

Investigating the Factors Influencing the Comprehension of Idiom Variation in a Second Language

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Abstract

In the age of information and technology, idiom variation driven by linguistic creativity occurs more frequently than ever before. This poses a great challenge for L2 learners. The present study conducted a set of tests to investigate the effects of familiarity, L2 proficiency level, variation type, and L1 figurative competence on Chinese EFL learners' comprehension of English idiom variants. The results revealed significant main effects of familiarity and L2 proficiency level on learners' performance. Figurative-level variation was the most difficult to understand, followed by idioms with literal-scene modification and simple constructional adaptations. The influence of L1 figurative competence needs to be determined in combination with L2 skills. Pedagogically, the findings call attention to the factors that cause comprehension difficulty to deal with the flexible use of L2 figurative language.

Keywords: comprehension of idiom variants, familiarity, L2 proficiency level, variation type, L1 figurative competence

1. Introduction

Idioms are part of the formulaic sequences of a language that tend to be prefabricated and stable in use. However, in the age of information and technology, new media has provided numerous opportunities for users to participate in language innovation. Such a trend prompts idioms to be modified from time to time, leading to creative variant forms that challenge the original status of idioms in a language system.

In sharp contrast to native speakers' performance, idioms are recognized as a typical stumbling block in second language (L2) learning, and their unpredictable variants add even more fuel to the fire (Karlsson, 2019). Given the increasingly obvious interaction between the formulaicity and creativity of idiom use (Wray, 2002), L2 learners need to adjust to this trend to ensure accuracy and fluency in reading and daily communication. Thus, language variation becomes an emerging issue that needs to be addressed in the study of L2 idioms. In view of this, the present study focuses on how L2 learners cope with the flexible use of idioms and empirically investigates Chinese EFL learners' comprehension of idiom variants.

2. Literature Review

2.1 Theoretical Studies on Idiom Variation

Although idioms are considered fixed in form and opaque in meaning in a traditional sense, idiom variants are hardly rare in practical use (Moon, 1998). In the gradual process of breaking away from the non-compositional view of idioms, researchers in Cognitive Linguistics emphasized that the constituents of an idiom play an important role in the construction of its overall figurative meaning (Lakoff, 1987; Glucksberg, 1993). Accordingly, multi-dimensional research has been carried out to provide cognitive interpretation of the syntactic flexibility and semantic transparency of idioms (Nunberg et al., 1994; Omazić, 2008; Duffley, 2013; Pitzl, 2018). Research on the classification of idiom variation has also been inspired to transcend earlier structural and functional approaches. In particular, Langlotz (2006) adopted a cognitive framework to classify idiom variation into several types, each highlighting a specific dimension of meaning change (see Table 1). This classification, driven by semantics, covers the potential variability at the lexical and syntactic levels of idioms and provides a theoretical foundation for the establishment of idiom variation types in the present study.

Table 1. Four types of idiom variation

Types of variation	Definition	Examples
Type 1: Constructional adaptation	Regular morphosyntactic and syntactic adaptations of an idiom's base form	Our analysis should clearly indicate the <u>several blind alleys</u> which Frey here explores.
Type 2: Literal-scene manipulation	Adapting the literal scene for coding the target conceptualization efficiently	The Chancellor <u>had a narrow tightrope to walk</u> and he managed to please a variety of people.
Type 3: Topic indication	Idiomatic, figurative-level modification, systematic variation (context-specific required)	What both Mr. Roberts and Mr. Smith were actually trying to do was to get Labor <u>off the 'promotion' hook</u> .
Type 4: Topic-related literal-scene manipulation	A combination of the previous two	Christmas cash <u>keeps the wheels of the economy oiled</u> .

2.2 Empirical Studies on Idiom Variation

Overall, the number of empirical studies on idiom variation is relatively limited. Earlier research on L1 made use of rating, lexical decision, self-paced reading, and other experimental tasks to examine the broad differences of accessing literal and figurative meanings between processing idioms and idiom variants (Cacciari & Glucksberg, 1991; McGlone et al., 1994; Van de Voort & Vonk, 1995; Vega-Moreno, 2001). More recently, scholars began to use online behavioral techniques. For instance, Geeraert (2016) adopted the eye-tracking paradigm and found that the length of idioms plays a decisive role in the processing latencies of various variants (see also Geeraert et al., 2017, 2020).

L2 relevant studies, mostly test-based, used quantitative analyses to examine the effects of potential influencing factors on the comprehension of idiom variants. Pertinent factors include: 1) Dictionary use. Szczepaniak (2006) conducted a set of reading comprehension tests on Polish advanced EFL learners and detected the partial facilitative effect of dictionary use on comprehending idiom variants; 2) Age. Karlsson (2019) investigated the comprehension of L2 idioms by 17-year-old students and found that even for participants at this age, the ability required to work out the correct meaning was still underdeveloped; 3) L2 proficiency. Guo (2014) tested lower- and intermediate-level EFL learners and found that the performance of the latter group was significantly better; 4) Variation type. Guo (2022) further pointed out that idioms with uni-dimensional structure change were the easiest to understand, while idioms modified in terms of literal images were the most difficult in comprehension.

2.3 Filling the Research Gaps—Towards an Empirical Approach to L2 Acquisition of Idiomatic Creativity

So far, three areas in the study of L2 idiom variants need to be further explored. First, it is necessary to examine the effect of familiarity on the processing of idiom variants. Tabossi et al. (2009) pointed out that familiarity is key to the rapid recognition of canonical idioms. Following this logic, is high familiarity with the canonical form of an idiom indispensable for correctly understanding its variants? This question can only be answered by distinguishing high/low familiarity idioms and investigating the comprehension performance of their variants, respectively.

Then, the influence of L2 proficiency level on the comprehension of idiom variants is worth further exploration. Guo (2014) has partially confirmed the positive role of L2 proficiency in idiom variant comprehension by lower- and intermediate-level learners. However, a more comprehensive comparison among the lower-, intermediate- and advanced-level learners will help detect or exclude the potential 'ceiling effect' and further explain the similarities and differences among learners.

Finally, it is important to probe into the relationship between the comprehension performance of L1 and L2 idiom variants. Does the processing difficulty of figurative language originate from a failure to activate relevant conceptual mechanisms, or does the unfamiliar L2 form cut off the connection across the conceptual and linguistic dimensions? Previous researchers have not reached any consensus on this issue (Liu, 2008). Taking the flexible use of idioms as an entry point and comparing learners' L1 and L2 performance can provide clues for the above question. In turn, it will help clarify the relationship between cognitive abilities at the conceptual level and the language decoding process at the linguistic level.

Drawing on the theoretical framework of Cognitive Linguistics, the present study conducted a set of tests to investigate the effects of familiarity, L2 proficiency level, variation type, and L1 figurative competence on Chinese EFL learners' comprehension of English idiom variants. The comprehension tests were divided into two

parts. Test One focused on the comprehension of English idiom variants, and Test Two on a contrastive study between learners' performance of comprehending idiom variants in L1 (Chinese) and L2 (English). The research questions to be addressed in this paper are as follows:

- (1) How does familiarity affect EFL learners' comprehension of the four types of English idiom variants?
- (2) How does L2 proficiency level affect EFL learners' comprehension of the four types of English idiom variants?
- (3) To what extent can familiarity, proficiency level, and variation type predict L2 learners' comprehension of idiom variants?
- (4) What is the relationship between Chinese EFL learners' comprehension performance of Chinese and English idiom variants?

3. Methods

3.1 Participants

The participants, two classes of freshmen, one class of juniors, and one class of graduate students, came from a university located in the southeast part of China. All the participants (English majors) were native speakers of Chinese, had been learning English for more than 10 years, and were still attending English classes on a weekly basis at college. According to their performance in the Test for English Majors Band 4 and Band 8 (subsequently referred to as TEM 4/TEM 8), the participants for Test One included 39 freshmen (marked as the below TEM 4 level), 34 juniors who had passed TEM 4 (marked as the TEM 4 level) and 31 graduate students who had passed TEM 8 (marked as the TEM 8 level). They were defined as lower-, intermediate- and advanced-level EFL learners. In Test Two, one class of 37 freshmen who did not take part in Test One were selected as the participants.

3.2 Materials

With a reference to Titone & Connine (1994), Langlotz (2006), and Collins English Idiom Dictionary, a set of 120 English 'ditropic idioms', i.e., idioms that can form literal images of related objects, actions, or events (Van Lancker et al., 1981), were selected. In addition, 120 Chinese four-character idioms that are easily misused were selected based on Ni and Yao (1997) and Zhao (2013).

Thirty freshmen and 23 graduate students of English major (none of whom took part in the formal tests) were recruited to rate the levels of familiarity of the above 240 idioms. A 5-point Likert Scale ranging from 'completely unfamiliar' to 'completely familiar' was used. Based on the results of the familiarity rating, 20 English idioms that the freshmen were most familiar with and 20 English idioms that the graduate students were most unfamiliar with were chosen to form the materials for Test One. The independent-samples T test showed a significant difference between the two mean values ($t = 26.319, p < 0.001$). In addition, 20 Chinese idioms that were most unfamiliar to the graduate students were selected as candidate materials for Test Two.

The potential variants of the prepared idioms were searched and collected from the British National Corpus (BNC), BLCU Chinese Corpus (BCC), and online web pages. The English idiom variants collected, as the items of Test One, were classified into four types (see Section 2.1). As the variants of some low familiarity Chinese idioms were hard to find, we further chose 10 Chinese idioms and 10 English idioms ($t = 0.511, p = 0.62$) and used their variants as items for Test Two. Table 2 lists all the idioms selected for the two tests. In all, Test One consisted of 40 items, 10 for each type of variation. Half of the idioms involved in Test One were with high familiarity, and the other half with low familiarity. There were 20 items in Test Two, half in English and half in Chinese, all with low familiarity.

Table 2. Selected idioms for the two tests

Test One: Comprehension Test of English Idiom Variants				
	Type 1:	Type 2:	Type 3:	Type 4:
High-Fam	<ul style="list-style-type: none"> ● get the eye ● pave the way ● break the ice ● burn one's boats ● give the cold shoulder 	<ul style="list-style-type: none"> ● miss the boat ● eat one's words ● go round in circles ● cost an arm and a leg ● keep your feet on the ground 	<ul style="list-style-type: none"> ● a dead end ● find one's feet ● catch the wave ● on the right track ● cross the bridge when one comes to it 	<ul style="list-style-type: none"> ● skate on thin ice ● burst one's bubble ● swallow the bitter pill ● have a mountain to climb ● make hay while the sun shines
Low-Fam	<ul style="list-style-type: none"> ● take a bath ● steal the show ● spill the beans ● save your skin ● cook sb's goose 	<ul style="list-style-type: none"> ● blaze a trail ● slow off the mark ● hang up one's boots ● take sth. in one's stride ● throw a spanner in the works 	<ul style="list-style-type: none"> ● bite the dust ● jump the gun ● go to the dogs ● pull one's weight ● carry all before you 	<ul style="list-style-type: none"> ● grasp the nettle ● wild goose chase ● stir up a hornet's nest ● take the bull by the horns ● have a chip on one's shoulder
Test Two: Comprehension Test of English and Chinese Idiom Variants				
	Low-Fam English Idioms		Low-Fam Chinese Idioms	
	<ul style="list-style-type: none"> ● spill the beans ● save your skin ● steal the show ● slow off the mark ● carry all before you 	<ul style="list-style-type: none"> ● pull one's weight ● grasp the nettle ● hang up one's boots ● take the bull by the horns ● throw a spanner in the works 	<ul style="list-style-type: none"> ● 与羊谋羞 ● 冷灰爆豆 ● 颊上添毫 ● 两脚书橱 ● 囊里盛锥 	<ul style="list-style-type: none"> ● 聚蚊成雷 ● 咳唾成珠 ● 拿糖作醋 ● 画脂镂冰 ● 指山卖磨

Note. 'High-Fam' stands for 'High Familiarity', while 'Low-Fam' stands for 'Low Familiarity' in the above table.

To help with meaning interpretation, the idiom variant in each test item was placed in a context. All the potential new words were provided with basic meanings between brackets to rule out the interference of unfamiliar vocabulary. English and Chinese test items were randomly sequenced respectively.

3.3 Tasks

In both tests, the participants were required to write down the meaning of the underlined English/Chinese idiom variants in each item. They could explain the meaning in either Chinese or English. Examples of English and Chinese test items are as follows:

(1) The highly anticipated launch of this fall is Samsung's Galaxy Note 8. The upcoming flagship has been creating a lot of buzz on the rumor mill, but in the latest report, Samsung itself has spilt a few beans about the dual camera setup on the device.

(2) spilt a few beans: _____

(3) 李纨、宝钗、袭人，平和中正，温顺低调，贾母自然不会认识不到这类人的优点。但《红楼梦》更是说话的艺术。凤姐、湘云、黛玉、宝琴，个个美妙绝伦，咳唾生风，甚至不乏铿锵厉害，所谓“言谈爽利”。

(4) 咳唾生风: _____

3.4 Data Collection and Data Analysis

There were two criteria for screening out invalid test papers: (1) perfunctory performance, for example, copying answers from a dictionary or from other participants; (2) leaving more than half of the items undone. Of the 141 test papers collected from the two tests, 12 unqualified papers were discarded. In all, we obtained 35 valid papers from the below TEM 4 level, 33 from the TEM 4 level, and 31 from the TEM 8 level from Test One. In Test Two, a total of 30 papers were screened as valid for data analysis. Each item in the two tests was scored on a 3-point scale ranging from 0 to 2. The detailed grading policy was: (1) 0 points for unanswered items and incorrect

answers; (2) 1 point for partially correct answers; (3) 2 points for correct explanation of meaning. For Test One, each type of variants was attributed 20 points, and the full score was 80 points. For Test Two, the full score was 40 points, 20 points for the English items and 20 points for the Chinese items.

The General Linear Model (repeated measures) procedure of SPSS 22.0 was used to analyze research question 1 (2 * 4) and question 2 (3 * 4). For question 3, linear regression analysis was used to examine the predictive effects of familiarity, L2 proficiency level, and variation type on the comprehension performance. Question 4 used independent-samples T test and Pearson correlation analysis to examine the similarities and differences between the participants' performance in L1 and L2. In addition, a textual analysis was used to check the answers of each valid test paper to trace the relationship between the participants' ways of thinking and the answers they provided. This was intended to shed more light on the comprehension process in a relatively offline context.

4. Results

4.1 Familiarity

The descriptive statistics of idioms with different familiarity in Test One are shown in Table 3. The success rate of highly familiar idioms' variants (49.5%) was higher than that of low familiarity idioms (30.5%), and there was no fluctuation due to the change of variation type. The main effect of familiarity was significant, $F_{\text{familiarity}}(1, 32) = 8.615, p = 0.006$, which confirmed that the performance of high and low familiarity items was significantly different. The main effect of variation type was not significant, $F_{\text{variation type}}(3, 32) = 0.801, p = 0.502$. There was no significant interaction between familiarity and variation type, $F_{\text{familiarity * variation type}}(3, 32) = 0.33, p = 0.804$.

Table 3. Mean scores and success rates of high/low familiarity idioms' variants in Test One

Group	Mean Score/Success Rate	Type 1	Type 2	Type 3	Type 4
		Mean Score (Standard Deviation)			
High-Fam	0.99/49.5%	1.16 (0.25)	1.03 (0.33)	0.80 (0.65)	0.97 (0.28)
Low-Fam	0.61/30.5%	0.69 (0.39)	0.71 (0.55)	0.59 (0.38)	0.43 (0.33)

4.2 L2 Proficiency Level and Variation Type

Table 4 presents the descriptive statistics of the three groups' performance in comprehending the four types of English idiom variants.

Table 4. Mean scores and success rates of the three groups in Test One

Group	Mean Score/Success Rate	Type 1	Type 2	Type 3	Type 4
		Mean Score (Standard Deviation)			
Below TEM 4	0.62/31%	0.72 (0.43)	0.69 (0.52)	0.58 (0.52)	0.48 (0.41)
TEM 4	0.79/39.5%	0.96 (0.33)	0.84 (0.44)	0.64 (0.51)	0.73 (0.35)
TEM 8	0.98/49%	1.09 (0.48)	1.07 (0.51)	0.87 (0.54)	0.88 (0.51)
Total	0.80/40%	0.92 (0.43)	0.87 (0.50)	0.70 (0.52)	0.70 (0.45)

The linear trends of L2 proficiency level and variation type in Test One are depicted in Figure 1. On the one hand, the mean score of each group increased from the below TEM 4 level to the TEM 8 level. On the other hand, a comparison of the mean scores of the four variation types showed that: Type 1 > Type 2 > Type 3 ≈ Type 4 ('>' means 'more than'; '≈' means 'similar to'), suggesting that from Type 1 to Type 4, the comprehension performance decreased first and gradually stabilized.

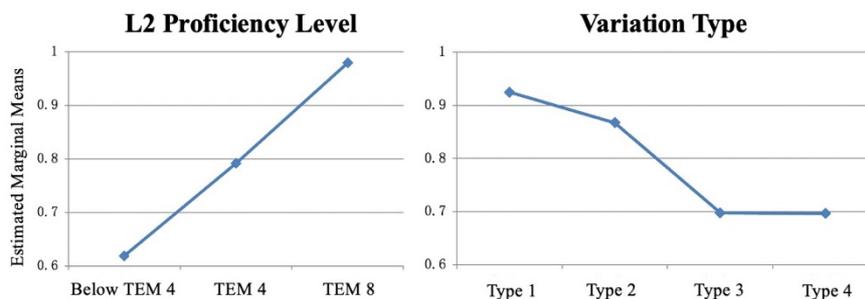


Figure 1. The linear trends of L2 proficiency level and variation type in Test One

Further, the main effect of L2 proficiency was significant, $F_{L2\text{ proficiency}}(2, 108) = 5.918, p = 0.004$, indicating that the influence of L2 proficiency level on the comprehension of idiom variants was significant. The LSD post hoc test result further revealed that there was a significant difference between the mean scores of the below TEM 4 and TEM 8 groups ($p = 0.001$). The difference between the TEM 4 and TEM 8 groups was approaching significant ($p = 0.076$), and that between the below TEM 4 and TEM 4 groups was not significant ($p = 0.102$). The main effect of variation type was not significant, $F_{\text{variation type}}(3, 108) = 1.879, p = 0.137$. There was also no significant interaction between L2 proficiency level and variation type, $F_{L2\text{ proficiency} * \text{variation type}}(6, 108) = 0.095, p = 0.997$.

4.3 The Predictive Effects of Familiarity, L2 Proficiency Level, and Variation Type

In the linear regression test, the participants' comprehension performance was set as the dependent variable, while familiarity, L2 proficiency level, and variation type were the independent variables. The results showed that $R^2 = 0.275, F(3, 116) = 16.068, p < 0.001$, indicating that the regression model could account for the variability of the participants' comprehension performance.

Further analysis of variance showed that the established linear regression model was statistically significant ($p < 0.001$). The standardized regression coefficients of the three independent variables were: $B_{\text{familiarity}} = 0.384, p < 0.001$; $B_{L2\text{ proficiency}} = 0.18, p < 0.001$, $B_{\text{variation type}} = -0.085, p = 0.012$. Therefore, familiarity and L2 proficiency level were positively correlated with comprehension performance, while variation type was negatively correlated. The predictive effect of familiarity was the highest, and that of variation type was the lowest. The regression formula was: comprehension performance = familiarity * 0.384 + L2 proficiency * 0.18 - variation type * 0.085 + 0.075.

4.4 L1 Figurative Competence

In Test Two, the results of descriptive analysis and independent-samples T test showed that the mean scores of the participants were 1.1 (Chinese items, $SD = 0.301$) and 0.71 (English items, $SD = 0.301$), $t = 4.966, p < 0.001$, indicating a significant difference in the performance between the Chinese and English idiom variants. Pearson correlation analysis showed that the participants' performance of Chinese and English items was significantly correlated, $r = 0.546, p < 0.001$.

To further explore the relationship between learners' comprehension performance of L1 (Chinese) and L2 (English), the 30 participants in this test were divided from high to low into three groups based on the mean scores of their comprehension of Chinese idiom variants. There were 10 participants for each group, marked respectively as Group A, B, or C. Group A represented those participants with the highest L1 figurative competence, Group C with the lowest, and Group B stood in the middle. Figure 2 presents a comparison of the difference between Chinese and English mean scores in each of the three groups. Among all, Group B performed relatively stable in the English part of the test, with a floating range of 0-0.5 points between Chinese and English items. It indicated that for those learners with a moderate ability to process idiomatic items in L1, their performance in L2 was similar to or slightly lower than that in L1, the two being relatively consistent.

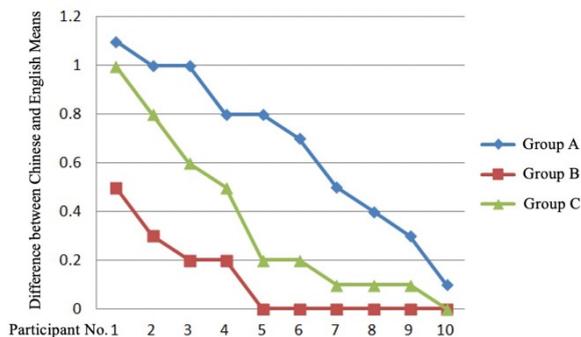


Figure 2. The difference between mean scores of Chinese and English items in Groups A, B, and C

In contrast, the Chinese and English performance of the participants in Groups A and C differed significantly (see Figure 3). The overall performance of the participants in Group A was above average in the English part of the test, but the mean score of the difference between their Chinese and English performance fluctuated greatly. It seemed that high L1 figurative competence did not have a constant positive predictive effect on L2 performance. The participants in Group C also performed poorly in the English part, indicating that if their ability to understand Chinese idiom variants was low, their performance in the English ones was generally correspondingly weak.

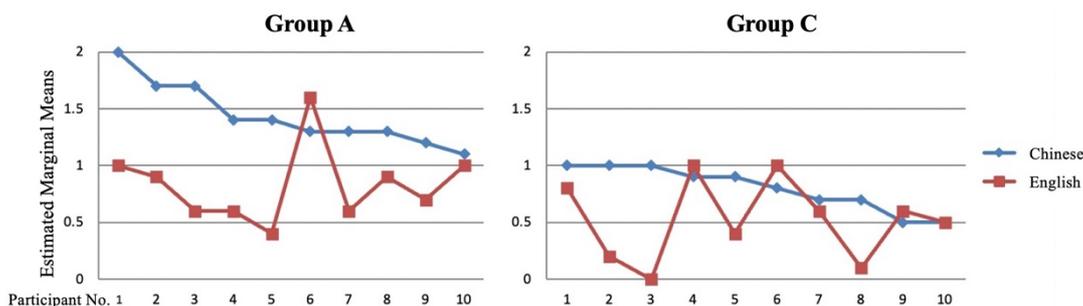


Figure 3. The comprehension performance of Chinese and English idiom variants in Groups A and C

5. Discussion

5.1 The Effect of Familiarity on Language Learners’ Successful Comprehension of L2 Idiom Variants

The results of Test One have shown that the comprehension performance of highly familiar idioms’ variants was significantly better than that of idioms with low familiarity. It could be inferred that high familiarity with an idiom is sufficient for language learners to understand its variants correctly. As mentioned in Section 2.3, idioms with high familiarity are normally easy to recognize (Tabossi et al., 2009) because language users tend to involuntarily activate the figurative meaning of idioms (Nordmann et al., 2014). The present study further proposes that high familiarity is also conducive to identifying the canonical forms of idioms back from their variants, accessing the proper figurative meanings, and ultimately understanding the target variants correctly (see also Glucksberg, 2001).

Given that sufficient condition, a follow-up question is whether high familiarity also constitutes a necessary condition for successful comprehension. To explore this question, we sorted out and analyzed all the data of low familiarity test items. It was confirmed that even in a low familiarity environment, the participants could still at least partially understand the idiom variants, obtaining a mean success rate of around 30% rather than completely avoiding answering. Additionally, in several test items, variants with low familiarity with the canonical idioms achieved a conspicuously high success rate. Take the idiom ‘bite the dust’ as an example. Its variant usage in the test item is:

(1) A leading economic reformer like Chief Minister Chandrababu Naidu of Andhra Pradesh, bit the political dust in the 2004 election because he was seen by poorer voters as having neglected their interests.

According to the familiarity rating result, the original idiom ‘bite the dust’ received a mean score of 1.5 out of 5, which means that it was a typical example of idioms with low familiarity. In contrast, the success rate of its variant reached up to 45%, nearly as much as the average success rate of idioms with high familiarity. To explain

this inconsistency, the contextual effect should not be overlooked. The local context of this item is quite rich in clues, which makes it not difficult to deduce the intended meaning ‘political defeat’ from the keywords including ‘election’, ‘poorer voters’, ‘neglected their interests’, etc. Karlsson (2019) pointed out that the development of L2 learners’ ability to make use of contextual clues takes precedence over frequency effect and other abilities, such as meaning deduction based on the literal form. Therefore, if the context can be effectively utilized, high familiarity with the canonical idiom is not categorically necessary for the comprehension of idiom variants.

Overall, the above analysis shows that familiarity has a significant impact on the comprehension of L2 idiom variants, but it is not the one and only determinant of correct understanding. Pedagogically, it reminds teachers that there is no need to simply rely on previous familiarity when encountering the creative use of idioms and other types of figurative language. It is equally important to raise learners’ awareness of the contextual information for online meaning processing when dealing with language variation and change. Only by cultivating this inferential ability and making comprehensive use of multiple contextual clues can learners be prepared for the emergent and innovative language knowledge that they have not encountered in classroom instruction (Wray 2000).

5.2 The Effect of L2 Proficiency Level and Variation Type on Language Learners’ Successful Comprehension of L2 Idiom Variants

As to variation type, the present study has revealed that idioms with uni-dimensional structural changes obtained the highest success rate in comprehension. Idioms modified in figurative ways (including topic indication and topic-related literal-scene manipulation) were the most difficult to understand, while the performance of idioms with literal-scene manipulation had a medium level of difficulty. Szczepaniak (2006) pointed out that the more syntactic and semantic operations involved, the more difficult it is to deduce the meaning of an idiom variant. The present study draws a similar conclusion that the complexity of idiom variation increases from the surface structure to the internal figurative meaning, which in turn reversely affects the participants’ comprehension performance, leading to a decreasing trend in terms of success rates. However, instead of a continuous decline, the mean score of variation type 4 was similar to that of type 3, suggesting that L2 learners were less sensitive to subtle changes in the figurative dimension than theoretically assumed.

Although Guo (2022) proposed that idioms with literal-scene manipulation may prompt literal interpretation, thereby leading to the lowest success rate of this variation type, it failed to take the effect of familiarity into consideration. In contrast, the present study distinguished between idioms with high and low familiarity. Linear regression analysis integrated the mixed effects of multiple factors and made necessary corrections to the results so that idioms with structural changes were the easiest, while figurative modification was the most difficult to understand. This seems to be more consistent with the theoretical hypothesis of the complexity of idiom variation.

5.3 The Relationship between L1 Figurative Competence and L2 Comprehension of Idiom Variants

The results of Test Two have generally confirmed that learners’ comprehension of L1 idiom variants is significantly better than that of L2. To investigate the relationship between learners’ L1 and L2 performance, it was further found that although the overall advantage of L1 comprehension was prominent, this advantage was only partially correlated with learners’ L2 performance. In particular, if learners’ comprehension of L1 idiom variants is weak, their performance in L2 tends to be poor as well since it seems difficult for them to break through the literal dimension of meaning interpretation. Therefore, related cognitive mechanisms working at the conceptual level play a fundamental role in both the L1 and L2 processing of figurative meaning. Failing to activate these mechanisms will exert a negative influence on the whole process of comprehension. However, the efforts required to activate conceptual mechanisms in L1 and L2 environments are different. According to Albrechtsen et al. (2008), if learners’ L2 vocabulary knowledge is below the threshold, they will not be able to transfer those higher-order skills developed via L1 to L2 tasks.

Similarly, in figurative language processing, even if learners have developed the ability to analyze meaning in an L1 environment, the unfamiliar L2 forms may cut off the cross-layer connection between conceptual and linguistic levels, resulting in a failure to access the figurative meaning in L2. In this sense, the related cognitive abilities and the specific levels of L1 and L2 proficiency dynamically affect the processing of idiom variants. The influence of L1 figurative competence on L2 comprehension needs to be determined jointly with the particular level of L2 proficiency.

6. Conclusion

Cacciari (2014) pointed out that the principle underlying the non-standard forms of idiom use is still part of the idiom mystery. The present study examined the effects of familiarity, L2 proficiency level, variation type, and L1 figurative competence on Chinese EFL learners' comprehension of English idiom variants. The results showed that: 1) the main effects of familiarity and L2 proficiency level were significant; 2) figurative-level variation was the most difficult to understand, followed by idioms with literal-scene modification and simple constructional adaptations; 3) the influence of L1 figurative competence needs to be determined in combination with L2 skills. In future studies, a greater variety of experimental paradigms can be integrated to measure the online processing of the creative use of idioms. This will help unravel the intricacies of the idiom mystery and expand our understanding of figurative language processing in general.

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