - matching
   - partially matching
   - non-matching

24. 满堂彩 – bring down the house
   - matching
   - partially matching
   - non-matching

25. 囊中物 – in the bag
   - matching
   - partially matching
   - non-matching

26. 上气不接下气 – out of breath
   - matching
   - partially matching
   - non-matching

27. 伸鼻子 – poke/ stick one’s nose into
   - matching
   - partially matching
   - non-matching

28. 无底洞 – a bottomless pit
   - matching
   - partially matching
   - non-matching
29. 武装到牙齿 – armed to teeth
   □ matching   □ partially matching   □ non-matching

30. 夜猫子 – night owl
   □ matching   □ partially matching   □ non-matching

31. 绕弯子 – beat around/ about the bush
   □ matching   □ partially matching   □ non-matching

32. 贪多嚼不烂 – bite off more than one can chew
   □ matching   □ partially matching   □ non-matching

33. 咬紧牙关 – bite the bullets
   □ matching   □ partially matching   □ non-matching

34. 连轴转 – burn the candle at both ends
   □ matching   □ partially matching   □ non-matching

35. 开夜车 – burn the midnight oil
   □ matching   □ partially matching   □ non-matching
36. 小道消息 – by the word of mouth
   □ matching    □ partially matching    □ non-matching

37. 照章办事 – by the book
   □ matching    □ partially matching    □ non-matching

38. 捅了马蜂窝 – open a can of worms
   □ matching    □ partially matching    □ non-matching

39. 对牛弹琴 – cast pearls before swine
   □ matching    □ partially matching    □ non-matching

40. 不沾边 – beside the point
   □ matching    □ partially matching    □ non-matching

41. 费口舌 – beat a dead horse
   □ matching    □ partially matching    □ non-matching

42. 冒失鬼 – bull in a china shop
   □ matching    □ partially matching    □ non-matching
43. 炒鱿鱼 – give/ get someone the sack
   □ matching    □ partially matching    □ non-matching

44. 以其人之道还治其人之身 – give someone a taste of his/ her medicine
   □ matching    □ partially matching    □ non-matching

45. 热心肠 – good Samaritan
   □ matching    □ partially matching    □ non-matching

46. 拉长脸 – long face
   □ matching    □ partially matching    □ non-matching

47. 唱双簧 – put words in one’s mouth
   □ matching    □ partially matching    □ non-matching

48. 钓大鱼 – big fish
   □ matching    □ partially matching    □ non-matching

49. 红眼病 – green-eyed monster
   □ matching    □ partially matching    □ non-matching
50. 上西天 – kick the bucket
   □ matching   □ partially matching   □ non-matching

51. 拉一把 – give a hand
   □ matching   □ partially matching   □ non-matching

52. 随大流（儿）– go with the flow
   □ matching   □ partially matching   □ non-matching

53. 说不到一块儿 – not see eye to eye
   □ matching   □ partially matching   □ non-matching

54. 有眼光 – have a good taste
   □ matching   □ partially matching   □ non-matching

55. 败胃口– turn one’s stomach
   □ matching   □ partially matching   □ non-matching

Thank you so much for your time!
APPENDIX C

Short paragraphs for the 15 target Chinese colloquial idioms

1. 一口气 (yì kǒu qì)

在15岁那年，约翰·史密斯在日记中一口气写下了127个伟大愿望。四十四年后，他终于实现了其中的106个愿望。

At age 15, John Smith wrote 127 great goals in one breath in his diary. Forty-four years later, he accomplished 106 of the 127 goals.

2. 只见树木不见森林 (zhī jiàn shùmù bù jiàn sēnlin)

有时候你会遇到许多这样的人，他们只根据自己的想法或者只为了自己的目的做事情。他们这样做很容易只见树木不见森林。

Sometimes we see a lot of people who only think of themselves or only work for their own interests instead of the common interests of the community. Of course they could not see the forest for the trees.

3. 泼冷水 (pō léngshuǐ)

今天小丽很高兴，因为她加入了学校女生足球队。没想到妈妈却给她泼了一头冷水，说足球是男孩子的运动，足球不适合女孩子。
Xiaoli is very happy today because she has officially joined the girls’ soccer team in her school. Surprisingly, her mom pours cold water on this idea, saying: “Soccer is a boys’ game. Soccer is not for girls.”

4. 开绿灯 (kāi lǜ dēng)

华盛顿这个月 15 号同意使同性恋婚姻合法化。华盛顿将成为美国第六个为同性恋婚姻开绿灯的地方。

On the 15th of this month, Washington D.C. legalized same-sex marriage, putting the capital on course to become the sixth state or region in the US to give the green light to gay marriage.

5. 拉长脸 (lā cháng liǎn)

王先生每天吃晚饭的时候都会喝一点儿酒。今天吃晚饭的时候，王先生看见饭桌上没有酒就很生气。他拉长脸，坐在一边，一句话也不说。

Mr. Wang likes to have some wine with dinner every day. Today when he found out there was no wine on the dinner table, he pulled a long face, sat at the table, and didn’t say anything.
6. 小道消息 (xiǎo dào xiǎoxì)

前不久这个村的很多人都得了一种很奇怪的皮肤病。后来，据小道消息说这种病跟他们平时喝的水有关。

Not long ago, many people in this village got a really weird skin disease. The word on the street is that this skin disease has something to do with the water they usually drink.

7. 走老路 (zǒu lǎolù)

妈妈说：“你哥哥从小学习就不努力。他现在的样子你都看到了，你要是不想走他的老路，就得从现在开始努力学习。”

Mom says: “Your older brother has never worked hard. You’ve seen what he is like now. If you don’t want to follow in his footsteps, you should work hard from now on.”

8. 开夜车 (kāi yèché)

我习惯每个周末复习功课，所以考试前有时间休息。可是，我们班大部分同学和我不一样，他们都喜欢在考试前开夜车，考完以后大睡三天。

I usually review during the weekend so I always have time to rest before the test. But most of my classmates are different. They like to burn the midnight oil before tests, and sleep for three days after tests.
9. 二把手 (èr bǎ shǒu)

现在大家都知道，哪个公司不是一把手说了算？工作这么多年，我发现一个人如果做不好二把手，那么就别打算以后有机会当一把手了。

Everybody understands it is the boss who has the final say in a company. I have been working for this company many years and I have found that if a person cannot succeed as a second-in-command, that person doesn’t stand a chance to be the boss in the future.

10. 红眼病 (hóng yǎn bìng)

你总是这样，平时自己工作不认真，看见别人得了好成绩，就得红眼病。你要是自己努力工作，也是会有机会的。

You normally don’t work hard. When other people achieve something, you get bitten by the green-eyed monster easily. If you worked as hard, you would someday have the same opportunities.

11. 拍马屁 (pāi mǎ pì)

老板的太太最近开了个饭馆卖早饭。小王就每天都去那家饭馆吃早饭。大家都觉得小王这么做是为了拍老板的马屁。
The wife of Xiao Wang’s boss recently opened a restaurant to sell breakfast. Xiao Wang has breakfast in that restaurant every day. Everybody thinks Xiao Wang is polishing the apple.

12. **有眼光** (yǒu yǎnguāng)

圆圆：方方，你看我新买的这件衣服怎么样？才 100 块钱！

方方：我看看，嗯，这件衣服又便宜又好看，你真有眼光！

Fangfang: Let me take a look, um, the sweater is inexpensive and good-looking.
You have good taste!

13. **对牛弹琴** (duì niú tánqín)

那天中午休息的时候老板和我们一群人聊天。当说到一个有趣的话题时，所有人都大笑起来，只有可爱的方方没有听明白。老板笑着说：“对牛弹琴啊！”

One day at noon the boss was chatting with us. When we talked about one amusing topic, everybody laughed really hard, except for the innocent Fangfang, who didn’t get the point. The boss then said smilingly: “It’s like **casting pearls before swine**!”
14. 费口舌 (fèi kǒushé)

由于考试前我生病了，没有好好复习，结果这次考试我的成绩很不好。昨天，在张老师那里，我费了半天口舌，她最后还是没让我再考一回。

I was too sick to prepare well for the test, so I didn’t get good grade. Yesterday in Ms. Zhang’s office, I pleaded to her to give me another chance. It was like beating a dead horse, as she did not allow me to retake the test.

15. 上西天 (shàng xītiān)

老张说：“前两天我和大民出去，赶上了大雨。大民回来后感冒了好几天。我呢，什么事也没有。我的身体我知道，离上西天还早着呢！”

Mr. Zhang says: “Da Min and I went somewhere together the other day. It rained so heavily that Da Min caught a cold and became sick for several days. Me? I am very well! I know about my health. It’s way too soon for me to bite the dust!!”
APPENDIX D

Decontextualized Chinese colloquial idiom comprehension task: Report verbally the meanings of the 15 target Chinese colloquial idioms in isolation

Directions:

Please report verbally in either Chinese or English the meanings of the following 15 Chinese colloquial idioms. No time limit is set for completing this task. Your verbal reports will be audio-recorded.

yi kǒu qì
1. 一口气

xiǎo dào xiāoxì
2. 小道消息

pāi mǎ pì
3. 拍马屁

zhī jiàn shùmù bú jiàn sēnlín
4. 只见树木不见森林
záo lǎo lù
5. 走老路

yǒu yǎnguāng
6. 有眼光

pō lěngshuǐ
7. 泼冷水

kāi yèchē
8. 开夜车

duì niú tánqín
9. 对牛弹琴

kāi lǜdēng
10. 开绿灯

èr bǎ shǒu
11. 二把手

fèi kǒushé
12. 费口舌

lā chángliǎn
13. 拉长脸
hóngyǎn bìng
14. 红眼病

shàng xītiān
15. 上西天
APPENDIX E

Contextualized Chinese colloquial idiom comprehension task: Report verbally the meanings of the 15 target Chinese colloquial idioms in a short paragraph context

Direction:

Please report verbally in either Chinese or English the meaning of the underlined Chinese colloquial idioms in context. No time limit is set for completing this task. Your verbal reports will be audio-recorded.

1. 拉长脸 (lā cháng liǎn)

王先生每天吃晚饭的时候都会喝一点儿酒。今天吃晚饭的时候，王先生看见饭桌上没有酒就很生气。他拉长脸，坐在一边，一句话也不说。

2. 红眼病 (hóng yǎn bìng)

你总是这样，平时自己工作不认真，看见别人得了好成绩，就得红眼病。你要是自己努力工作，也是会有机会的。
3. 上西天 (shàng xītiān)

老张说：“前两天我和大民出去，赶上了大雨。大民回来后感冒了好几天。我呢，什么事也没有。我的身体我知道，离上西天还早着呢！”

4. 费口舌 (fèi kǒushé)

由于考试前我生病了，没有好好复习，结果这次考试我的成绩很不好。昨天，在张老师那里，我费了半天口舌，她最后还是没让我再考一回。

5. 二把手 (èr bǎ shǒu)

现在大家都知知道，哪个公司不是一把手说了算？工作这么多年，我发现一个人如果做不好二把手，那么就别打算以后有机会当一把手了。

6. 开绿灯 (kāi lǜ dēng)

华盛顿 (Washington D. C.) 这个月 15 号同意使同性恋婚姻合法化 (legalized same-sex marriage)。华盛顿将成为美国第六个为同性恋婚姻 (same-sex marriage) 开绿灯的地方。
7. 泼冷水 (pō léngshuǐ)

今天小丽很高兴，因为她加入了学校女生足球队。没想到妈妈却给她泼了一头冷水，说足球是男孩子的运动，足球不适合女孩子。

8. 开夜车 (kāi yèchē)

我习惯每个周末复习功课，所以考试前有时间休息。可是，我们班大部分同学和我不一样，他们都喜欢在考试前开夜车，考完以后大睡三天。

9. 对牛弹琴 (duì niú tánqín)

那天中午休息的时候老板和我们一群人聊天。当说到一个有趣的话题时，所有人都大笑起来，只有可爱的方方没有听明白。老板笑着说：“对牛弹琴啊！”

10. 有眼光 (yǒu yǎnguāng)

圆圆：方方，你看我新买的这件衣服怎么样？才 100 块钱！

方方：我看看，嗯，这件衣服又便宜又好看，你真有眼光！
11. 走老路 (zǒu lǎolù)

妈妈说：“你哥哥从小学习就不努力。他现在的样子你都看到了，你要是不想走他的老路，就得从现在开始努力学习。”

12. 只见树木不见森林 (zhǐ jiàn shùmù bú jiàn sēnlín)

有时候你会遇到许多这样的人，他们只根据自己的想法或者只为了自己的目的做事情。他们这样做很容易只见树木不见森林。

13. 一口气 (yī kǒu qì)

在 15 岁那年，约翰·史密斯 (John Smith) 在日记中一口气写下了 127 个伟大愿望 (great dreams)。四十四年后，他终于实现了其中的 106 个愿望 (dreams)。

14. 小道消息 (xiǎo dào xiāoxì)

前不久这个村的很多人都得了一种很奇怪的皮肤 (skin) 病。后来，据小道消息说，这种病跟他们平时喝的水有关。
15. 拍马屁 (pāi mǎ pì)

老板的太太最近开了个饭馆卖早饭。小王就每天都去那家饭馆吃早饭。大家都觉得小王这么做是为了拍老板的马屁。
APPENDIX F

Instructions of think-aloud protocols

This experiment attempts to examine how you figure out the meanings of 15 unfamiliar Chinese colloquial idioms in and out of context. A Chinese colloquial idiom is a nonliteral expression that does not mean what it says: for example, 铁公鸡 (iron rooster) is a Chinese colloquial idiom that describes a stingy person. It has nothing to do with iron or rooster.

Here I have a few flash cards with Chinese colloquial idioms on them. What I need you to do is to think aloud as you derive the meanings of the Chinese colloquial idioms. Think aloud means that you have to tell me everything you are thinking, from the time you first see the idiom until you tell me what it means. Tell me everything! Some questions probably will go through your mind when you see an idiom, for example, how does the context imply the meaning of the idiom? How do I say it in English? What is this character and what does it mean? Does this idiom remind me of something I’ve seen or done before?

I would like you to report verbally your thoughts all the time.

Before we get started with the experiment, let’s do some warm-up practice. Here I have a sentence:
Since his girlfriend broke up with him, he was so upset that he could not concentrate on what the teacher said in class.

What does 听不进去 mean to you? Please tell me what you think of this idiom.

Tell me all your thoughts as you figure out the meaning.