Journal of Linguistics & Cultural Studies

Article

Forward conceptual transfer in Native English Speakers' Acquisition of Chinese Adjective-Noun Collocations

Ying Yuan[1,*]

[1] Hebei University, Baoding, China
* Correspondence: Ying Yuan, Hebei University, Baoding, China

Abstract: Existing research on collocation errors is mostly limited to description, and conceptual causes still lack explanation. The study of conceptual transfer also focuses on the direction of non-native English speakers learning English, and the reverse investigation of native English speakers' acquisition of Chinese is still rare. The purpose of this study is to investigate whether there is forward conceptual transfer in the acquisition of Chinese adjective-noun collocations by native English speakers, and the relationship between the distribution of transfer and the degree of conceptual overlap between English and Chinese. Based on the BCC Modern Chinese Corpus, HSK Dynamic Composition Corpus and Global Chinese Interlanguage Corpus, three target nouns with different degrees of conceptual overlap of "pressure", "sound", and "influence" are selected, and the "norm comparison–back-translation verification" procedure is used to analyze the Chinese adjective-noun collocation produced by native English speakers. The results show that forward conceptual transfer does exist, and its distribution is closely related to the degree of conceptual overlap between English and Chinese. Combined with the existing research, it can be inferred that the learning direction also affects the observability of transfer. This result provides new corpus evidence for discussions of directionality of conceptual transfer.

Keywords: adjective-noun collocations; native English speakers; Chinese learners; forward conceptual transfer

1. Introduction

Collocation has always been a core issue in the field of second language acquisition. Collocation knowledge is directly reflected in learners' language "input" and "output"; that is, it is directly related to learners' comprehension and idiomatic expression [1,2]. However, it is difficult for even high-level second language learners to be proficient in lexical collocations [3–5]. At present, the research on second language acquisition around lexical collocation in China pays more attention to verb-noun collocation, and the type of adjective-noun collocation has not received considerable attention. At the same time, most of the relevant experimental studies are based on Chinese learners of English and their interlanguage system. Although scholars who take Chinese acquisition as the research object have also achieved certain results, their lexical collocation research tends to describe the types of adjective-noun collocation errors of native English speakers, and the conceptual reasons behind the errors have not been clearly explained.

The conceptual transfer theory proposed by Jarvis and Pavlenko can provide a perspective for the above problems, that is, learners' native-language conceptual systems will be activated in the use of the second language, resulting in non-target-like lexical collocations, which in turn affects the conceptualization and expression of the second language. On the whole, most of the existing empirical studies on conceptual transfer follow the direction of "non-native English speakers acquire English", and there are few studies on "native English speakers acquire Chinese". Zhao Xueqin and Zhang Junyi confirmed through a word-association experiment that the positive transfer of Chinese learners of English's "spatial" thinking inhibited their acquisition of English adjective-

Received: 16 September 2026
Revised: 09 November 2026
Accepted: 20 November 2026
Published: 26 November 2026

Copyright: © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

noun collocations to a certain extent [6]. Based on this reverse argument, this paper examines whether the dimension-specific measurement in English thinking (that is, native English speakers often put abstract entities on physical scales such as height, weight and loudness to measure their cognitive thinking tendency) plays a role in the same mechanism when native English speakers acquire Chinese adjective-noun collocations. Based on the BCC modern Chinese corpus, HSK dynamic composition corpus and global Chinese interlanguage corpus, this study makes a normative comparison and back-translation verification of the target words, and analyzes the Chinese adjective-noun collocations produced by native English speakers one by one.

The research questions are:

1. What are the systematic differences between native English and Chinese speakers in adjective collocations of target nouns?
2. Is there forward conceptual transfer in Chinese adjective-noun collocations produced by native English speakers?
3. What is the correlation between the distribution of forward conceptual transfer and the degree of conceptual overlap between English and Chinese?

2. Research Background

2.1. Research Status of Adjective-Noun Collocations

Since Firth put forward the concept of "collocation," lexical collocation has attracted wide attention in academia [7]. Throughout the domestic research, learners' collocation errors can be seen in many types such as verb-object, subject-predicate and modifier-head. Among them, there are many research results on verb-noun collocation errors. Chen pointed out that although the error rate of adjective-noun collocation ranks second, systematic investigation is still rare [8]. Even when analyzing adjective-noun collocations, most of the existing studies focus on a certain target word, such as Zhou Xiaoting's study of great/big/large and Huo Ying's study of little/small [9,10]. Moreover, their research is focused on the error representation of Chinese learners of English, and Chinese as a second language has received little attention. At the same time, some scholars have investigated the errors of native English speakers based on corpus, such as Zhao Hui's classification of errors in modal verbs, but this kind of work still stays at the level of error classification and description [11]. The existing research has fully described the types of collocation errors, but there is still a lack of empirical answers to the conceptual causes of errors.

2.2. Research Status of Conceptual Transfer

Jarvis proposed conceptual transfer, and Jarvis further developed it into the conceptual transfer hypothesis [12,13]. Pavlenko used the modified hierarchical model to further illustrate that the use of second language vocabulary according to first-language categories is forward conceptual transfer [14]. Pavlenko's research on emotion concepts in bilinguals further shows that the difference in conceptual representation between mother tongue and target language in emotional vocabulary will appear in the use of second language, which provides evidence for conceptual transfer at the emotional semantic level [15]. Since then, there have been empirical studies to demonstrate and develop this theory. Pavlenko and Driagina found that American learners' Russian emotional vocabulary production is influenced by conceptual transfer [16]. Cook et al. found that the expression of object categorization of Japanese learners who have lived in the United Kingdom for a long time is changing [17]. Qiu Chenhui and Wen Qiufang confirmed that conceptual transfer occurs in learners at different levels based on cognitive comparative analysis [18]. These studies have promoted the study of conceptual transfer in the acquisition of English by non-native English speakers.

Regarding Chinese acquisition, the empirical research on conceptual transfer has been partially accumulated, but it is not focused on the adjective-noun collocations. Wang Zhijun and Hao Yuxin focused on the development of the Chinese mental lexicon of American learners, and found that the unique meanings of mother tongue would interfere

with learners' word meaning acquisition at the intermediate stage [19]. Li, taking "danshi" as an example, found that native English speakers tend to transfer the semantic structure of English but to Chinese, and produce correct but semantically deviated expressions [20]. This shows that conceptual transfer does occur in Chinese acquisition. However, their focuses are word meaning and conjunction respectively, and the collocation of adjective-noun has not been taken into account. Despite the existence of existing research on adjective-noun collocations, the analysis of collocation errors still remains at the level of "interlingual interference/intralingual interference". Wei Liang investigated the collocation of disyllabic adjectives and nouns by foreign students, and attributed the errors to interlingual interference and intralingual interference [21]. Conceptual transfer was not addressed. Jiang Shuai and Zhao Yang, in reviewing the theoretical contributions of Chinese second language acquisition research, pointed out that the field is in the stage of verifying the existing hypothesis [22]. They put forward that "the theoretical innovation of Chinese second language acquisition should start from the micro-study based on language comparison". This study is a response to this.

3. Research Methods

3.1. Source of Corpus

The standard corpus of Chinese native speakers in this study is taken from the "multi-domain sub-corpus" in the BCC modern Chinese corpus of Beijing Language and Culture University. Based on the British National Corpus (BNC), the English native-speaker norm was determined via an online collocation tool, named Just The Word. The Chinese learner corpus is taken from the HSK Dynamic Composition Corpus (Version 3.0) and the Global Chinese Interlanguage Corpus (V1.0, which automatically provides native language background annotation fields). The retrieval date of the above three corpora (BCC multi-domain sub-database, HSK dynamic composition corpus, global Chinese interlanguage corpus) is October 23, 2026; Just The Word/BNC is an online collocation tool and is not listed separately. In view of the content of this study, only learner texts by native English speakers were retained. In the process of data collection, nationality was used to screen learners from six countries of the United States, Britain, Australia, Canada, New Zealand and Ireland, supplemented by the corpus's own "mother tongue or first language" retrieval function, excluding non-native English speakers. A total of 470 learner examples (pressure 67, sound 69, influence 334) were obtained by searching the three target nouns.

3.2. Target Noun Extraction

In the preliminary screening stage, we directly consider the 9 Chinese words corresponding to the "central noun" that have been screened in the vocabulary association experiment of Zhao Xueqin and Zhang Junyi [6]. This experiment selects several typical Chinese learners of English's errors in adjective-noun collocations from the daily expressions of CLEC. Then the corresponding expressions with the highest frequency of collocation are found in the Corpus of Contemporary American English (COCA). The two people's word selection method has its advantages: first determine the target word in the learners' collocation error, and then match the high-frequency expression in the native English corpus. In this way, the selected words have the actual record of the learners' mistakes, and there will be no situation where "the word is selected but the error is not found". In addition, adopting high-frequency collocation is to control the difference of learners' input and minimize the influencing factors of learners' learning ability. However, unlike this corpus-based study, this word list only provides the test materials needed for the experiment, and does not require a large corpus for support. Therefore, according to the procedure of corpus research, this study tests these nine words one by one in learners' real production to judge whether they meet the analysis requirements; the following only explains the criteria and representative examples for retention or elimination, and does not list the respective judgment results of the nine words one by one.

After rechecking the nine words, we found that the word list is not a perfect fit. There are two reasons. On the one hand, some words do not have collocational differences in

the process of acquisition. According to the theory of conceptual transfer, the forward conceptual transfer must appear in the form of deviating from the norms of the target language in order to be observed as a corpus. If the conventional collocation of English is compatible with Chinese, even if it is inferred that there is a transfer, the resulting expression is still in line with the standard, and the error cannot be observed. This is equivalent to the entry having no value for the present study. Taking "risk" as an example, the high-frequency collocation of English mother tongue is high risk, which is literally translated as "high risk". This is also a legitimate expression in Chinese, so the word has no observable value in the learning direction and high-frequency collocation criteria of this study (see 5.2). On the other hand, the observable words must have sufficient examples in the learner's corpus (this study uses 20 as the minimum threshold), and a handful of samples is not enough to support the judgment. Although some words (such as "scale", "expectation") have obvious collocation differences, the research examples are almost nonexistent and will be eliminated.

It is worth noting that the corpus selected in this study is mostly from written texts, and a considerable part is prompted compositions from Chinese proficiency tests. As a result, the content of learners' output is naturally restricted by the topic of the composition. Words beyond the scope of the topic are difficult to be found, and it is difficult to get examples. In view of the above criteria, we selected daily nouns from the primary words of the "New Chinese Proficiency Test Syllabus", with 1-3-level nouns as the candidate range, and extracted them according to the criteria of everyday use and adjective modification. A total of 15 candidate words (full word list available) were obtained as the starting point for the following three steps of screening.

The specific target noun screening is divided into three steps. 1. Retrieve the adjective collocation of the candidate words in the BCC, and search the predicate form of "noun + adjective" and the attributive form of "adjective + de + noun" respectively; check the total frequency and retain the absolutely dominant collocation. 2. Retrieve the adjective collocations of their English equivalents in Just The Word, and also retain the highest frequency of collocations. 3. Finally, the number of samples is tested in the learner corpus, and candidates with fewer than 20 examples were eliminated. After the 15 candidate words were screened by the above procedure, "pressure", "sound", and "influence" were selected, and three different types of English-Chinese conceptual overlap were presented for subsequent comparison. The classification basis of the three words is as follows: "pressure" corresponds to the overall "big" in Chinese with high/heavy/intense on the English side, which is a complete disagreement; the "sound" only diverges on the two sides in terms of polarity of "sound", and the table "light" is consistent with the pitch, which is a one-way divergence; both sides of "influence" accept the direct translation of size/degree words, which is completely overlapping. The classification is based on whether the high-frequency collocation can be directly translated, and whether the disagreement falls on the large polarity or the small polarity word by word. This classification is completed independently based on the comparison between BCC and Just The Word before the transfer density statistics, and is not based on the transfer results.

3.3. Extraction and Transfer Judgment of Adjective-Noun Collocation Corpus

First, we manually examined all the learner examples of the three target nouns individually. Excluding verb-object collocation, nominal modifiers and fixed collocation (social pressure, academic pressure), a total of 122 adjective-noun collocation samples (26 pressure, 29 sound, 67 influence) can be obtained. The adjectives in each collocation are labeled and classified according to different angles of modification. "Big/small" and "high/low" are the most common. Adjectives such as "heavy/light" and "strong/intense", which map abstract noun entities onto specific physical scales, are also included.

The process of judging the transfer phenomenon is as follows: (1) learners' collocations are compared with BCC native speakers' norms; (2) the deviant ones are back translated into English; (3) the translations are checked for idiomaticity in the native English corpus; (4) The samples that pass both items can be regarded as the evidence

consistent with the existence of "forward conceptual transfer", while the samples of non-idiomatic English expressions after literal translation are regarded as the evidence consistent of the absence of conceptual positive transfer. In the specific demonstration, if the learner's output corpus is "the pressure is very heavy", according to the BCC data statistics, the combination is first judged to deviate from the native language norms. Because the collocation of "pressure" and "great" is the most common in the Chinese corpus, "very heavy" is found in 17 cases. Then, the literal translation of heavy pressure is also an idiomatic collocation in the English corpus, so the sample is classified as an example of forward conceptual transfer. The combination like "a new kind of pressure" has no corresponding source in the English native language corpus, that is, it is classified as a non-transfer instance.

4. Research Results and Analysis

4.1. Systematic Differences in English and Chinese Adjective-Noun Collocations

The high-frequency collocations of the three target nouns in the Chinese corpus retrieval system BCC (multi-domain subcorpus) and the English corpus Just The Word (based on BNC) are shown in Table 1.

Table 1. Comparison of English and Chinese Adjective-Noun Collocation Norms

Noun	Chinese (BCC; English gloss)	English (Just The Word)
Pressure	pressure is great 1,479; great pressure 486; pressure is high 108*; pressure is heavy 17	high 202; great 119; considerable 106; strong 90; intense 85; enormous 66; heavy 55 (big not listed)
Sound	sound is big 266; big sound 142; sound is small 166; small sound 50; sound is high 61**	low 280; small 130; soft 86; little 73; loud 30
Influence	great influence 1,338; small influence 61; profound influence 413; far-reaching influence 875	great 176; major 124; important 114; strong 108; powerful 90; significant 71; profound 45; big 37

Note: *"pressure is high" (108 cases): the first 50 were manually examined; almost all occur in physical contexts (geological strata, boiler drums, heart ventricles, etc.), with very few describing psychological pressure. In Chinese, **"sound is high" refers to both pitch ("an octave higher") and volume ("whoever speaks louder wins the argument").

The adjective collocations of "pressure" in Chinese total about 2,000 cases of "big" family (1,479 cases of pressure and 486 cases of big pressure), only 108 cases of "high" and almost all of them are interpreted in physical contexts, with 17 cases of "heavy". On the English side, high (202), great (119), considerable (106) are followed by intense (85), strong (90), big does not appear in the high-frequency list. The high-frequency collocations on both sides are almost non-overlapping. Chinese covers all measurement dimensions with a holistic "big", while English selects words according to height, intensity and weight.

In terms of "sound" in Chinese, there are 266 cases of "sound is big," 142 cases of "big sound," 166 cases of "sound is small," and 50 cases of "small sound," showing that both polarities are fully represented. In addition, there were 61 cases of "sound is high", which expresses both pitch ("an octave higher") and volume ("whoever speaks louder wins the argument"). In English, loud (30) is used for "loud", small voice (130) and little voice (73) are used for "light", low voice (280) is used for "pitch", while big voice is not included in the high-frequency list. By comparison, the meaning of "light" is consistent on both sides, and "high/low" is the same in the pitch sense. Only when expressing "loud", the gap between the two languages is obvious. Chinese only says "big", and English uses loud for it.

For "influence", 1,338 cases were "big influence" and 61 cases were "small influence". Great (176), major (124), important (114), strong (108), powerful (90), significant (71) and big (37) are also frequently used in English. The existence of big influence indicates that English and Chinese accept direct translation of this noun. Both sides agree with a set of

depth-based metaphorical expressions, namely, "profound influence" (413) and "far-reaching influence" (875), which directly correspond to English profound (45). The first research question is therefore answered: there are differences between English and Chinese in adjective-noun collocation, and the degree of difference varies from word to word, ranging from complete divergence, one-way divergence and complete overlap.

4.2. Evidence of Forward Conceptual Transfer

Table 2 shows the determination details of 7 conceptual transfer candidates in the "pressure" group. It can be seen from the table that 7 of the 26 adjective-noun collocations retrieved in the study were judged to belong to instances of forward conceptual transfer. The criterion of distinction lies in the degree of correspondence of English and Chinese corpus. The more complete the deviation of the Chinese side, the more fixed the English correspondence, the more convincing the evidence. On the contrary, they are classified as marginal. These seven items are all distributed in three dimensions: weight (very heavy, too heavy, excessively heavy), intensity (intense), and height (high). Among them, six items are conclusive (such as "very heavy pressure" to heavy pressure), and one item belongs to the marginal statement in native Chinese collocations ("too heavy" is not impossible to say in Chinese). This shows that the learner's output is not the repeated misuse of an adjective. The three dimensions of weight, intensity and height are distributed, indicating that the ways of measuring pressure in English are brought into Chinese expression by learners as a whole.

Table 2. "Pressure" Group Conceptual Transfer Candidate Details

Learner example (English gloss)	Adjective type	Back-translation	Classification
The pressure borne is very heavy	Weight	heavy pressure	Candidate
The pressure is too heavy	Weight	too heavy	Candidate
The pressure and competition are too intense	Intensity	intense pressure	Candidate
The high pressure created	Height	high pressure	Candidate
New York's high pressure	Height	high pressure	Candidate
This so-called "high-pressure" condition	Height	high pressure	Candidate
The pressure is excessively heavy	Weight	excessively heavy	Candidate (marginal)

In contrast, all the 15 acceptable examples in this group follow the Chinese "big/small" framework ("great pressure", "so much pressure"), and none of them use "heavy", "high" and "intense"; in addition, there are 4 non-transfer errors (including 2 items that were originally included in the candidate, the degree-type instance "the pressure applied is insufficient" and the misattributed-modification instance "the pressure of family difficulties", as well as 2 other non-transfer errors). There are 26 items in the three categories of candidate, non-transfer errors and acceptable examples, which are consistent with the total number of samples.

Six of the 29 collocations in the "sound" group were candidates, including four marginal expressions and two strongly supported cases ("turn the volume up high", corresponding to English turn the volume up high; "Mother's voice is so high" corresponds to her voice was so high, where "sound" is taken in the volume sense based on the context), and there are five non-transfer errors (such as "turning the volume to the lowest" is a grammatical problem). A prominent manifestation is that in the 18 acceptable examples of this group, learners use a large number of qualitative adjectives (gentle, beautiful, clear, special, serious, strange), bypassing the two sets of measurement adjectives of "big/small" and "high/low".

The 67 adjectival modifications in the "influence" group are all in line with Chinese norms, and no candidate is found. Thus, the second research question is answered: there is evidence of forward conceptual transfer in Chinese adjective-noun collocations

produced by native English speakers. The positive transfer of conceptual transfer is clear and systematic on completely divergent words, sparse on one-way divergent words, and absent on overlapping words.

4.3. Gradient Comparison of Forward Conceptual Transfer Density

Table 3 in this section shows the transfer of three nouns.

Table 3. Gradient Comparison of Forward Conceptual Transfer

Conceptual overlap	Noun	Learner examples	Adjective–noun collocations	Transfer candidates	Transfer density
Complete divergence	Pressure	67	26	7	26.9%
One-way divergence	Sound	69	29	6 (including 4 marginal)	20.7%
Complete overlap	Influence	334	67	0	0

Note: Learner examples refer to all the examples of native English speakers with target nouns in the two interlanguage corpora; adjective-noun collocation refers to the number of instances with adjective modification after excluding verbal usage and fixed chunks; conceptual transfer candidate refers to the number of cases identified as candidates; transfer density = number of conceptual transfer candidates ÷ total number of adjective-noun collocation instances. There were 111 cases of nominal modification in the "influence" group (such as "the influence of globalization"), which were not included in this study.

Seven of the 26 collocations in the pressure group were candidates, and the transfer density was 26.9%. Of the 29 items in the sound group, 6 were candidates, and 4 were marginal expressions, with a density of 20.7%. There were 67 collocations in the influence group, none of which was selected, and the density was 0. It can be seen from Table 3 that learners' transfer candidates are concentrated on the "pressure" with the greatest difference between English and Chinese conceptual encoding, while the "influence" with almost overlapping conceptual encoding is rarely seen. At the same time, the three groups of transfer density data decrease with the increase of degree of conceptual overlap between English and Chinese. This gradient is the result of descriptive observation on the three target nouns in this paper, which does not constitute an independent test of the correctness of the above "complete disagreement-one-way disagreement-overlap" classification. It can be concluded that the distribution of forward conceptual transfer is directionally related to the degree of conceptual overlap between English and Chinese (this conclusion is limited to the observation results on the three target nouns of "pressure", "sound", and "influence"). That is, the higher the degree of overlap, the less the transfer. If only well-documented candidates (excluding marginal statements) are included, the pressure group is 6/26 (23.1%), and the sound group is 2/29 (6.9%). The transfer density of each group changes significantly with the candidate criteria, but the direction of the gradient remains unchanged, so this conclusion is limited to the directional level.

5. Discussion

5.1. From "High/low" to "Heavy/loud": Dimension-Specific Measurement and Holistic Representation

In the pressure group, 7 candidates covered the three dimensions of weight, strength and height, 4 were non-transfer errors, and 15 acceptable examples all followed the "big/small", with a total of 26 in the three categories. Learners still write "very heavy", "too high" and "too intense" when high-frequency collocations are available. Wang's discussion on the differences between English and Chinese language representations can provide answers [23]. He proposes that Chinese is a spatial language, accustomed to the "big/small" type of overall spatial words to accommodate traits. English is a temporal language, and its analytical orientation is accustomed to mapping abstract quantities onto specific physical scales. This cognitive mechanism is related to conceptual metaphor

theory. People tend to use specific physical experience to understand abstract degrees. In English, high is used to measure the height of pressure, heavy is used to measure its weight, and intense is used to measure its intensity. The "dimension-specific measurement" observed in this paper is the concrete embodiment of the broad characteristics of the two languages at the "adjective" level. English can use the orientational metaphor of MORE IS UP to interpret stress as height, while Chinese can use the holistic "big" to express the degree of stress. Both of them belong to the quantitative metaphor of "degree/quantity increase", which can be found in the relevant discussion of Lakoff and Johnson [24]. When learners acquire Chinese, it is natural to activate this set of solidified measurement modes at the time of production, and replace "big" in Chinese. This is also the process of L1 conceptual system involved in L2 expression described by the conceptual transfer hypothesis [13].

The voice group data shows that when learners encounter difficulties in collocation selection, they will bypass measurement adjectives and use qualitative adjectives. Learners will bypass target-language forms that differ from their mother tongue and that they do not yet fully command. This is consistent with the avoidance theory of second language acquisition [25]. That is to say, the target language form of the English-Chinese disagreement is precisely the collocation content that learners have less contact with and have not yet acquired. The first-language concept is more likely to intervene here. If this influence does not lead to successful production, the learner will choose to avoid.

5.2. The Relativity of the Direction of Forward Conceptual Transfer

The three groups of transfer density decrease with the increase of degree of conceptual overlap between English and Chinese. This pattern confirms that the greater the difference between the two languages, the more errors caused by transfer; the smaller the discrepancy, the fewer the errors [26]. However, since this principle was put forward, almost all the evidence has come from the level of "whether specific words correspond", and most of the participants are English learners with European language backgrounds. By contrast, the level of "what is the difference in the way of thinking behind the two languages" and the direction of native English speakers' acquisition of Chinese have not been tested. The data in this paper are at this cross point. If this paper is placed side by side with Zhao Xueqin and Zhang Junyi, the core claim of the conceptual transfer hypothesis can be verified in both English and Chinese [6].

However, this set of data answers more than "how transfer changes". In terms of "risk" (low/small is discussed here, and it is the direction for Chinese learners to acquire English), when Chinese learners learn English, English is based on low risk and does not accept * small risk. This is a complete divergence. In the direction of native English speakers' acquisition of Chinese, this difference no longer appears. The literal translation of low risk into Chinese is in line with Chinese norms. At this time, even if the learner has conceptual transfer, the written expression is "correct". It can be seen that the existence of differences does not depend on the vocabulary itself, but really depends on which direction to learn from. The "sound" data shows that its lower end of the scale is consistent, and the upper end of the scale is divided. This shows that the "divergence" itself is also hierarchical. Taken together, the two examples suggest that to judge whether a word can observe the transfer, it is necessary to verify it one by one according to the learning direction, and to distinguish which part of the word meaning the disagreement falls on.

In addition, it is also necessary to mention the absence of candidates of the "influence" group. Zero-candidate is not due to insufficient samples. There are 334 examples containing the target noun in the corpus of the group in 3.1 statistics, of which 111 are nominal modifiers, which do not enter the form-noun collocation judgment, and the actual entry into the transfer judgment is 67; no conceptual transfer candidate is found in these 67 examples, so the absence of candidates is not caused by the lack of judgment samples. So far, the distribution pattern of forward conceptual transfer in adjective-noun collocation has been clear: it decreases with the increase of English and Chinese

conceptual overlap, and whether the transfer can be observed depends on the learning direction.

6. Conclusion

The findings of this study on the forward conceptual transfer in native English speakers' Chinese adjective-noun collocations are summarized as follows. First of all, the differences between English and Chinese adjective-noun collocations are not homogeneous, but vary with words. This means that "there are differences between English and Chinese collocations" cannot be used as a general premise, and the differences must be verified on specific words. Secondly, the distribution of forward conceptual transfer is related to the degree of this difference. The more complete the divergence between English and Chinese, the easier it is for learners to bring English measurement into Chinese, and the pattern is systematic. The divergence is narrowed, and the transfer is sparse. At the overlap of both sides, transfer is impossible to appear. Furthermore, the observability of transfer is also constrained by direction. If the same word is divergent in the acquisition of English, it may be dispelled in the acquisition of Chinese due to the acceptable expression of the target language. Therefore, as far as the three target nouns in this paper are concerned, divergence is not an inherent attribute of vocabulary, but related to learning direction; this directional judgment is based on the combination of existing research and should be understood as a tentative inference about directionality.

This paper has certain reference value for the teaching of lexical collocations in international Chinese education. If collocation teaching only lists the "fixed collocations" of the target language, learners will still assemble them according to their first-language representational habits. A more effective approach in teaching is to directly clarify the differences in the representation of specific words between mother tongue and target language. Which words are represented similarly on both sides, which words only differ in one end of a scale, and for which words the transferred form happens to be acceptable in the target language. This distinction does not have to stay in vocabulary instruction. It is also an interface for learners to realize that "thinking habits affect expression". Incorporating differences in thinking into teaching is more reliable than waiting for learners to acquire naturally.

This study still has the following limitations. The final word list contains only three words and focuses on abstract social nouns, so this conclusion should not be extended to all noun types. At the same time, the study relies entirely on corpus data, and the conceptual representation of learners other than output cannot be directly observed. The transfer judgment of this study is based on the inference of corpus co-occurrence, which should be understood as providing consistent evidence of forward conceptual transfer, rather than directly confirming the occurrence of conceptual representation. Moreover, this procedure makes it difficult to distinguish between interlingual transfer and intralingual bias, so the above evidence is not equal to direct observation of conceptual representation. Additionally, the learner corpus lacks available level labels, and this study fails to test the relationship between the directionality of L1 conceptual transfer and L2 proficiency. In summary, future research can proceed in three directions. Introducing Chinese proficiency variables; expand the investigation of representational differences from adjectives to other parts of speech; words from contexts not covered by the corpus were supplemented by translation-elicitation tasks or priming experiments. These works can test whether directional relativity is valid on a larger vocabulary, so as to judge whether directional relativity is specific to adjective-noun collocation or a general attribute of forward conceptual transfer.

References

1. H. Men, *Vocabulary Increase and Collocation Learning*. Shanghai: Shanghai Jiao Tong University Press, 2018.
2. G. Fox, "Using corpus data in the classroom," in *Materials Development in Language Teaching*, B. Tomlinson, Ed. Cambridge: Cambridge University Press, 1998, pp. 25–43.

3. B. Altenberg and S. Granger, "The grammatical and lexical patterning of MAKE in native and non-native student writing," *Appl. Linguist.*, vol. 22, no. 2, pp. 173–195, 2001.
4. N. Nesselhauf, "The use of collocations by advanced learners of English and some implications for teaching," *Appl. Linguist.*, vol. 24, no. 2, pp. 223–242, 2003.
5. N. Nesselhauf, *Collocations in a Learner Corpus*. Amsterdam & Philadelphia: John Benjamins, 2005.
6. X. Zhao and J. Zhang, "An empirical study of forward conceptual transfer in Chinese learners' acquisition of English adjective–noun collocations," *Foreign Lang. Res.*, vol. 39, no. 1, pp. 65–73, 78, 112, 2022, doi: 10.13978/j.cnki.wyyj.2022.01.004.
7. J. R. Firth, *Papers in Linguistics: 1934–1951*. London & New York: Oxford University Press, 1957.
8. H. Chen, "An analysis of adjective–noun collocation errors by Chinese college English learners from the perspective of conceptual transfer," M.S. thesis, Liaoning Normal University, 2014.
9. X. Zhou, "A study of adjective–noun collocation acquisition: A case study of great, big, and large," M.S. thesis, Dalian Maritime University, Dalian, 2007.
10. Y. Huo, "A corpus-based study of adjective–noun collocations among Chinese college students: A case study of little and small," M.S. thesis, Northwest Normal University, 2010.
11. H. Zhao, "An error analysis of modal verb acquisition by native English speakers based on HSK Dynamic Composition Corpus 2.0," *Mod. Educ. Pract.*, vol. 3, no. 9, pp. 56–59, 2021.
12. S. Jarvis, *Conceptual Transfer in the Interlingual Lexicon*. Bloomington, IN: Indiana University Linguistics Club Publications, 1998.
13. S. Jarvis, "Conceptual transfer: crosslinguistic effects in categorization and construal," *Bilingualism: Lang. Cogn.*, vol. 14, no. 1, pp. 1–8, 2011.
14. A. Pavlenko, "Conceptual representation in the bilingual lexicon and second language vocabulary learning," in *The Bilingual Mental Lexicon: Interdisciplinary Approaches*, A. Pavlenko, Ed. Bristol: Cromwell Press Ltd., 2009, pp. 125–160.
15. A. Pavlenko, "Bilingualism and emotions," *Multilingua*, vol. 21, no. 1, pp. 45–78, 2002, doi: 10.1515/mult.2002.004.
16. A. Pavlenko and V. Driagina, "Russian emotion vocabulary in American learner's narratives," *Mod. Lang. J.*, vol. 91, no. 2, pp. 213–234, 2007.
17. V. Cook, B. Bassetti, C. Kasai, M. Sasaki, and J. A. Takahashi, "Do bilinguals have different concepts? The case of shape and material in Japanese L2 users of English," *Int. J. Bilingualism*, vol. 10, no. 2, pp. 137–152, 2006.
18. C. Qiu and Q. Wen, "A new approach to conceptual transfer research: Cognitive contrastive analysis," *Foreign Lang. Teach. Res.*, vol. 52, no. 2, pp. 225–236, 320, 2020, doi: 10.19923/j.cnki.fltr.2020.02.006.
19. Z. Wang and Y. Hao, "An empirical study of Chinese mental lexicon development among American learners in a native-language environment," *Lang. Teach. Linguist. Stud.*, no. 1, pp. 29–37, 2014.
20. J. Li, "Conceptual transfer: An important mechanism underlying errors in international students' Chinese interlanguage—A case study of danshi," *J. Yunnan Norm. Univ. (Teach. Res. Chin. Foreign Lang.)*, vol. 16, no. 2, pp. 10–17, 2018, doi: 10.16802/j.cnki.ynsddw.2018.02.003.
21. L. Wei, "An investigation of disyllabic adjective–noun collocations in Chinese used by international students," *J. Capital Norm. Univ. (Soc. Sci. Ed.)*, no. S1, pp. 74–81, 2014.
22. S. Jiang and Y. Zhao, "Theoretical contributions of research on Chinese as a second language," *J. Capital Norm. Univ. (Soc. Sci. Ed.)*, no. 2, pp. 98–106, 2026.
23. W. Wang, "On the temporal characteristics of English and the spatial characteristics of Chinese," *Foreign Lang. Teach. Res.*, vol. 45, no. 2, pp. 163–173, 318, 2013.
24. G. Lakoff and M. Johnson, *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.
25. M. Dagut and B. Laufer, "Avoidance of phrasal verbs—A case for contrastive analysis," *Stud. Second Lang. Acquis.*, vol. 7, no. 1, pp. 73–79, 1985, doi: 10.1017/S0272263100005167.
26. E. Kellerman, "Transfer and non-transfer: Where we are now," *Stud. Second Lang. Acquis.*, vol. 2, no. 1, pp. 37–57, 1979, doi: 10.1017/S0272263100000942.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Publisher and/or the editor(s). Publisher and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.