

Applying Cognitive Linguistics to Teaching Polysemous Vocabulary

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Abstract

The purpose of this study is to compare the efficiency of two methods for teaching polysemous vocabulary – the *image-schema-based vocabulary instruction method* (ISBM) and the *translation-based vocabulary instruction method* (TBM). While ISBM is inspired by cognitive linguistics, and represents a new trend in teaching polysemous vocabulary, TBM embodies a traditional and well established way of teaching polysemous vocabulary in EFL contexts. The subjects of this study, 40 pre-university Arab students studying in an intensive English program, were placed in two groups and were taught a range of metaphorical meanings of polysemous words, in accordance with the cognitive linguistics ISBM and the mainstream TBM. In order to assess the pedagogical value of both methods, a polysemous word knowledge test (PWKT) was used as a pre and post-test. The results of the immediate post PWKT suggest that the ISBM is more effective in teaching and learning polysemous vocabulary in this setting than the TBM. In light of these findings, I give a number of recommendations to teachers. As far as the contribution to field of vocabulary acquisition is concerned, this study attempts to shed light on the teaching of polysemous words in an Arab context (a so far an unmapped territory). In that, it tries to show how polysemous words have been treated in the English syllabi directed to UAE learners, to equip English teachers with feasible ways to teach polysemous words more efficiently, and thereby to improve the learners' ability to comprehend the polysemization mechanism more easily.

Keywords: cognitive linguistics, polysemous words, image-schema

I Introduction

1 Problem Statement

Polysemous words are ubiquitous in written and spoken English. This is a phenomenon whereby a word has different, but related senses with respect to the contexts in which it is used. Most of these words are of high frequency in English, belonging to the three thousand most frequent words in the language. For this reason, knowledge of these words is a prerequisite for forming a substantial vocabulary base (Nation, 1990, 2001, 2008; Cobb, 2006). Nation (2001, 2008) convincingly argues that profound knowledge of high frequency words can help English as a Foreign Language (EFL) learners understand around 80% of most English texts. Nonetheless, polysemous words have been neglected in many EFL contexts. The reasons for this are manifold.

These words are frequently described as a “complete headache for learners” (Thornbury, 2002, p. 8). Likewise, Csábi (2004), who tried to teach polysemous words to Hungarian learners, argues that polysemes are often seen by many teachers and learners of English as problematic and troublesome. These attitudes can reveal underlying problems with the teaching and learning of polysemous words.

Equally critical, Tyler and Evans (2004) argue that attempts to teach polysemous words are sometimes doomed to failure as the different meanings of a polyseme (“over,” for instance), are treated as *homophones*—an “unorganized list of unrelated meanings that are accidentally coded by the same phonological form” (p. 152).

The teaching and learning of polysemous words in the UAE, the EFL context for the current study, is not significantly different from other EFL contexts. English language learners in the UAE only seem to have a superficial knowledge of the senses of polysemous words as an interrelated set of meanings.

In an attempt to help EFL learners become aware of the mechanism underlying the meaning extensions of polysemous words, and to acquire the different senses of these words as an interrelated set, researchers and teachers have attempted, since 2004, to apply insights from cognitive linguistics. Some of these attempts, however, didn’t seem to reach conclusive evidence as to the primacy of the CL approach.

The present research aims to apply insights from cognitive linguistics in learning polysemous words. In particular, to my best knowledge, this study is the first to use the insights of cognitive linguistics in an Arab EFL context. In order to help the experimental participants understand the underlying mechanism underlying the extension of polysemous words’ meanings, the instructional treatment will heavily rely on image schemas and to a lesser extent on conceptual metaphors. I will also address some of the pitfalls of previous studies such as their small-scale nature and the ignorance of some of the learner characteristics.

In the study, I teach polysemous words strategically over a period of two months, taking into account the participants’ cognitive approach to carrying out different mental tasks, as well as their vocabulary learning strategies. This will, I hope, be an improvement to the previous studies and make my findings applicable to teaching polysemous words both in Arab, as well as general, EFL contexts.

2 Significance of the study

By researching the applicability and the effectiveness of the insights of cognitive linguistics in teaching polysemous words, and by verifying the hypothesis of this study, this paper will try to help teachers and Arab EFL learners (and learners in comparable situations)

better deal with polysemous words, and thereby improve the learners' overall language proficiency.

First, it will provide teachers with pedagogical methods that can be used in the instruction of a set of high frequency lexical items, ones that were previously assumed too complicated to teach. Second, it is an attempt to show that polysemous words, previously considered too difficult to understand, can in fact be easy to comprehend and retain. Also, the intended treatment attempts to engage learners in deciphering and retaining a wide array of meanings related to polysemous word prototypes.

II Theoretical anchoring

1 Pedagogical Applications of the Cognitive Linguistic Insights into the Teaching of Polysemous Words

Cognitive linguists' discussion of the cognitive linguistics theoretical constructs yielded many insights about language and its relation to the mind and the physical and social world that surround us. Some of the insights that have possible implications for language teaching in general and polysemous words teaching and learning in particular are:

- polysemous words are natural categories of senses (Lakoff, 1987),
- polysemous peripheral senses are extended from core meanings (Lakoff, 1987; Evans and Green, 2006).
- Instead of being completely abstract, metaphorical extensions have literal bases. (Johnson 1987; Lakoff, 1987).
- Image schemas are so powerful that they can capture the multiple meanings of a given radial category and can serve as visual aids.
- Used as source domains in metaphors, image schemas can structure abstract entities and enable us to understand them in terms of entities with physical attributes (Lakoff, 1987).

In fact, many EFL teachers and textbook authors have applied these insights to grammar as well as to vocabulary teaching, but as the focus of this study is on the teaching and learning of polysemous words, I will limit myself to the applications of the insights that are relevant to vocabulary teaching.

- Polysemous words are natural categories of senses

Cognitive linguists such as Lakoff (1987) and Tyler and Evans (2004) have shown that polysemous words are natural categories of semantically motivated senses, with the more basic sense lying in the centre and the extended meanings radiating towards the periphery.

Proponents of such a theory believe teaching polysemous words as natural categories of semantically motivated senses might help EFL learners learn polysemous words better.

- Metonymic and metaphorical extensions have literal bases.

The embodiment thesis as a cognitive theoretical construct implies that cognition is grounded in reality in the sense that our experiences with the world shape and inform our cognition and figurative thoughts, and that concepts have pre-conceptual, linguistic bases. Lakoff (1981, 1987) and Johnson (1987) argue that figurative meanings of radial categories are extended from basic, prototypical meanings, mainly through image schema transformation, metaphor, and metonymy. If teachers know the processes through which the figurative extensions of polysemous words are extended from their literal original meanings, and if teaching can show how the literal is related to the figurative, their learners will have better chances of understanding and retaining the meaning of these words (Csábi, 2004; Boers, Eyckmans and Stengers, 2007 and Boers *et al*, 2008).

- Image schemas

As shown by Tyler and Evans (2004), primary image schemas are characterized by their abilities to capture all the meanings of the polysemous words they represent.

Pedagogically, this is helpful, as EFL learners will learn an array of meanings through one picture only. For instance, as suggested earlier when a learner is presented with a polysemous word primary image-schema, such as *over*, and its core meaning and five or six of its peripheral senses, he or she is likely to understand and learn all these meanings. Also, this will maximize the learner's understanding of the potential new occurrences that will be encountered in the future. Often, image schemas which in theory should be too general to capture all the meanings of polysemous words meanings, are specified (enriched) to account for particular, single meanings.

So, presenting figurative meanings of polysemous words with their image schemas can be rewarding in a classroom setting. First, for teachers, as they will find it easy to teach metaphorical meanings through concrete images; and second, for learners, as they will better understand and retain these words. In this context, Boers *et al* (2007) have discovered that *etymological association*—associating polysemous words' metaphorical meanings with their original literal meanings—is “likely to call up a mental image of a concrete scene which can be stored in memory alongside the verbal form” (p. 43). In other words, presenting polysemous words with their image schemas is likely to create a dual verbal-nonverbal memory trace, and can thus result in better retention.

2. A survey of three studies

In an attempt to help EFL learners become aware of the mechanism underlying the meaning extensions of polysemous words, and to acquire the different senses of these words as an interrelated set, researchers and teachers have attempted, since 2004, to apply insights from cognitive linguistics. However some of these attempts didn't seem to reach conclusive evidence as to the primacy of the CL approach because many factors as will be seen in the following section. This paradigm has theoretically advanced accounts of the semantics of polysemous words (e.g., Johnson, 1987; Lakoff, 1987; Evans and Green, 2006), which can be used in the teaching of these words. In this context, few small-scale studies (such as those of Csábi, 2004 and Morimoto and Loewen, 2007) have used conceptual metaphor and image schemas to help learners view the different peripheral meanings of a polyseme as motivated extensions derived from a core member.

These projects have tried to compare the effectiveness of the CL techniques with traditional approaches based on translation and memorization used in teaching polysemous words. While Csábi (2004) and Touplikioti (2007) found that the cognitive linguistics-based approach helped their experimental participants to assimilate polysemous words better than their control peers, who used a translation based and memorization approach, Morimoto and Loewen (2007) failed to find significant differences between both approaches. Also, while the data of her study confirms the beneficial influence of the cognitive linguistics pedagogy, Touplikioti (2007) could not offer conclusive evidence as to the primacy of the CL approach because other variables (which she claims were not controlled) might have helped her experimental participants outperform their control peers. In fact, all of these three studies neglect some of the learners' characteristics, which may have a big influence on vocabulary acquisition in general and polysemous words in particular.

Equally significant, the first two studies proved to be short interventions, where learners were exposed to new words and concepts on one occasion only. In fact, this might have deprived the learners of the opportunity to digest the idea underlining the polysemization mechanism.

This review (for a detailed account of these insights, see section 2 on Cognitive Linguistics and its Pedagogical Implications, Makni, 2013) helped me understand how insights from cognitive linguistics were applied to the teaching of some polysemous words, evaluate the findings of these studies, and find out how I can contribute to the field of teaching polysemes.

3. *The Status of Polysemous Words' Teaching in the UAE*

I examined four English textbooks destined for four different levels in governmental schools, and found that polysemous words were scarce at the primary and preparatory levels and fairly common at the secondary level. In both cases, however, students were exposed to a good deal of polysemous words' literal meanings only. Hence, learners might have been left with the feeling that each of these multi-meaning words has one single meaning.

4. *research hypothesis*

The experimental participants who will be taught polysemous words using the *image-schema based vocabulary instruction method* (ISBM) are expected to outperform the control group, who will be taught the same words using the *translation based vocabulary instruction method* (TBM).

III The study

As in all pieces of careful research, prior to the main study, a pilot study was conducted on students similar to the participants of the present study. In light of the results of this study, refinements and amendments were made to the main study.

1. *Participants and setting*

The subjects that participated in the study are low-intermediate, pre-university UAE students. These participants were divided into two groups—an experimental group and a control group, each of which consisted of 20 students.

Before joining the university, these participants had studied in governmental schools and had been taught English as a subject for five hours a week for 12 years. The subjects of this study consist of level 2 students who got TOEFL scores between 373 and 437.

2. *Treatment words and the two adopted methods of instruction*

The instructional treatment of this study is a short course aiming at teaching polysemous words using two different teaching methods. It consists of 9 short lessons for each of the experimental and the control groups. The taught words for both groups are the same. They are *hand, break, head, over, burn, push, beyond* and *root*. I chose these words for the following reasons: First, most of them belong to the first 2000 most frequent words in both spoken and written English. Second, the participants knew most of the literal meanings of these words, a requisite condition for understanding the metaphorical extensions.

A. *The ISBM*

The ISBM was used with the experimental group. It is inspired from the cognitive linguistics approach to teaching polysemous words. The aim of the ISBM, as Boers and Lindstromberg (2008) put it, is to attempt “to make learners aware both of the word’s central sense and of how particular additional senses extended from this central sense” (p. 28). It is built on a constellation of principles, the most important of which are the:

- i. embodied experience of non-propositional representations of concepts,
 - ii. the key concept of image-schema (Lakoff, 1987; Tyler and Evans, 2004), and
 - iii. the non-arbitrary nature of polysemous words senses.
- Boers and Lindstromberg (2008, p. 28)

Also, this approach uses image schemas figuring the central meanings of the target words together with the specified, enriched schemas depicting the derived metaphorical senses. Figure 1, for instance, shows the primary image schema of *break*.

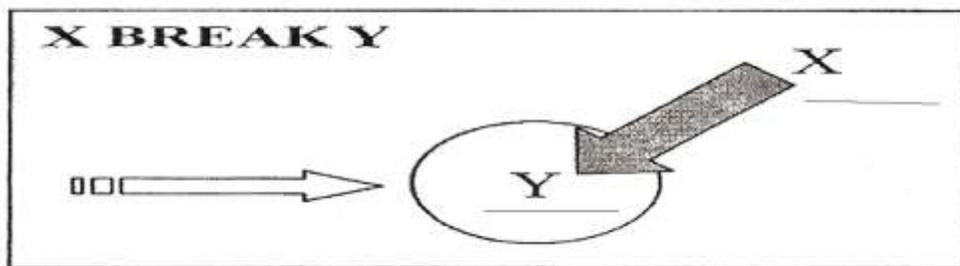


Figure 1: The image-schema of the core meaning of break

Tanaka (1987)

Once X and Y are specified, the primary image schema gives rise to other specified image schemas figuring meanings such as *to destroy the shape or function of something* in Figure 2 and *to not do what is agreed upon / put an end to* in Figure 3.

Example 1: Who broke this radio?

Meaning: *destroy the shape or function of something*

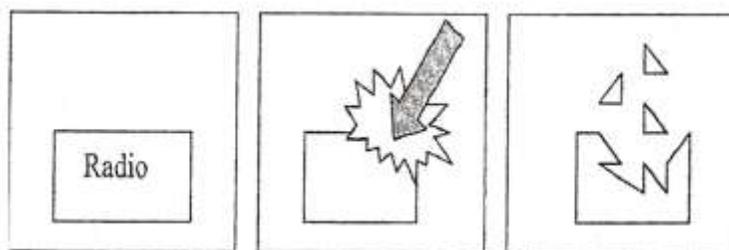


Figure 2: Image schema of the literal meaning of break (e.g. radio)

Physical Space: Exert energy so as to destroy the shape or the function of something.

Morimoto and Loewen (2007, p. 370)

Example 2: You cannot break your contract now.

Meaning: *to not do what is agreed upon / put an end to*

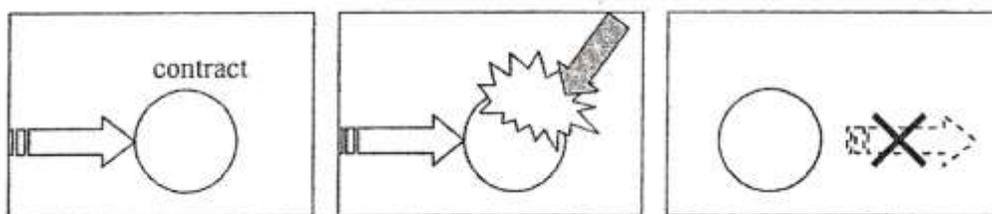


Figure 3: Image schema of the metaphorical senses of *break* (e.g., contract)

Abstract Space: Put an end to something that has been continued. (**Abstract:** based on ideas rather than real things)

Morimoto and Loewen (2007, p. 370)

The ISBM has a number of advantages to other teaching methods. First, it will provide learners with various senses of polysemous words not in a piecemeal fashion, but in a *gestalt*-like way, thus helping learners to capture a *unified picture of language*. Second, it helps learners understand the intra-lexical structure underlying polysemous words via the use of image schema. Such a tool may account for the motivations of the literal and metaphorical senses of polysemous words. It may also help learners to acquire these words as image-schemas may aid in dual-coding. The third advantage, as convincingly discussed by Tanaka and Abe (1985), is that the use of image-schema has the potential to enable learners to understand the additional senses of polysemous words in the L2, particularly those which do not have exact counterparts in L1, without being constrained by its L1 equivalent (Morimoto, and Loewen, 2007).

B. The TBM

The control participants were taught the same list of polysemous words as their experimental peers along the lines of the translation-based approach. This traditional method treats polysemous words as homophones and teaches the different senses of polysemous words as they turn up. Thus, these words were presented to the participants in a piecemeal fashion. In each lesson, the researcher presented the participants with three metaphorical senses of three different words from the list in focus. More importantly, the researcher explained the semantics of the target words without showing how their metaphorical senses can be derived from their core meanings. Like the experimental group, the control group treatment was interwoven in their reading class, thus assuring that most of the target words (literal or metaphorical meanings) were presented in context.

3. Study materials

A. Pre-treatment instruments

i. Polysemous words knowledge test

The PWKT is a vocabulary-depth instrument which seeks to measure the participants' deep knowledge of the polysemy aspect of the eight polysemous words that are taught in the treatment (see Appendix 1). It consists of 24 sentences (3 metaphorical meanings for each of the 8 target words) and has a gap-filling format. It is a productive test as the participants are required to complete one unfinished word in each sentence. In an attempt to guide the participants to the target words, a variable number of initial letters are provided for each blank. While the PWKT presents words in rich context (clues to the appropriate meaning are provided), it does not involve a significant amount of reading. In fact, most of the structures of the sentences are

simple, and the difficult words, that might hinder the understanding of any test sentence, were translated into Arabic – the participants' L1. The PWKT was designed by me as a ready-made, commercial test about the polysemy aspect of polysemous words was not available.

ii Vocabulary Levels Test (1st and 2nd thousands) and TOFL Test

The vocabulary levels test (VLT) (Paul Nation and Laufer, 1999) used in this study is the online version of the original test. This test is used to assess the breadth of the participants' vocabulary knowledge prior to the treatment. As the participants scored below 83% in the second level (words from 1001 to 2000), the researcher contended with the results obtained in the first two levels of this vocabulary test. Another measurement which was used to shed light on the English language proficiency of the participants and to group them under different levels was the TOEFL test.

B. Post-treatment Instruments

i. Immediate Polysemous Words Knowledge Test

After the two-month treatment, the PWKT was immediately administered to the participants to track their progress in understanding and learning the polysemous target words.

4. Methods of Data Analysis

Descriptive analyses such as *the mean, the standard deviation, the median, the minimum and the maximum* were calculated for the scores obtained from all the pre and post-treatments tests. In addition, in order to gauge the effectiveness of the instructional treatment for each of the experimental and the control groups, the *paired-samples t-test* was performed in order to compare the mean differences of the pre and post-treatment PWKT scores and to show whether or not the instructional treatment was effective. However, to show that the entry level is not significant between the experimental and control groups in the pre-treatment test (PWKT), the VLT, and the TOEFL, the *independent samples t-test* was applied.

IV Results

Before performing statistical tests, I tested my data to determine if it was normally distributed, and I found that most of the tests involved in the Independent T-tests were normally distributed.

1. TOEFL, VLT and PWKT

Overall, the analysed data of the TOEFL, VLT and PWKT show that there was no significant difference between the experimental and control groups in the beginning of the study. The carried out Independent Samples t-Test of the TOEFL test scores of the experimental and control groups shows that the difference between the two groups is not statistically significant ($t = .699$, $df = 29.353$, $p = .490$). Similarly, the differences between both groups' scores on both vocabulary levels tests, VLT K1 and K2, are not significant. Likewise, the difference between the two groups' mean scores of the experimental and the control group in the PWKT test is statistically not significant ($U = 197$, $P = .947$).

2 Statistical analysis of the post-treatment collected data

i PWKT

Table1. Differences between the pre-treatment and the post-treatment PWKT scores (experimental group)

| Experimental Group | N | Mean | Std. Deviation |
|--------------------|----|------|----------------|
| PWKT pre- | 20 | 1.95 | 1.90 |

| | | | |
|--------------------------|----|-------|------|
| treatment test | | | |
| PWKT post-treatment test | 20 | 15.45 | 7.66 |

Table 2. Differences between the pre-treatment and the post-treatment PWKT Scores (control group)

| Control Group | N | Mean | Std. Deviation |
|--------------------------|----|------|----------------|
| PWKT pre-treatment test | 20 | 2.35 | 2.54 |
| PWKT post-treatment test | 20 | 8.45 | 4.57 |

As can be seen in Tables 1 and 2, there is no significant difference between the experimental and the control groups in the results of the PWKT taken before the treatment. At the post-test, though both the experimental ($t = 9.053$, $df = 19$, $p < 0.0001$) and the control group ($t = 5.79$, $df = 19$, $p < .001$) performed better (Tables 1 and 2), the gains of the experimental group were larger. The scores of the experimental group increased from (1.95 ± 1.905) in the pre-test to (15.45 ± 7.667) in the post-test compared to the control group which went from (2.35 ± 2.450) to (8.45 ± 4.571) . The differences between the two groups in the PWKT post-test are significant ($t = 3.507$, $df = 38$, $p = .001$).

ii Analysis of the individual words of the post treatment PWKT

Control Group

The PWKT test includes eight words, namely, *break*, *beyond*, *over*, *head*, *roots*, *push*, *hand*, and *burn*. Examining the control participants' correct answers at the level of these words, we notice that the participants did well on *hand*, *push* and *head* (scored between 32 and 27 out of 60), while they experienced some difficulties with *break*, *beyond* and *burn* (scored between 19 and 9 out of 60)

Experimental group

Examining the scores of the PWKT, the experimental participants were found to score better at the level of all the words. At the level of *push*, *roots*, and *head*, their scores ranged between 41 and 48 (out of 60), and in words like *beyond*, *burn* and *break*, they scored between 26 and 32.

Overall both groups found the metaphorical senses of words like *push* and *head* easy to understand and retain than words like *break* and *burn*.

V Discussion

1. Hypothesis discussion

In considering the study hypothesis, the results suggest that the experimental participants outperformed their control group peers on the PWKT which was used to assess the effectiveness of the treatment instructional methods – the ISBM and the TBM. The statistically significant difference between the scores of the experimental (15.45 ± 7.667) and control groups (8.45 ± 4.571) proves my hypothesis true. The good results achieved by the experimental group can be attributed to several factors, the most important of which are: (1) The usefulness of understanding the underlying mechanism of polysemous words' meaning extension, (2) the beneficial role of dual-coding in understanding polysemous words, (3) the effectiveness of the

explicit instruction of vocabulary and (4) the power of the ISBM to deal with words which have more than one equivalent in their L1.

(1) The usefulness of understanding the underlying mechanism of polysemous words' meaning extension

This finding indicates that the ISBM is better than the TBM in that it can help learners better understand, assimilate and recall the metaphorical senses of the polysemous words in focus. The cognitive linguistic instructional method was advantageous over the translation-based one as it helped the learners understand the intra-lexical structure underlying polysemous words via the use of image schemas and conceptual metaphors. Compared with the control participants, the experimental subjects found it relatively easier to understand the underlying mechanism existing in polysemous words' meanings extension. The cognitive approach allowed the experimental participants to learn the metaphorical meanings of the treatment words in a *gestalt*-like version, in the same way they are presented in the mental lexicon according to many researchers (e.g., Cruse, 1986; Lakoff, 1987; Deane, 1988; Tuggy, 1993).

Equally significant, the understanding of the links that exist between the different meanings of polysemous words might have facilitated the assimilation and the retention of these meanings for the experimental group. The drawn findings about the primacy of the ISBM over the TBM in making the experimental participants aware of the intra-lexical structure underlying the meaning extensions of polysemous words are congruent with the results reached by other studies inspired by cognitive linguistics and notably those of (Demecheleer and Boers, 1998; Csábi, 2004 and Touplikioti, 2007).

(2) The beneficial role of dual-coding in understanding polysemous words

Equally important, the good performance of the experimental group on the PWKT can be attributed to the implementation of the dual coding theory. The instructional approach in accordance with which the experimental participants studied polysemous words adopted image-schemas accompanied by verbal explanations in showing how metaphorical senses are extended from core meanings of polysemous words (see Appendix 2 for treatment lessons). As a result, image-schemas were used as visual aids that might have helped the experimental participants better understand the metaphorical extensions of the taught polysemous words. According to proponents of the dual coding theory (e.g. Paivio, 1971; Clark and Paivio; 1991, Boers *et al*, 2007), visual aids used in the form of image-schemas in this study might have had the potential to concretize the taught figurative, abstract senses which are long-considered to be beyond the EFL learners' grasp.

(3) The effectiveness of the explicit instruction of vocabulary

More importantly, the experimental group obtained better results on the post PWKT, which might have been made possible through the deliberate instruction of the treatment words. This finding provides evidence in the support of the view that vocabulary should be deliberately targeted for instruction (Nation, 2001; Laufer, 2005).

(4) The power of the ISBM to deal with words which have more than one equivalent in their L1

The good performance of the experimental participants on the PWKT reveals the possible potential of image-schemas to enable the experimental learners to understand the extended senses of polysemous words in general and those which do not have exact counterparts in L1 in particular. As we have seen in the results, the verb *burn* (in some sentences, phrasal verb), for instance, does not have a one-to-one equivalent in Arabic as indicated in the sentences in table 3 below.

Table 3. English definitions and Arabic translations of burn

| Example | English meaning | Arabic translation |
|---|--|-----------------------|
| It was a terrible fire and the whole house was <i>burnt</i> to the ground. | To destroy, damage by fire or heat (literal translation) | يحرق |
| The man will <i>burn</i> himself <i>out</i> by working too hard. He works even on weekends. | ruin one's health (metaphorical meaning) | يهلك صحته |
| It's recommended to work out on daily basis to <i>burn off</i> a few calories. | lose fat, calories ... by working out (metaphorical meaning) | يحرق السعرات الحرارية |
| You must have a temperature, your forehead is <i>burning</i> . | feel unpleasantly hot (metaphorical meaning) | يشعر بالحرارة |

The control participants found this and other words figuring the same problem such as *break* and *beyond* tricky. This is clearly seen in the post PWKT scores. This problem was partly avoided by their experimental peers who scored significantly higher on these three words as indicated in the table below, and this can be attributed to the advantage of the ISBM over the TBM in teaching these sorts of words. It seems that the cognitive semantic explanations the experimental participants got from the cognitive-based instructional treatment helped them outperform their control peers who seemed to rely on translation and *blind memorization*. Such a finding sheds light on the limitations of L1 = L2 equation and the inappropriateness for the EFL learners to fall back on their L1 when dealing with polysemous words. These results appear to be in line with Tanaka and Abe's (1985) assertion that the use of image-schema has the potential to enable learners to understand the L2 additional senses of polysemous words, particularly those which do not have exact counterparts in L1, without being constrained by its L1 equivalent (Morimoto and Loewen, 2007).

Table 4. Scores from the PWKT of the polysemous words with more than one Arabic equivalent

| Treatment polysemous words | Maximum score | Experimental group scores | Control group scores |
|----------------------------|---------------|---------------------------|----------------------|
| <i>burn</i> | 60 | 30 | 9 |
| <i>beyond</i> | 60 | 32 | 10 |
| <i>break</i> | 60 | 26 | 19 |

Drawing on the results displayed in table 4 and on the results obtained from the other treatment words, it is possible to deduce that literal translation is likely to fail as mismatching is predominant between Arabic and English. In this context, students are likely to make *production errors* in speech and writing as differences in the native and target language exist (Odlin, 1989, p. 167). The low scores the control group obtained on these individual words in particular might be attributed to their reliance on the literal translation of these words when taking the PWKT. This is consistent with what Gabrys-Barker (2006, p. 145) refers to as 'calques' which he defines as the "literal translations of complex words or phrases". Resorting to literal translation and

ignoring the *cross-linguistic semantic differences* between L1 and English when dealing with polysemous words may lead to comprehension and production errors.

VI Conclusion

1 Summary

This study sought to compare the effectiveness of two different approaches to teaching polysemous words to Arab EFL learners: an image-schema approach based on insights from cognitive linguistics and the traditional translation method.

The findings drawn from the statistically analyzed results confirm the primacy of techniques inspired by cognitive linguistics over those based on translation in learning polysemous words. Such findings give pedagogic support to the tenets of cognitive linguistics and prototype theory within cognitive linguistics (e.g., Brugman, 1980; Lakoff 1987; Tyler and Evans, 2004; Evans and Tyler, 2008). Additionally, the results of this study confirm findings from other studies using teaching methods based on the insights from cognitive linguistics. (e.g., Csábi, 2004; Touplikioti, 2007).

2 Implications

The findings of this study have a number of pedagogical implications for teachers. First, given the efficiency of image schemas and verbal explanations in helping the experimental participants assimilate the polysemous words of the treatment, teachers are advised to adopt the dual coding theory in teaching vocabulary.

Also, concerning the techniques of teaching polysemous words, like Morimoto and Lowen (2007) I warn against applying the insights from cognitive linguistics to the teaching of polysemous words on one occasion only. The findings of this study support the idea that “isolated, one-off lessons might not be sufficient to ensure students’ full internalization and restructuring” of their knowledge of the polysemous words’ literal and metaphorical senses (Morimoto and Lowen, 2007 p. 362). For this reason, polysemous words should be taught strategically.

Third, to avoid the *mismatching phenomenon* discussed above, EFL teachers should draw their learners’ attention to limitations of word-for-word translation when dealing with polysemous words. However, given the cases where we have matches between English words and their Arabic equivalents, teachers can additionally point this out using the translation method. In this case the L1 should not be seen as a thing to be avoided, but rather as additional asset in learning polysemous vocabulary.

Fourth, as cognitive linguistics have proven effective in equipping teachers with a feasible way of teaching English polysemous words to EFL learners, English teachers should be trained in techniques pertinent to polysemous vocabulary teaching proposed by this framework.

3 Limitations and directions for future research

I have tried to remedy for the pitfalls of the previous related studies but I encountered a few limitations during the course of my study.

Partly because the study was set out to be a fully ecological one, in the sense that the presentation of the polysemous words taught and the practice exercises of the instructional treatment for the control group replicated the mainstream teaching practices of polysemous words (unlike some previous studies), I was not able to control for these variables, piece meal presentation of polysemous words, different practice exercises between control and experimental group, and lack of translation test at the end of the experiment.

About the Author

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VII References

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VIII Appendices

Appendix A PWKT (sample sentences)

Complete the unfinished words.

- Some bad eating habits are difficult to stop, for instance, for some, eating junk food daily is a habit which one cannot b..... easily.
(عادة)
- Many people continue working b.....the age of 60. At this age people usually retire.
(يوصل) (يتقاعد)
- Your article is o.....the page limit. You wrote more than what is required.
(مقال) (الحد)
- Passing the TOEFL h.....the list of ambitions among all the students who joined the Intensive English Program at the University of Sharjah.
(النجاح) (طموحات) (التحق)
- I like Oman very much, and I'm proud of my Omani ro.....We live in the Emirates, but my parents were born in Muscat.
(فخور) (مسقط)
- The new manager managed to pu..... his ideas to reform things in the company.
(المدير) (يصلح) (الشركة)
- He kept talking about his new ideas until he convinced all the workers to trust him.
(أقنع) (يثق)
- When we went out, we left the kids in the good ha.....s of our babysitter. We all trust her and think that the kids will be safe with her.
(جلسة أطفال)

8. Her cheeks were **b.....ing** with embarrassment when she failed to know the answer.
 (خدين) (احراج) (فشل) (امنين)
9. You'll **b.....** yourself out by taking drugs and drinking too much alcohol. These bad habits will ruin your health.
 (كحول)
10. We didn't know we were **b...ing** the law until the policeman arrested us and gave us a ticket.
 (القانون) (يوقف) (تذكرة مخالفة)

Appendix B

A. Lesson Sample Handout (push) (for experimental group)

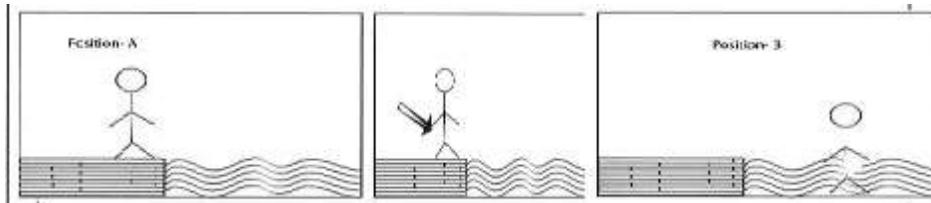
Example 1.

Christine **pushed** the poor boy into the water.

Push definition: When you push something, you use **force** to make it **move away from you** or **away from its previous position**.

Step # 1. Can you come up with other sentences showing other uses of **push**?

Step # 2: Let's see how this meaning can be presented.



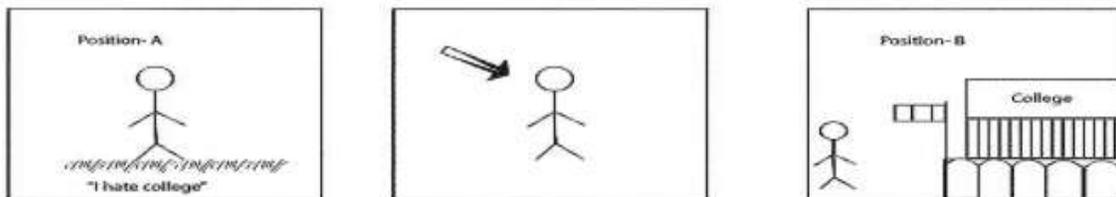
Physical space

Use **force** so as to make something move away and consequently **changes position**.

Step # 3: Now let's see how figurative meanings of **push** can be presented

Examples showing figurative senses

1. He **pushed** his way through the crowd until he reached his son.
Meaning: move forward using force
4. My parents pushed me into going to college. I didn't want to pursue my studies, but they forced me to do so.
Meaning: to force
3. After **pushing** his new political ideas, the candidate was elected.
 He kept talking about his new ideas until people trusted him.
Meaning: to convince people to accept one's ideas in a forceful way

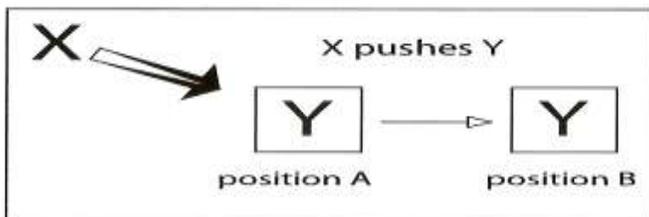


Abstract space:

Use **force** so as to cause **someone** to **change position** and behave in a different way.

Step # 4

Explain the following sentences with reference to the image-schema below.



Sentences

1. The naughty boy *pushed* the closed door open with his foot.
2. The poor mother *pushed* her way through the crowd (A.....B) looking for her son.
3. The teacher *pushed* his new ideas until he persuaded his students. They were not convinced with what he called for in the beginning, but as he kept talking about his new ideas repeatedly, they finally trusted him.
4. My friends *pushed* me into attending the party. At first I refused the invitation, but as they forced me to go, I changed my mind (accepted).

Exercises

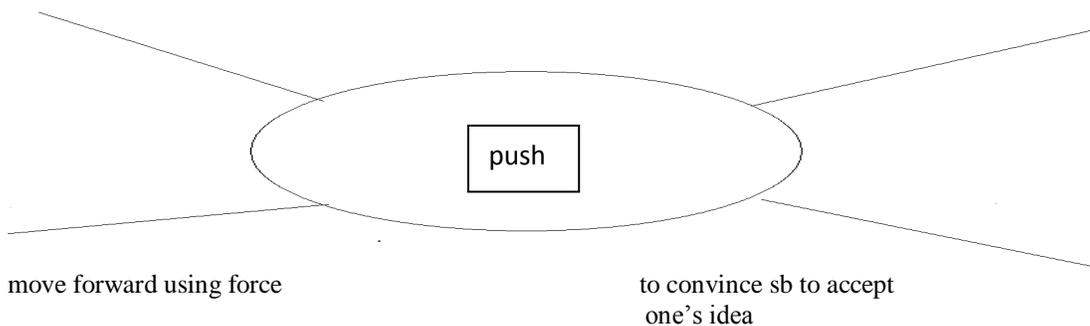
Words in context

1. Suzan **pushed** the desk aside to clear the way for her students. The chair will
 - a. change its position
 - b. remain in the same place
2. If you **push** your way through the crowd, you
 - a. move forward using force
 - b. move backward using force
3. If your friend **pushes** her ideas about a particular subject, you'll probably
 - a. change your mind/position
 - b. keep your position
4. The test **pushed** her to study very hard. The test must be
 - a. very easy
 - b. very difficult

Part of push Network

to use force to make sth move (literal meaning)

to force



Lesson Sample Handout (push / root / burn) (for control group)

(Just like experimental students, control participants were presented with the three different meanings of push, but in a piece meal fashion, i.e. on three separate occasions. In this sample lesson they were presented with one of these three meaning – to force)

Themes: Exams and traveling

Literal meanings of push, root and burn: _____, _____, _____

How many meanings do you think does each of these words have? _____,

_____, _____
Sentences translation: _____

Below are words you know used figuratively.

1. Push:

*Example: Standardized tests like TOEFL seem to **push** students to work really hard.*

English meaning: (verb) to force

Sentences translation:

2. Root:

*Example: Robert traveled to Vietnam in search for his **roots**. He was born there.*

English Meaning: (preposition) origin, place where one was born

Sentences translation:

3. Burn: (to destroy something with fire)

Example: In order to pass the TOEFL, the student studies day and night.
 She may **burn** herself **out** by working too hard.

English meaning: (verb) ruin one's health

Sentences Arabic translation:

Exercise # 1

Words in context:

1. How can one search for his/her roots?
 - a. surfing the internet
 - b. reading novels
2. How can teachers push students to work very hard?
 - a. giving them a lot of homework
 - b. deducting marks
3. Who might burn himself out?
 - a. a drunkard
 - b. a fireman working 6 hours a day

Exercise # 2

Gap filling

| |
|---------------------|
| burn - roots - push |
|---------------------|

1. Teachers don't seem to ____ these kids very hard. They don't force them to work hard.
2. The workaholic risk _____themselves out.
3. Certain TV programs can help people search for their_____ .