Using Conceptual Metaphors and L1 Definitions in Teaching Idioms to Non-native Speakers

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Idioms tend to present difficulties for L2 learners because their meaning is often not transparent, and the choice of vocabulary seems to be unsystematic. Recent studies in cognitive linguistics, however, suggest that although the words in idiomatic phrases frequently do not retain their original meaning, idiomatic usage is semantically motivated. Idioms can be viewed as instances of conceptual metaphors (CM) which are grounded in physical and social experience. The present study explored whether raising the learners' awareness of the underlying CMs would help them retain the meaning and the form of the idiomatic expressions. Four different learning conditions were compared: 1) idioms grouped by CM with definitions and example sentences provided in English; 2) idioms grouped by CM with definitions and example sentences translated into Japanese, the students' L1; 3) semantically unrelated idioms with definitions and example sentences provided in English; and 4) semantically unrelated idioms with definitions and example sentences translated into Japanese. The results of the study suggest that the conceptual grouping of idiomatic expressions facilitates understanding, and that students are more likely to benefit from CM-motivated instruction when underlying concepts are introduced in their first language. In order to help learners develop a productive knowledge of L2 idiomatic expressions, form-focused activities may be necessary.

Key words: idiom instruction, figurative language, conceptual metaphors, L1 definitions

IDIOMS AND IDIOMATICITY

Idioms are typically defined as expressions whose meaning cannot be derived from their constituent parts. They are frequently used in both formal and informal, spoken and written discourse. They are common in movies, on television, in journalism, as well as in everyday life. According to Polio, Barlow, Fine and Polio (1977), most English speakers utter about 20 million idioms in their lifetime, or 7,000 idioms per week. This means that about four figurative expressions are produced in every minute of speech.

The pervasiveness of idiomatic language in authentic input presents considerable difficulties for second language learners. Knowledge of the literal meaning of the constituents is a prerequisite for the correct interpretation of figurative meaning. Learners, however, often have a limited L2 vocabulary and many words that appear in idiomatic phrases may not be familiar to them. Furthermore, even if learners are familiar with the literal meaning of the constituent words, it does not always mean they will be able to interpret the meaning of the idioms correctly. As Boers et al. (2009) point out, if students fail to identify the correct 'source domain' of an idiom, its meaning can easily be misinterpreted. Like other cognitive abilities, sensitivity to figurative language and their 'source domains' develops with age and exposure (Cain, Towse & Knight, 2009). Second language learners, however, often do not have sufficient exposure that would allow them to develop the ability to identify the relevant metaphoric constructs, and interpret figurative expressions correctly. Finally, due to their limited knowledge of metaphorical expressions, during the processing of idiomatic language L2 learners tend to rely on L1 conceptual systems. Literal meanings of the phrases are accessed more quickly than the figurative ones (Gibbs, 1980, 1986; Kecskes, 2000; Cieślicka, 2006). The saliency of literal meanings is natural, considering that learners become familiar with literal meanings of individual lexical items long before they encounter their figurative meanings (Cieślicka, 2006). Research with formulaic language, however, has shown that idiomatic senses are often used more frequently

than literal ones (Low, 1988; Conklin & Schmitt, 2008).

The sheer number of idioms, their frequency in the English language and the extended difficulties that learners experience with this type of language are compelling arguments for making idiom learning an integral part of vocabulary learning. There is a clear need to look for approaches that will minimize the learners' burden, and increase the probability that the idiomatic expressions they encounter are understood and remembered. In the EFL field, however, idiomatic language has been a neglected area of vocabulary teaching. While no one seems to dispute the benefits of explicit instruction of figurative language, for many years teachers were at a loss as to how to assist their students with the acquisition of idiomatic expressions. Because of the alleged arbitrary semantics of idiomatic language and fixed word order, it was believed that the only way learners could master these expressions was by rote memorization (Boers, Eyckmans & Stengers, 2007). Idioms were seen as "dead metaphors", fixed multiword units which must be learned as a whole. As a result, second-language teaching materials often either ignored idioms completely, or just listed them as 'other expressions', without providing any opportunities for practice (Irujo, 1986).

Redefining Idioms

In recent years, however, research into phraseology and discourse studies has resulted in a better understanding with regard to what idiomatic language entails, and how it can be approached for teaching purposes. Grant and Bauer (2004) point out that idiomatic phrases differ in their degree of figurativeness and compositionality. They identify two basic categories of idioms: 'core-idioms' which are non-compositional and non-figurative, and 'figuratives', which are more metaphorically transparent, and can be traced back to their compositional elements. Only a small number of idioms are "core idioms"; most idiomatic expressions have been shown to be semantically motivated (Grant, 2004).

Redefining idioms has opened new possibilities for teaching this type of language to second language learners. While core idioms are institutionalized

and may have to be memorized, figurative idioms can be interpreted according to general cognitive principles, opening pathways to the more insightful learning of idiomatic language as an alternative to rote learning.

Cognitive Linguistics and Figurative Language

One of the major contributions of cognitive linguistics to vocabulary teaching has been the substantiation of the non-arbitrary nature of figurative language. Conceptual metaphor is a term used to refer to the understanding of one idea, or conceptual domain, in terms of another. For example, in the expression "prices are rising", *quantity* can be examined in terms of *directionality*. A conceptual domain can be any coherent organization of human experience (Feldman & Narayanan, 2004). In their seminal work, *Metaphors We Live By*, Lakoff and Johnson (1980) argue that conceptual metaphors shape not only language, but also perception, thought and action. Metaphorical concepts are systematic, and therefore the language used to talk about these concepts is also systematic. The choice of linguistic forms is likely to be motivated by language-users' experience of their physical, social and cultural environment. One example can be seen in the metaphorical concept TIME IS MONEY. Expressions such as *waste time, spend time, invest time* or *budget time* all reflect the fact that *time* in Western culture is conceptualized as a limited resource and, as a result, is a valuable commodity. Lakoff and Johnson (1980) offer numerous other examples as evidence that the human conceptual system is metaphorical in nature: ARGUMENT IS WAR (Your claims are *indefensible*; He *attacked every weak point* in my argument; His criticisms were *right on target,* etc.); LIFE IS A GAMBLING GAME (I'll *take my chances;* The *odds are against me;* I've got an *ace up my sleeve,* etc.); and LOVE IS MADNESS (I'm *crazy* about her; She *drives me out of my mind;* He constantly *raves* about her, etc.). These findings have fundamental implications for how figurative language is taught to second language learners.

Conceptual metaphors offer learners an alternative way of organizing L2

vocabulary in a meaningfully structured network. They help learners see that linguistic choices in figurative language, including idiomatic expressions, are semantically motivated and not completely arbitrary as previously thought. Raising learners' awareness of conceptual metaphors should, therefore, increase their sensitivity to the internal semantic structure of lexical phrases and help them to acquire clusters of expressions which present an intrinsic part of the native speaker's lexicon. A number of recent studies provide empirical evidence for the pedagogical effectiveness of instructional approaches grounded in cognitive linguistics. The section that follows will review the major studies that concern the application of cognitive approaches to the teaching of idiomatic language.

Conceptual Metaphors and the Teaching of Idiomatic Language

Research in cognitive linguistics and psychology provides important evidence about the constraining role that metaphoric thought has in the processing of idiomatic language. Conceptual metaphors bring order to the seemingly chaotic world of idiomatic expressions. Rather than being isolated, frozen lexical items in the mental lexicon, they are part of a coherent system of metaphorical concepts. A large number of idiomatic expressions can be traced back to a limited number of source domains or metaphoric themes (Boers, 2000). While the mechanism of metaphor is largely unconscious, people's tacit understanding of conceptual metaphors motivates both the production and the comprehension of idiomatic language (Gibbs et al., 1997).

A number of experimental studies which adopted the motivational approach to idiom teaching have reported positive results.

Boers (2000) conducted an experiment with 118 Dutch students of English. The students were asked to read a short text which contained 18 idiomatic expressions. After reading the text, the students received vocabulary notes. For the experimental group, the idioms were grouped under headings referring to their conceptual metaphors: Anger is a Hot Fluid in the Container, Anger is Fire, and Angry People are Dangerous Animals. To ensure the same

degree of organization of the input, for the control group, the expressions were presented under functional headings: Sudden Anger, A Slow Build-up of Anger, and Angry Personalities. In an immediate post-test (a cloze-test targeting ten of the expressions), the experimental group did significantly better than the control group.

Csábi's (2004) study compared the learning of L2 idioms when the students were given clues in terms of their semantic motivation and when idiom meaning was only explained in their first language. On a cloze test undertaken after the treatment, the learners in the "motivations" condition outperformed the students who just received L1 meaning equivalents.

Beréndi, Csábi and Köveces (2008) also examined whether a CM approach can enhance the learning of L2 idioms. In their study, the students were asked to read a text, guess the meaning of the idioms and then provide their translations. In the translation task for the experimental group, the target idioms were grouped under their conceptual metaphors. In the control group, they were presented in the same order in which they appeared in the text. After the translation task, the original text and the list of idioms were removed, and the learners were asked to complete a cloze test with the idioms they could recall from the instruction stage. The same cloze test was administered again two days later to measure medium-term retention and after five months to measure the long-term retention of the target expressions. The experimental group performed better on all three post-tests.

The results of these studies suggest that raising learners' awareness of conceptual metaphors can facilitate the retention of idiomatic phrases. The positive results of these studies could be attributed to the fact that the CM categorization of idiomatic language provides learners with a meaningfully structured network, which facilitates the comprehension and production of the target phrases. Another possible reason for the superiority of CM conditions might be their conduciveness to the creation of mental images. Conceptual metaphors are grounded in sensory experiences and in social and cultural practices and, as a result, they potentially make it easier for learners to visualize the input. According to dual coding theory (Paivio, 1971, 1986;

Clark & Paivio, 1991), the association of verbal information with a mental image facilitates recall. As verbal and non-verbal pieces of information are processed along separate channels and are represented differently in the human mind, the generation of mental images provides learners with an alternative way of encoding the input, which subsequently provides an extra pathway for recall.

While progress has been made in attempts to adopt cognitive semantic approaches to the teaching of idiomatic language, to my knowledge, no studies so far have been conducted to examine the effect that language of presentation (L1 vs. L2) may have on learners' understanding of conceptual metaphors and consequently learning outcomes.

The research on dictionary use (e.g., Hayati, 2005; Luppescu & Day, 1993) suggests that learners' comprehension and vocabulary acquisition increases when bilingual dictionaries are used. In addition, the learners seem to prefer bilingual dictionaries to monolingual ones. Bejoint and Moulin (1987) conducted a comprehensive study of over 1,000 learners in seven European countries, and found that the majority of the students (75%) tended to rely on bilingual dictionaries. The main reason seemed to be the differences in the way words are explained. Although monolingual learners' dictionaries aim to define words in simple terms, many learners find them difficult to follow. Bilingual dictionaries, on the other hand, provide the learners with an equivalent, or series of equivalents between their native language and the language they are trying to master. The two types of dictionaries also differ in their treatment of fixed and semi-fixed phrases. While in monolingual dictionaries, they are typically glossed or defined in L2, in bilingual dictionaries they are translated, often by equally idiomatic equivalent expressions (Atkins, 1985). In short, available research evidence suggests that the majority of learners have a strong preference for target words and expressions to be translated into their native language, the main reason being the comprehensibility of the definitions.

Based on these findings, it is possible to predict that the effect of instruction will be stronger when conceptual metaphors and example

sentences are presented in both L2 and L1. L1 definitions and translations of example sentences are expected to make the connections between seemingly unrelated expressions more obvious to the learners, and to help them see "the logic" behind the linguistic choices in idiomatic expressions.

The present study is an attempt to fill in the gap in the current research and to evaluate the plausibility of the speculation noted above.

THE PRESENT STUDY

Purpose

The study has two objectives. The first objective is to compare the effect of the CM-based method of idiom presentation with the vocabulary treatment where only idiom definitions are used. The second objective is to examine the effect that the language of presentation (L1 vs. L2) may have on the conditions above.

Research Hypotheses

The study will test the following two hypotheses:

> H1: Organizing idioms based on their conceptual metaphors, and making those metaphors explicit to learners, facilitates the understanding and retention of both the meaning and the form.
>
> H2: The instruction is more effective when conceptual metaphors are presented and explained in the learners' first language.

Materials

Eighteen idioms and the relevant example sentences were selected from *Metaphors We Live By* (Lakoff & Johnson, 1980). The idioms came from three source domains: Ideas are Food, Love is a Journey, and Life is a

Gambling Game. A complete list of target expressions is available in the Appendix.

Procedures

Testing Conditions

The idioms were presented in four different learning conditions: 1) idioms grouped by CM, with definitions and example sentences provided in English (henceforth "CM English group"); 2) idioms grouped by CM with definitions and example sentences translated into Japanese, the students' L1 (henceforth "CM Japanese group"); 3) semantically unrelated idioms with definitions and example sentences provided in English (henceforth "Listing English group"); and 4) semantically unrelated idioms with definitions and example sentences translated into Japanese (henceforth "Listing Japanese group").

Pilot-study

Prior to the experiment, the materials were piloted with a group of 13 students of the same age and approximately the same level of English proficiency. The results of the test showed that the idioms selected were new to most students. The students were asked to underline the words in the idioms they were not familiar with. Three words (burner, ace, toss-up) were identified as new by all the participants in the pilot study, and one word (odds) was new to six students. These four words were, therefore, pre-taught to the students two weeks before the commencement of the experiment.

Treatment

CM groups. At the beginning of the experiment, students in "metaphor groups" were introduced (in non-specialist terms) to the notion of conceptual metaphors. Two conceptual metaphors were presented as examples: IDEAS

ARE MONEY and LOVE IS MADNESSS. For *Ideas are Money*, the students were given the following examples: He's *rich* in ideas. That book is a *treasure trove* of ideas. He has a *wealth* of ideas. *Love is Madness* was illustrated through the following sentences: I'm *crazy* about her. She *drives me out of my mind*. He's gone *mad* over her. I'm just *wild* about her.

At the experimental stage, the "CM English group" had only L2 input. This consisted of a conceptual metaphor, explanations of the idioms, and example sentences. For the "CM Japanese group", explanations were given in Japanese, and conceptual metaphors and example sentences were provided in both English and Japanese. The translations were taken from the Japanese edition of the *Metaphors We Live By* (Trans. Watanabe, Kusunose & Shimotani, 1986). Providing students with the translations rather than asking them to use a dictionary ensured that all students had the correct meaning of the target idioms. Previous studies (e.g. Ard, 1982; Luppescu & Day, 1993) showed that dictionaries may be confusing to some students because of the large number of entries and students' limited proficiency in terms of taking advantage of them. In addition, dictionaries are restricted in terms of both the type of information they provide and the way that information is presented. Not all dictionaries give sufficient attention to idioms, and it is difficult to ensure that the dictionaries that the students may bring to class will necessarily include all the target expressions.

Listing groups. For the "listing groups", the idioms from the three source domains were mixed, and no reference to their underlying conceptual metaphors was made. In the "English listing group", the students were provided with the explanations of the target idioms and example sentences in English. For the "Japanese listing group", the definitions were provided in Japanese and translations of example sentences were included.

In all learning conditions, the target idioms were presented over three weeks with 6 idioms covered in each lesson.

Post-tests

In each learning session, the students were given 10 minutes to study the definitions and the examples. After that they were given 15 minutes to complete two gap-filling tasks. In the first task, the students had to complete sentences with a suitable idiom from the list. The purpose of this task was to measure whether they had acquired the meaning of the target idioms (receptive knowledge test). The target idioms were presented in the neutral (dictionary) form (e.g. *to have an ace up one's sleeve),* which means that, in order to complete the sentences correctly, the students had to change verb tense, possessive pronouns, etc. In the second activity, the students also had to complete the sentences with a suitable idiom, but the target idioms were not provided, which meant that the students had to recall both their meaning and the form (productive knowledge test). In the following week, the students received the results. They could look at their mistakes and the teacher's corrections and ask questions. The activities were then collected in and the students were not told that they would have to work with the same material again. Four weeks after the initial presentation of the idioms, the gap-filling tasks were re-administered to the students to measure the medium-term retention of the target idioms. There was no revision of the expressions before the test. The second post-test was also conducted over a period of three weeks to ensure the same time gap between the two testing sessions.

Participants

The experiment involved 56 first-year university students. All participants were native speakers of Japanese. The students were non-English majors and their level of English was intermediate (TOEIC scores between 430 and 545). The students were randomly assigned in equal numbers to one of the four treatment conditions.

RESULTS

An initial analysis of the data showed that a considerable number of the students' responses were mostly, but not entirely, correct. For example, some students would omit an article or use a wrong verb tense. The students also seemed to have problems replacing the pronoun *one* used in the basic form of an idiom, with the correct possessive pronoun that fitted a particular sentence context. Therefore, the responses on the immediate and the delayed post-test were analyzed twice, once taking into account only completely correct responses, and the second time including idioms which were chosen correctly, but did not have an entirely correct form.

Receptive Knowledge Tests

In both the immediate and the delayed post-tests, the "CM groups" did better than the "listing groups". This was true, both when only completely correct answers were counted, and when the criterion was only the correct selection of the target idioms. Table 1 presents the results. The numbers in brackets indicate students' scores when non-entirely correct responses are also taken into account.

TABLE 1
Mean Scores and Standard Deviations on Receptive Knowledge Tests

	Immediate post-test		Delayed post-test	
Condition	Mean	SD	Mean	SD
1. CM (English)	10.21 (12.57)	2.12 (1.16)	9.21 (11.36)	3.49 (2.84)
2. CM (Japanese)	11.64 (14.07)	3.67 (2.13)	10.14 (12.79)	2.41 (1.85)
3. Listing (English)	9.43 (11.36)	2.31 (4.57)	8.43 (10.50)	3.03 (2.03)
4. Listing (Japanese)	9.93 (13.21)	1.44 (0.89)	9.21 (12.36)	1.76 (1.50)

As can be seen from the figures above, the students got the highest scores when the target idioms were grouped along their underlying conceptual metaphors, and that information was presented in the students' native language (Treatment 2: CM Japanese). In this condition, in the immediate post-test, the mean score was 11.64 for "perfect answers" and 14.07 when a

more lenient criterion of correctly chosen response was adopted. The mean values went down to 10.21 (12.57) when conceptual metaphors were introduced in L2 only. When the target expressions were taught through definitions accompanied by Japanese translations, the mean was 9.93 (13.21 if grammatical errors were ignored). The worst performance was observed when target expressions were grouped randomly and explained through L2 definitions only. The mean score was 9.43 (11.36 if the criterion was the correct selection of the target idiom).

In all four conditions, the scores on the delayed post-test were lower than on the immediate post-test. The highest mean value was again observed in the CM (Japanese) condition where the mean value was 10.14 (12.79 if all correctly selected responses are counted.) CM (English) and listing (Japanese) conditions had the same mean values of 9.21 if only entirely correct answers were counted. If all correctly selected responses were included, the group where definitions were presented in Japanese outperformed the group where idioms and underlying conceptual metaphors were introduced in English only (12.36 vs.11.36). The lowest mean score was observed when idioms were just listed and explained in L2 (8.43 for "perfect response"; 10.50 for all correctly selected responses).

The Kruskal-Wallis Test, a non-parametric alternative to a one-way between-groups analysis of variance, was conducted to examine the statistical significance of differences in the mean scores. The results of the analysis are summarized in Table 2.

TABLE 2
Kruskal-Wallis One-way Analysis of Variance for the Tests of Receptive Idiom Knowledge

	Immediate post-test		Delayed post-test	
	Perfect answer	Correctly identified idiom	Perfect answer	Correctly identified idiom
Chi-square (N=56; df=3)	3.104	8.337 *	2.744	9.066*

* $p<.05$

In the immediate post-test, if only perfect answers were counted, the differences between the mean values were not found to be statistically significant (H=3.104 (3, N=56), p>.05). However, if the criterion of "correctly selected idiom" was adopted, the differences between the groups were found to be statistically significant (H=8.337 (3, N=56), p<.05).

On the delayed post-test, a similar pattern was observed. If only perfect responses were considered, the observed differences between mean values were not statistically significant at the p<.05 level (H=2.744 (3, N=56), p>.05). However, when the correct selection of the idiom was used as the criterion, the statistical difference at the p<.05 level was observed: H=9.066 (3, N=56), p<.05).

Productive Knowledge Tests

The results of the productive test also provide support for the CM-based approach to teaching idiomatic expressions. The mean values and standard deviations for the four treatment conditions are provided in the table below.

TABLE 3
Mean Scores and Standard Deviations on Productive Knowledge Tests

Condition	Immediate post-test		Delayed post-test	
	Mean	SD	Mean	SD
1. CM (English)	8.71 (10.57)	3.52 (2.28)	6.86 (9.86)	3.13 (2.93)
2. CM (Japanese)	9.29 (12.64)	2.27 (1.45)	8.64 (12.07)	2.92 (2.09)
3. Listing (English)	6.79 (9.43)	2.22 (1.74)	6.14 (9.00)	2.44 (1.96)
4. Listing (Japanese)	7.07 (10.21)	1.86 (1.76)	6.64 (8.29)	2.37 (3.13)

As in the receptive test, a CM treatment of idioms was more effective when conceptual metaphors were translated into the students' first language. In the immediate post-test, the mean score for the CM (Japanese) treatment was 9.29 (12.64 if spelling, verb tense and article errors were ignored). For the CM (English) condition the mean was 8.71 (10.57). When idioms were taught through L2 definitions without semantic grouping, the mean was 6.79 (9.43). When L1 definitions were used, the mean was 7.07 (10.21 if grammar

and spelling errors were ignored). A similar pattern was observed in the delayed post-test. The highest mean values were recorded in the CM (Japanese) treatment at 8.64 (12.07), and the lowest when idioms were taught through English definitions at 6.14 (9.00).

The Kruskal-Wallis test was applied again to evaluate differences between the four treatments. The results of the test are presented in the table below.

TABLE 4
Kruskal-Wallis One-way Analysis of Variance for the Tests of Productive Idiom Knowledge

	Immediate post-test		Delayed post-test	
	Perfect answer	Correct idiom	Perfect answer	Correct idiom
Chi-square (N=56; df=3)	7.929*	17.526 *	5.497	10.355*

* p<.05

In the immediate post-test, for both the "perfect-answer" and the "correct idiom" criteria, the differences between the mean values were found to be statistically significant ("perfect answer": $H=7.929$ (3, N=56), p<.05); "correct idiom": $H=17.526$ (3, N=56), p<.05). In the delayed post-test, a significant difference between the treatments was observed only when the more lenient "correct-idiom" criterion was applied ($H=10.355$ (3, N=56), p<.05). When only the perfect answers were considered, the outcome of the test indicated no significant differences between the four treatments ($H=5.497$ (3, N=56), p>.05).

DISCUSSION

Before the results of the study and their pedagogical implications are discussed, it is important to look at the limitations of this study. The experiment included a relatively small number of participants, and the students had a limited exposure to the target idioms, which may not have

been enough for unfamiliar concepts to become fully developed. A sequenced repetition of input is crucial for memory-trace formation (Pimsleur, 1967; Baddeley, 1990) and the results might have been different if the students had been provided with more frequent exposure to the target expressions in a variety of contexts. Furthermore, as was discussed above, the observed differences between the mean scores were not always statistically significant (which is not surprising considering the fact that, with a small sample size, the differences would have to be very marked to be significant at the .05 level). This means that the results of the study must be interpreted with caution.

Nevertheless, the data obtained provide support for a cognitive semantic approach to the teaching and learning of figurative language. Focusing learners' attention to the semantic motivation behind linguistic choices in idiomatic expressions seems to make the explanations more meaningful and memorable for the students. In both the receptive and the productive knowledge tests, students obtained the best results when the target idioms were grouped, and their metaphorical conceptualization was highlighted. The relative progress recorded in the immediate post-test was also observed in the delayed post-test. A better performance in the CM condition can be explained with reference to the before-mentioned theory of dual-coding. The presentation of underlying metaphoric concepts allows learners to create mental images. The association of verbal information (examples of usage and explanations) with mental images stimulated by conceptual metaphors, provides learners with two pathways for processing the meaning of the target expressions, promoting their retention. The listing condition, however, does not prompt students to generate images, consequently limiting them to only one route in terms of input encoding.

The results of the experiment also suggest that CM-grounded instruction is likely to be more effective when motivation behind linguistic phenomena is presented in the students' native language. In both the immediate and the delayed post-tests, the best results were obtained when the target idioms were presented as a network of related items and when that network was

highlighted in Japanese. While CM-based instruction offers learners an alternative way of organizing fixed multiword lexical chunks, L1 input gives them a more complete understanding of the metaphors, definitions and the example sentences. An understanding of the example sentences is particularly important because they not only exemplify a typical context in which an idiom may be used, but also provide an alternative access to the meaning by either substantiating the definition or making it clearer. The L1 presentation of conceptual metaphors may be particularly beneficial to beginning and low-intermediate learners who, due to their limited lexical resources, may face difficulties in understanding conceptual metaphors. These groups of learners often lack the core vocabulary, and therefore may not be able to grasp major entailments of different metaphorical constructs introduced in L2 only. L1 input may also benefit learners with lower verbal ability who typically experience more difficulty in using context to infer word meaning (Knight, 1994). Translation of the examples and L1 definitions should help them internalize the meaning of the idioms, and also make them more sensitive to the conceptual metaphors behind them.

The data obtained also point out to some additional issues that should be considered in order for a CM-based approach to idiom teaching to be successfully implemented in the classroom. The presentation of conceptual metaphors and the identification of their source domain do not necessarily facilitate retention of form. The percentage of form-based errors was approximately the same in both the CM and the listing conditions. On the immediate post-test, the learners were able to produce error-free responses with regard to only about half of the target expressions. Even when the idioms were semantically grouped and their meaning explained in Japanese, the students were only able to generate 51.6% of the phrases correctly. In all four treatment conditions, there were numerous instances of incomplete recall of the target expressions (e.g. *had an ace ___ their sleeve)*, mixed word order (e.g. *feed spoon),* etc. These findings are in line with Boers' (2000) observation that conceptual metaphors can help learners organize the figurative language they are exposed to, but that metaphor awareness is not

meant to be used for the generation of idiomatic expressions, and is not a substitute for established vocabulary teaching methods. Most idioms have an invariant form. Furthermore, many idioms have grammatical constraints. For example, some idioms allow only passive forms. To use idioms correctly, students must make the correct choice of verb forms, and make sure that pronouns agree with their antecedents. Drawing students' attention to the precise lexical make-up of multiword units should help learners remember the composition of the target expressions. Activities that promote structural elaboration, therefore, must be incorporated into the regular class work.

CONCLUSION

This study has three main findings that can be summarized as follows:

1) Making learners aware of the semantic motivation of idiomatic language facilitates its retention and recall.
2) The mapping between idiomatic expressions and conceptual metaphors will be more transparent to learners when conceptual metaphors are presented in their native language.
3) For learners to develop a productive knowledge of idiomatic language, activities that promote structural elaboration might be necessary.

The results of the present study provide support for the adoption of cognitive approaches to the teaching of idiomatic language. Providing learners with information about the semantic motivation of L2 idioms seems to facilitate both their comprehension and their recall. The pedagogical effectiveness of the CM-based approach can be further increased by providing relevant information in the students' native language. The use of translations in a language class is often discouraged on the grounds that it makes students too dependent on the L1. In the case of CM based pedagogy, however, there seem to be several strong reasons for providing L1 input. First,

learners are not likely to be familiar with the idea of conceptual metaphors. Most people are not aware of the extent that conceptual metaphors shape human thought and speech, and fail to recognize the semantic motivation of idiomatic usage even in their native language. The implementation of any new approach brings about a certain anxiety and sense of insecurity. As Boers and Lindstromberg (2008) observe, if motivation in the organization of idioms under specific CMs seems implausible to the learners, the whole approach risks being unproductive. Therefore, it is of crucial importance that the conceptual metaphors presented in the class are transparent enough for learners to see the connection between the lexical selection and the meaning of the idiomatic expressions. Transparency can be ensured by careful selection of the target idioms, and by the clarification of semantic motivation in students' L1. Explanations in the native language should help learners better understand the correlation between the source and the target domains. Finally, the results of the study highlight the need for structural elaboration that would draw learners' attention to the composition of idiomatic phrases and help them to remember them. The ability to use figurative language is a central feature of high language proficiency and the accurate production of idiomatic language should help learners come across as fluent and native-like (Boers et al., 2006). Therefore, learners must be provided with opportunities not only to 'decode' idiomatic language, but also to encode it.

CALL FOR FURTHER RESEARCH

The findings of the study also open new pathways for further research.

In this study, the learners were presented with the definitions of the target idioms. The results of some studies (e.g. Boers, Eyckmans & Stengers, 2007) however, show that inferring idiomatic meaning is likely to facilitate recall. The inferencing process requires an element of mental elaboration, which is believed to promote the retention of input. There are also some studies (e.g. Stahl & Fairbanks, 1986; Knight, 1994) which suggest that a combination of

definitional and contextual approaches to vocabulary learning is more effective than either approach in isolation. These studies, however, were conducted with single words only. It would be interesting to examine how the knowledge of conceptual metaphors interacts with other language processing skills such as inferencing from context and semantic analysis, and how these different, but potentially mutually supportive channels of vocabulary acquisition, can be best combined for the purpose of teaching multiword figurative expressions.

Another topic that deserves more research is cross-cultural variation in idiom repertoires. As Boers and Stengers (2008) point out, conceptual metaphors are the result of general and universal cognitive processes, and therefore they are a feature of all natural languages. Different linguistic communities, however, have different compositions in terms of idiom repertoires, which are often a result of their cultures and histories (Boers, Demecheleer & Eyckmans, 2004). The distance between L1 and L2 may lead to comprehension problems due to cross-cultural differences in conventionalized metaphoric themes (Boers, 2000). Furthermore, even if two languages have an equivalent conceptual metaphor, the forms of the idioms which share that metaphorical theme are often different. Comparison of idioms in the first and the second language should help students discover which idioms are the same, which are similar and which are different, and this in turn can help them utilize positive transfer and avoid negative interference from L1 (Irujo, 1986). A better understanding of similarities and differences in idiom clustering across different languages should also lead to better teaching materials and better classroom practices, as well as more comprehensive dictionaries which will make students aware of the salience of different source domains across cultures.

Further research is also necessary to examine the possible role that learners' cognitive styles may have in metaphoric processing. Clark and Paivio (1991) argue that the activation and inhibition of different representations are affected by individual differences in imagery ability. It would be of interest to compare the effectiveness of the CM based

approaches for learners who are high and low imagers.

More research is also needed to find out whether and how a knowledge of conceptual metaphors may facilitate other aspects of vocabulary learning, and active usage in particular. The identification of entailments of different source domains, for example, could potentially help learners understand the lexical variability that some idioms allow (e.g. *to jump (climb / get) on (aboard) the bandwagon*) and give them a better understanding of collocations and their restrictions in the target language, making the learning process more meaningful. Knowledge of source domains could also provide cues for usage restrictions with regard to register. Some pioneering studies in this area (e.g. Boers et al., 2007) suggest that etymological information may help learners determine, to some extent, a level of formality of the contexts in which a particular idiomatic expression is likely to occur.

Finally, further experimental work is needed to determine whether the conceptual metaphor-based approach can be turned into a conscious learning strategy. While the grouping of idiomatic expressions based on their underlying conceptual metaphors can make the learning task more manageable for the students, relatively few learners seem to have the persistence or linguistic competence to conduct intensive semantic analysis that the identification of CMs requires. The results of experiments conducted by Skoufaki (2005) and Beréndi, Csåbi & Kőveces (2008) suggest that it may be difficult to apply CM analysis as an autonomous learning strategy. In Beréndi et al.'s (2008) study, for example, although learners remembered the target idioms better when they were grouped according to underlying metaphor themes, they were not able to recall the CMs themselves, nor did they continue to use CM grouping as a learning strategy outside the classroom. Considering the number of idioms in the English language, it is clear that they cannot all be the target of formal classroom instruction. Therefore, learners must be equipped with sets of skills and strategies that would allow them to operate independently as life-long word learners. It is still to be seen whether raising learners' awareness about the semantic motivation of figurative language will enable them to reflect on language use

and to identify metaphoric concepts that underlie idiomatic language usage independently of the teacher.

To answer these questions, new collaborative cross-disciplinary studies are necessary. It is hoped that the results of this study will encourage researchers to embark on them.

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APPENDIX
Target Idioms

IDEAS ARE FOOD

    1. to leave a bad taste in one's mouth

    2. to smell fishy

    3. to sink one's teeth into something

    4. food for thought

    5. to spoon feed

    6. on the back burner

LOVE IS A JOURNEY

    1. at a crossroads

    2. to go one's separate ways

    3. dead-end-street

    4. to spin one's wheels

    5. on the rocks

    6. off the track

LIFE IS A GAMBLING GAME
1. to take one's chances
2. the odds are against one
3. to have an ace up one's sleeve
4. to hold all the aces
5. to be a toss-up
6. to play one's cards right