

# The Effects of EFL Learners' Awareness and Retention in Learning Metaphoric and Metonymic Expressions

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**Abstract.** Cognitive linguists contend that learners' awareness of motivations is the key in not only second language acquisition but also figurative language learning. Two cognitive-oriented methods are proposed to raise L2 learners' awareness on metaphoric/metonymic expressions and to enhance retention: instruction involving conceptual metaphors (CM) and instruction involving metaphoric mappings (MM). The present study aims to examine their effectiveness in an EFL context. The results show favorable influences on learners' awareness and retention, which confirm that cognitive-oriented instructions indeed can assist learners to make better sense of figurative language. Moreover, the instruction on metaphoric mappings seems to result in better awareness of expressions which involve more complicated and abstract mapping relationships. The findings of the study can shed light on the application of metaphor and metonymy to EFL teaching and learning of figurative language

**Keywords:** Conceptual metaphor, Metaphoric mappings, Cultural universality/specificity

## 1. Introduction

Researchers in the field of SLA contend that learners' awareness of motivations is the key in second language acquisition (Ammar, Lightbown, & Spada, 2010; O'Mally & Chamot, 1990; R. Ellis, 2002). Cognitive linguists, applying the idea to research on figurative language learning, demonstrate the beneficial effects of enhanced awareness (Boers, 2000ab, 2001; Boers & Lindstromberg, 2006; N. Ellis, 2006ab; Chung & Ahrens, 2004; Deignan et al., 1997; Dong, 2004; Kövecses, 2001; Low, 1988, among others). These studies mainly implement metaphoric themes—called conceptual metaphor—during the learning processes in order to raise L2 learners' awareness of semantic motivation behind figurative expressions. The results have proved that L2 learners' enhanced awareness of conceptual metaphor is indeed beneficial in comprehension and retention.

However, the method of providing conceptual metaphor is not unproblematic. First of all, their method mainly focuses on *metaphor*; *metonymy* is seldom taken into consideration. The underestimation of the importance of metonymy may lead to an overlook of its effects on learning figurative expressions. *Metonymy* and *metaphor*, in extant literature, are believed to interact with each other in intricate ways and their boundary is fuzzy (Barnden, 2010; Goossens, 1990; Radden, 2003). Chen & Lai (in press), manifesting their interactions as a continuum, has found that L2 learners respond differently to figurative expressions locating on different spots of the continuum. However, with the significance of *metonymy* taken into consideration, whether L2 learners would respond to figurative expressions differently hasn't been determined.

Moreover, focusing mainly on awareness raising may lead to an underestimation of effects of one important element: the gaps caused by different cultures between native and target languages. In the early stage of learning, both similarities and differences between L1 and L2 may facilitate L2 learning (Kellerman, 1977; Odlin, 1989; Ringbom, 1987); with the advance in L2 learning process, such as metaphor and metonymy learning which involve not only languages but also cultures and conventions, conflicts between L1 and L2 knowledge may cause greater difficulties (Kövecses, 2001).

In order to help numerous EFL learners around the world to be more aware of figurative language use, Kövecses' (2001) proposal of integrating metaphoric mappings seems very promising. Presumably, *ontological mappings* that characterize the correspondences between basic constituent elements in the source and in the target domain may help learners to create links between distinct linguistic expressions of the two languages; *epistemic mappings* that carry over knowledge about elements in the source domain onto elements in the target domain may help learners to relate their knowledge of the used and abstract half to the unused and concrete half. The idea of using metaphoric mappings as explicit instructions to facilitate domain linking processes between L1 and L2 figurative concepts not only follows the trend of cognitive linguistics but also deals with cultural gaps by utilizing learners' already-existent world knowledge and universal concepts. However, up till now the idea hasn't been empirically tested yet, and hence hasn't been able to claim its effects on L2 learning.

The present study, therefore, intends to compare the two methods in teaching EFL learners metaphoric and metonymic expressions, determine their effects on L2 figurative language learning, and find a compromising way for EFL learners with different native languages. The two methods are the method of conceptual metaphor (CM), which focuses on giving conceptual metaphors and has learners compare two domains to find associative characteristics, and the method of metaphoric mappings (MM), which emphasizes mapping processes and has learners map between domains and between cultures. The present study targets at Chinese native speakers who are learning English as a foreign language. Their ability of finding figurative expressions and their retention of what have learned are under investigation.

## **2. Methodology**

### **2.1 Participants**

The participants of the study were 68 first-year university students who were non-English majors with levels of English proficiency around intermediate to high-intermediate level. They were all native Chinese speakers, and had learned English for at least six years during their high school years; none of the participants had lived in foreign countries for over one year. The control of the participants' general English proficiency and experience in English is meant to mitigate the impact of factors identified as complicating in previous studies. They were divided into two groups: one group contained 32 participants, and received instruction in conceptual metaphor (the CM group). The other group contains 36 participants, and received instruction in metaphoric mappings (the MM group).

### **2.2 Instruments**

To measure the participants' ability to recognize figurative language use, an awareness test was designed. The test consisted of 48 English sentences collected from dictionaries, a corpus (the British National Corpus), and the internet. The sentences were modified to maintain an average sentence length of 10 to 15 words to ensure that the stimuli were similar and would not influence learners' judgments. Among the 48 sentences, 24 sentences contained metaphoric or metonymic expressions and 24 counterparts contained no figurative intentions in the expressions. Moreover, the sentences that had metaphoric or metonymic expressions were

further categorized into four groups based on the metonymy-metaphor continuum: metonymy (C1), metaphoric metonymy (C2), metonymic metaphor (C3), and metaphor (C4). Each category contained sentences that involved embodied descriptions or body-related expressions as well as sentences that did not.

Participants were asked to read each sentence first and determine whether the sentence contained metaphoric/metonymic expressions, or whether it needed to be understood by thinking figuratively. Participants were required to rate their certainty to their judgments on a scale of 1-5; to avoid reading problems caused by unknown vocabulary, one extra option (0) was given as well.

### 2.3 Procedures and Data Collections

The experiment required two successive weeks to complete. The first week was used to conduct the pretest and to teach, and the second week was used to conduct the posttest. The CM group and the MM group were led through the experiment respectively.

In the beginning of the first week, the participants were given the test in order to determine the participants' default level of awareness. The test took 15 minutes to complete. After the test, the CM group and the MM group received instructions about conceptual metaphors and metaphoric mappings, respectively, and were led to discussions in Chinese about the metaphoric/metonymic expressions used in a given article. The goals of the discussions were to lead the participants to be aware of the pervasiveness of metaphoric and metonymic expressions, to clarify an idea that *pì-yù* ('metaphor') includes not only idioms but words or phrases, and to draw their attention to the similarities and differences between Chinese and English. The teaching and discussing phase lasted 25 minutes. One week after, the participants were given the 15-minute test again to examine the effects on retention and in what ways the two instructions might cause different learning effects. The test used contained the same test items as the one used in the first week, but the orders of the items were reshuffled. Before taking the test, the participants were asked whether they had studied relevant subjects during the week to ensure that their performances would result from the effect of learning.

The results of the tests were calculated by SPSS 17. Some external factors, including the participants' scores in English on the JCEE, their time spent on learning English by themselves outside of classes, and their study of relevant subjects during the week, were calculated in order to exclude possible impacts of the participants' individual background differences.

### 3. Results

Table 1 shows the mean performance scores of the participants. The mean scores show that the participants of both CM and MM group had overall improvements. The improvements of scores also indicate that the participants became more certain about their judgments of recognizing metaphoric/metonymic expressions.

Table 2 reports differences in participants' performances between pretest and posttest. Regarding the sentences containing metaphoric/metonymic expressions, the CM group showed no significant progress whereas the MM group showed significant differences between two tests. On the other hand, regarding the sentences containing no metaphoric/metonymic expressions, both groups performed no significant differences between the two tests. In sum, the results suggest that explicit instructions on metaphoric/metonymic expression indeed enhanced learners' awareness of figurative language use; however, the instruction on metaphoric mappings resulted in significantly better improvement on the participants' ability to recognize figurative expressions.

Table 3 reports the results of comparing the progress that the CM and the MM group made in evaluating sentences in the posttest. The results show that the CM group had better improvements than the MM groups did on evaluating both sentences with and without

metaphoric/metonymic expressions; however, the differences between two groups were not significant.

In what specific ways could the instruction on metaphoric mappings facilitate steady learning requires further investigation. Thus, the finer-grained analyses based on metaphor-metonymy continuum were conducted and reported in Table 4. The CM-group participants did not make significant progress on any of the four categories, though they received higher scores averagely in the posttest. However, the MM-group participants made significant progress in Category Three (C3) and Category Four (C4).

Table 5 reports the results of cross-examination between sentences with/without body-related metaphoric/metonymic expressions and the four categories to further determine the effects of transparency and opaqueness on the participants. Regarding the sentences whose metaphoric/metonymic expressions contained body-related descriptions, the participants of both groups did not show any significant progress in the four categories of expressions. However, regarding the sentences whose metaphoric/metonymic expressions did not contain body-related descriptions, the CM-group participants did not make any significant progress in any of the four categories, while the MM-group participants made significant progress in C3 and C4.

## **4. Discussion**

### **4.1. Effects on Awareness Raising**

The first focus of the study is EFL learners' awareness of figurative language. The results of the Awareness Test, as reported in Table 1, show that both the participants of the CM group and of the MM group made progress on the Awareness Test after receiving the instructions. The improvements of scores indicate that the participants became more confident of their judgments of recognizing metaphoric/metonymic expressions; the enhanced certainty also indicates the participants' raised awareness of figurative language.

However, the results reported in Table 2 also show that the participants of the MM groups performed significantly better in the posttest than in the pretest while those of the CM groups did not. The significances suggest that instruction on metaphoric mappings were especially beneficial to the learners' awareness in some aspects. Table 3 reports the analyses on the participants' responses to expressions of different categories on the metaphor-metonymy continuum, and shows that the MM-group participants performed significantly better in evaluating metonymic-metaphoric (C3) and metaphoric expressions (C4), the two categories which were closer to the metaphoric end on the continuum and were considered more abstract in the concepts involved. The findings suggest that instruction on metaphoric mappings can help L2 learners to process abstract concepts and hence can be helpful in noticing and understanding expressions concerning abstract source or target domains.

Moreover, Table 4 reports the analyses on the participants' responses to body-related metaphoric/metonymic expressions, and shows that the MM-group participants received significantly higher scores in the posttest in evaluating metaphoric/metonymic expressions containing no bodily descriptions, expressions which were even more abstract and opaque than others due to lack of bodily experiences. The finding suggests that instruction on metaphoric mappings can help learners overcome difficulties resulting from abstractness of concepts and insufficiency of embodied experiences, and they become more aware of those expressions.

To sum up, both instructions were proved to be beneficial in improving EFL learners' awareness of figurative language use. Moreover, instruction on metaphoric mappings, owing to its structural, systematic, and logical mapping processes, was found to be especially helpful in facilitating learners' awareness of expressions involving more abstract concepts, such as expressions which involved complicated cross-domain mappings and expressions which were not grounded in embodied experiences.

## 4.2. Effects on Retention

The other focus of the study is EFL learners' retention of figurative language. The general improvements in the posttest demonstrate the effects of having explicit instructions during figurative language learning process. In other words, the improvements on mean scores of the tests give positive evidence of beneficial effects on cognitively-based instructions, including CM and MM instructions.

However, when comparing the participants' performances of the two groups, the degree of progress the MM group made was lower than the degree of progress the CM group made in judging sentences with or those without metaphors/metonymies, as shown in Table 3. Even though the MM group did not achieve higher average scores than the CM group, the results of the comparisons indicate that the MM-group participants did gain significantly higher overall improvements. In other words, the participants of the MM groups might have made more consistent progress on the posttest, and thus the variances of the changes resulted in significance in Table 2. Contrarily, the participants of the CM groups might have performed inconsistently on the posttest, so they did not show significant overall changes. The results of the comparisons answer the second research question: instruction involving metaphoric mappings can lead to longer-term effect than instruction involving conceptual metaphors.

To sum up, even though both instructions bring beneficial effects to EFL learners' awareness raising and comprehension improvement, instruction on metaphoric mappings can also bring relatively more consistent and steady progress. The findings assure the effects of meaningful learning on second language acquisition (Ausubel, 1963, 1968). Metaphoric mappings provide structural correspondence through ontological mappings as well as knowledge association through the epistemic mappings. The systematic elaborations can facilitate a deeper level of cognitive processing throughout the learning process (Ellis, 2002). In addition, the advantages of relating existing and concrete knowledge to new and abstract concepts through epistemic mappings can solve problems caused by cultural specificity.

## 5. Conclusion

The present study sheds light on the application of metaphor and metonymy to EFL teaching and learning of figurative language in three aspects. First, that explicit instructions on second language acquisition carry beneficial effects is validated. In addition, metonymy is suggested as equally important as metaphor, and should be included in EFL language learning programs. Moreover, instruction of metaphoric mappings should be incorporated with instruction of conceptual metaphor in order to assist figurative language learning in EFL classrooms.

## 6. Tables

**Table 1:** Mean Performance Scores of Participants in the Awareness Test

Type	CM group		MM group	
	Pretest	Posttest	Pretest	Posttest
With figurative expressions (k=24)	3.50 (.55)	4.17 (.43)	3.52 (.54)	3.97 (.60)
Without figurative expressions (k=24)	1.84 (.45)	2.20 (.66)	1.86 (.49)	2.05 (.62)
Sample size	32		36	

*Notes.* k: number of items. Standard deviations are in parentheses.

**Table 2:** Differences in Participants' Performances between Pretest and Posttest

Variables	Sentences with metaphoric/metonymic	Sentences without
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	exp.		metaphoric/metonymic exp.	
	CM group	MM group	CM group	MM group
	$\beta$ (t-value)	$\beta$ (t-value)	$\beta$ (t-value)	$\beta$ (t-value)
Constant	2.15 (.98)	3.04 (2.50)**	.10 (.05)	1.10 (1.23)
Scores	-.12 (-.75)	-.20 (-2.14) <sup>+</sup>	.00 (.00)	-.05 (-.72)
Self-learning time	-.03 (-.47)	.037 (.64)	.05 (.86)	-.08 (-1.95) <sup>+</sup>
Review or not	.45 (1.93 <sup>+</sup> )	-.11 (-.54)	.28 (1.20)	-.07 (-.47)
R <sup>2</sup>	.13	.13	.09,	.15

<sup>+</sup>  $p < .05$ , one-tailed. \*\*  $p < .01$ , two-tailed.

**Table 3:** Differences in Participants' Performances between the CM and the MM Group

Variables	Sentences with	Sentences without
	metaphoric/metonymic exp.	metaphoric/metonymic exp.
	$\beta$ (t-value)	$\beta$ (t-value)
(Constant)	2.15 (1.00)	.10 (.06)
Group (G)	-.29 (-1.81)	-.18 (-1.25)
Scores (S)	-.12 (-.76)	.00 (.01)
Self-learning (SL)	-.03 (-.48)	.05 (.99)
Review or not R)	.45 (1.98)	.28 (1.38)
G×S	-.08 (-.44)	-.05 (-.32)
G×SL	.07 (.79)	-.35 (-1.28)
G×R	-.57 (-1.81)	-.13 (-1.86)
R <sup>2</sup>	.15	.13

Note: Group: The CM group is coded as 0, and the MM group is coded as 1.

**Table 4:** Differences in Performances on Four Categories between the Pretest and the Posttest

Variables	CM group	MM group	
	$\beta$ (t-value)	$\beta$ (t-value)	
C1	Constant	-1.85 (-.49)	2.49 (1.67)
	Scores	.17 (.64)	-.14 (-1.26)
	Self-learning time	.03 (.34)	-.04 (-.50)
	Review or not	-.12 (-.31)	-.24 (-.92)
	R <sup>2</sup>	.02	.09
C2	Constant	3.21 (.96)	2.30 (1.35)
	Scores	-.20 (-.84)	-.14 (-1.10)
	Self-learning time	-.06 (-.70)	-.01 (-.16)
	Review or not	.90 (2.53)*	-.11 (-.39)
	R <sup>2</sup>	.19	.05

C3	Constant	2.40 (1.26)	2.86 (2.28)*
	Scores	-.13 (-.96)	-.19 (-2.01)
	Self-learning time	-.04 (-.79)	.02 (.40)
	Review or not	.01 (.05)	-.01 (-.02)
	R <sup>2</sup>	.05	.11
C4	Constant	4.86 (1.46)	4.49 (2.38)*
	Scores	-.32 (-1.32)	-.31 (-2.19) <sup>+</sup>
	Self-learning time	-.04 (-.48)	.17 (1.92)
	Review or not	1.03 (2.90) *	-.10 (-.31)
	R <sup>2</sup>	.25	.18

+  $p < .05$ , one-tailed. \*  $p < .05$ , two-tailed.

**Table 5:** Cross-examination of Four Categories and Sentences with/without Body-related Expressions between the Pretest and the Posttest

Variables	Sentences with body-related exp.		Sentences without body-related exp.		
	CM group	MM group	CM group	MM group	
	$\beta$ (t-value)	$\beta$ (t-value)	$\beta$ (t-value)	$\beta$ (t-value)	
C1	Constant)	-1.53 (-.38)	2.66 (.92)	-2.16 (-.47)	.08 (.03)
	Scores	.17 (.62)	-.14 (-.71)	.17 (.52)	-.53 (-1.44)
	Self-learning time	.01 (.17)	-.14 (-1.77)	.05 (.40)	-.07 (-.89)
	Review or not	-.19 (-.46)	.49 (1.51)	-.05 (-.10)	.08 (.52)
	R <sup>2</sup>	.02	.14	.01	.09
C2	Constant	5.41 (1.64)	3.23 (.96)	1.00 (.18)	1.53 (.61)
	Scores	-.37 (-1.60)	-.21 (-.89)	-.01 (-.04)	.02 (.05)
	Self-learning time	.03 (.34)	-.09 (-1.01)	-.15 (-1.04)	-.09 (-.96)
	Review or not	.60 (1.73)	.39 (1.03)	1.18 (2.02 <sup>+</sup> )	-.02 (-.10)
	R <sup>2</sup>	.17	.08	.14	.03
C3	Constant	2.46 (1.15)	-.05 (-.02)	2.33 (.85)	3.33 (2.43)*
	Scores	-.14 (-.95)	.01 (.05)	-.11 (-.59)	-.08 (-.38)
	Self-learning time	.00 (.11)	-.00 (-.02)	-.08 (-1.18)	-.07 (-1.31)
	Review or not	-.10 (-.45)	.26 (.85)	.12 (.42)	-.15 (-1.56)
	R <sup>2</sup>	.04	.02	.06	.14
C4	Constant	1.59 (.36)	3.04 (1.11)	8.12 (1.53)	8.10 (3.09)*
	Scores	-.08 (-.28)	-.22 (-1.12)	-.54 (-1.43)	.15 (.35)
	Self-learning time	-.02 (-.22)	.03 (.47)	-.06 (-.42)	-.30 (-2.92 <sup>+</sup> )
	Review or not	.69 (1.51)	.34 (1.09)	1.36 (2.42)	-.31 (-1.64)
	R <sup>2</sup>	.08	.09	.21	.29

\*  $p < .05$ , two-tailed. +  $p < .05$ , one-tailed.

## Selected References

- Ammar, A., Lightbown, P. M., & Spada, N. (2010). Awareness of L1/L2 differences: Does it matter? *Language Awareness*, 19(2), 129-146.
- Ausubel, D. (1963). *The psychology of meaningful verbal learning*. New York: Grune & Stratton.
- Ausubel, D. (1968). *Educational psychology: A cognitive view*. New York: Holt, Rinehart & Winston.
- Barnden, J. A. (2010). Metaphor and metonymy: Making their connections more slippery. *Cognitive Linguistics*, 21(1), 1-34.
- Boers, F. (2000a). Enhancing metaphoric awareness in specialised reading. *English for Specific Purposes*, 19, 137-147.
- Boers, F. (2000b). Metaphor awareness and vocabulary retention. *Applied Linguistics*, 21, 553-571.
- Boers, F. (2001). Remembering figurative idioms by hypothesising about their origin. *Prospect*, 16, 35-43.
- Boers, F., & Lindstromberg, S. (2006) Cognitive linguistic applications in second or foreign language instruction: rationale, proposals, and evaluation. In G. Kristiansen, M. Achard, R. Dirven & F. J. Ruiz de Mendoza Ibáñez (Eds.), *Cognitive linguistics: Current applications and future perspective* (pp.305-355). Berlin: Mouton de Gruyter.
- Chen, Yi-chen & Lai, Huei-ling (In Press). EFL learners' awareness of metonymy–metaphor continuum in figurative expression. *Language Awareness*.
- Chung, Siaw-Fong & Ahrens, K. (2004). Teaching Economy Metaphors: A Psycholinguistic Perspective through the CMM. *Proceedings of the Thirteenth International Symposium and Book Fair on English Teaching*. Taipei, Taiwan: English Teachers Association.
- Deignan, A., Gabrys, D. & Solska, A. (1997). Teaching English metaphors using cross-linguistic awareness-raising activities. *ELT Journal*, 51(4), 352-60.
- Dong, Y. (2004). Don't keep them in the dark! Teaching metaphors to English language learners. *English Journal*, 93(4), 29-35.
- Ellis, N. (2006a). Cognitive perspectives on SLA. *AILA Review*, 19, 100–121.
- Ellis, N. (2006b). Language acquisition as rational contingency learning. *Applied Linguistics*, 27(1), 1–24.
- Ellis, R. (2002). *The study of second language acquisition*. Oxford: Oxford University Press.
- Goossens, L. (1990). Metaphonymy: The interaction of metaphor and metonymy in expressions for linguistic action. *Cognitive Linguistics*, 1, 323-340.
- Kellerman, E. (1977). Towards a characterization of the strategy of transfer in second language learning. *Interlanguage Studies Bulletin*, 2, 58-145.
- Kövecses, Z. (2001). A cognitive linguistic view of learning idioms in an FLT context. In M. Pütz, S. Niemeier & R. Dirven (Eds.), *Applied cognitive linguistics II: Language pedagogy* (pp. 87-115). Berlin: Mouton de Gruyter.
- Low, G. (1988). On teaching metaphor. *Applied Linguistics*, 9(2), 125-147. Retrieved February 4, 2009, from <http://apliij.oxfordjournals.org/cgi/reprint/9/2/125>
- Odlin, T. (1989). *Language transfer: Cross-linguistic influence in language learning*. Cambridge: Cambridge University Press.
- O'Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.
- Radden, G. (2003). How metonymic are metaphors? In R. Dirven & R. Pörings (Eds.), *Metaphor and metonymy in comparison and contrast* (pp. 407-434). Berlin, New York: Mouton de Gruyter.
- Ringbom, H. (1987). *The role of the first language in foreign language learning*. Clevedon, England: Multilingual Matters.