Applying semantic frames to effective vocabulary teaching in the EFL classroom

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I. Abstract

This study intends to shed some light on the advantages Cognitive Semantics can provide to vocabulary teaching in EFL (English as a Foreign Language), by describing how our knowledge is organized and what cognitive mechanisms are used by our mind in order to organize it, namely cognitive domains and frames.

If we want our students to use English properly and fluently, we need to make sure they comprehend (and not only learn by rote) the concepts they are taught. Regarding this, focusing on cognitive domains and frames can have a vital role, since they provide the right conceptual background to understand and use lexical concepts. Moreover, categories at the basic level provide the highest amount of information at the lowest processing effort.

All in all, this paper suggests that introducing vocabulary in terms of frames and choosing the appropriate level of categorization depending of the proficiency level can lead to a better comprehension, and, consequently, an easier entrenchment of specific lexicon in the long-term memory than using traditional methods. Finally, we propose a task that implements a frame-based approach.

Keywords: Cognitive Semantics, categorization, cognitive domains, frames, vocabulary entrenchment

II. Introduction

Learning vocabulary is a vital part of learning a language. As many researchers hold (Richards, 1976; Nation, 1990; Lewis, 1993; Nation, 2001; Schmitt & McCarthy, 2002; Xu, 2010; Nezhad & Shokrpour, 2012), teaching vocabulary is the basis for the improvement in other language aspects.

However, for a long time vocabulary has not been given a proper attention. Instead, many teachers decided to regard grammar as a priority, overlooking the fact that mastering a language implies much more than just learning grammatical rules and memorizing vocabulary lists. As a result, most of the times students have no chance to learn the polysemy of words, the contexts in which they could be used, etc. When studying a language it is sometimes hard for the students to remember the meanings of the words, let alone to relate the concept with the appropriate context of language use. As Nation (2001) explains, true mastery of a word implies more than just knowing its meaning, it also entails knowing a variety of word knowledge aspects, namely spelling, pronunciation, other meanings the word might have, its collocations, derivations, etc. The more aspects of word knowledge we teach our students about a word, the more likely they will be able to use it in the right contexts in an appropriate manner.

This matter of how to benefit our students' learning, especially regarding their vocabulary competence, led us to study the relevance of Cognitive Semantics, and, within this approach, the theories that can

improve the better understanding of lexical units in English, namely the theory of the levels of categorization, the theory of cognitive domains and especially Fillmore's theory of frames (1982).

All in all, this paper suggests that applying a frame-based approach to the teaching of vocabulary can help students to better comprehend concepts that in turn will become more easily entrenched in their long-term memory.

III. Aim

The main aim of this paper is to suggest a frame-based approach to teaching vocabulary in the EFL classroom as an alternative to the ineffective and unsuccessful techniques used so far.

IV. Theoretical framework

Cognitive Semantics (henceforth, CS) is concerned with investigating the relationship between experience, the conceptual system and semantic structure encoded by language (Evans & Green, 2006). In specific terms, cognitive semanticists investigate conceptual structure (knowledge representation), and conceptualization (meaning construction). As Valenzuela et al (2012) claim, a key feature of CS in which it differs from other approaches to semantics is that meaning is a mental phenomenon, and the meaning associated with linguistic symbols relates to mental representations.

The present paper is based on this approach since many studies on second language acquisition prove that a cognitive linguistics perspective on teaching vocabulary not only helps to understand better the meaning of the words but also leads to a better retention of the different semantic extensions of a word (Boers & Lindstromberg 2006, 2008, Boers et al. 2010).

As CS provides insights into the way our mind arranges concepts, there are some theories that could offer valuable strategies for introducing vocabulary in the EFL classroom, namely the theory of categorization, the theory of cognitive domains and the theory of semantic frames.

4.1. The categorization system

Categorization allows us to organize the information we perceive from the external world. By means of this mental process of classification we subsume elements into groups according to their similarities and differences.

One of the central ideas of prototype theory is that the organization of our experience has two dimensions: a horizontal dimension and a vertical one. Both dimensions allow us to organize and classify our experience: the vertical one, arranging the different category elements from the basic level to the superordinate and subordinate levels; and the horizontal one, organizing categories in relation to other close categories.

4.1.1 The vertical dimension

The vertical dimension is related to the level of inclusiveness of a particular category. There are three levels of categorization: basic, superordinate and subordinate.

Basic level terms are more frequently used in language than superordinate or subordinate terms, since unless there is a specific communicative need, these terms are the ones used for reference.

As for the superordinate level, it includes a great diversity of members. Then, categories at this level (for example, VEHICLE) emphasize one or a few functional attributes that many basic level categories share (a conveyance for transporting people or things), while also undertaking a collective function (grouping together categories that are closely related in our knowledge representation system).

Regarding the subordinate level, categories at this level are more specific and thus offer more information, but at the same time they require more processing effort.

According to the findings in Rosch's research (1976), the basic level is the most important level of categorization, since categories at this level provide the greatest amount of information at the lowest processing effort. In other words, people are generally faster and more accurate to name or categorize elements at the basic level (e.g. fork) than at more general (cutlery) or specific (fish fork) levels.

4.1.2 The horizontal dimension

The horizontal dimension is related to category distinctions at the same level of inclusiveness. Not all the members of a category have the same status within the category; there are elements more characteristic and prototypic than others. The members that are judged to be best examples of a category can be considered to be the most central in the category. Therefore, a category consists of prototypical elements and elements which are progressively more peripheral.

However, Croft and Cruse (2004) emphasize that the grade of centrality of category members is strongly culture dependent. For instance, while DATE would be a central category of FRUIT for Jordanians, it would be quite a peripheral one for Spaniards.

4.2. Cognitive domains

Certain concepts are intimately related because they are associated in experience. Cognitive domains are cognitive entities that operate as a frame to sets of interrelated concepts. In Langacker's words (1987:147), a cognitive domain is 'a context for the characterization of a semantic unit'. As Evans & Green (2006) explain, the only prerequisite that a knowledge structure has for counting as a domain is that it provides background information against which lexical concepts can be understood and used in language.

Regarding the types of domains, we can distinguish basic and abstract domains. Langacker (1987) refers to basic domains as domains derived directly from the nature of our embodied experience. Some examples of

this kind of domains are SPACE, TIME, COLOR, PAIN, HARDNESS, MATERIAL, etc). On the other hand, domains like MARRIAGE, LOVE are conceived as abstract domains, in the sense that, although they are ultimately derived from our embodied experience, they are more complex in nature.

In Figure 1 we can see the example of the COOKING DOMAIN and how the different elements within that domain are organized in our minds.
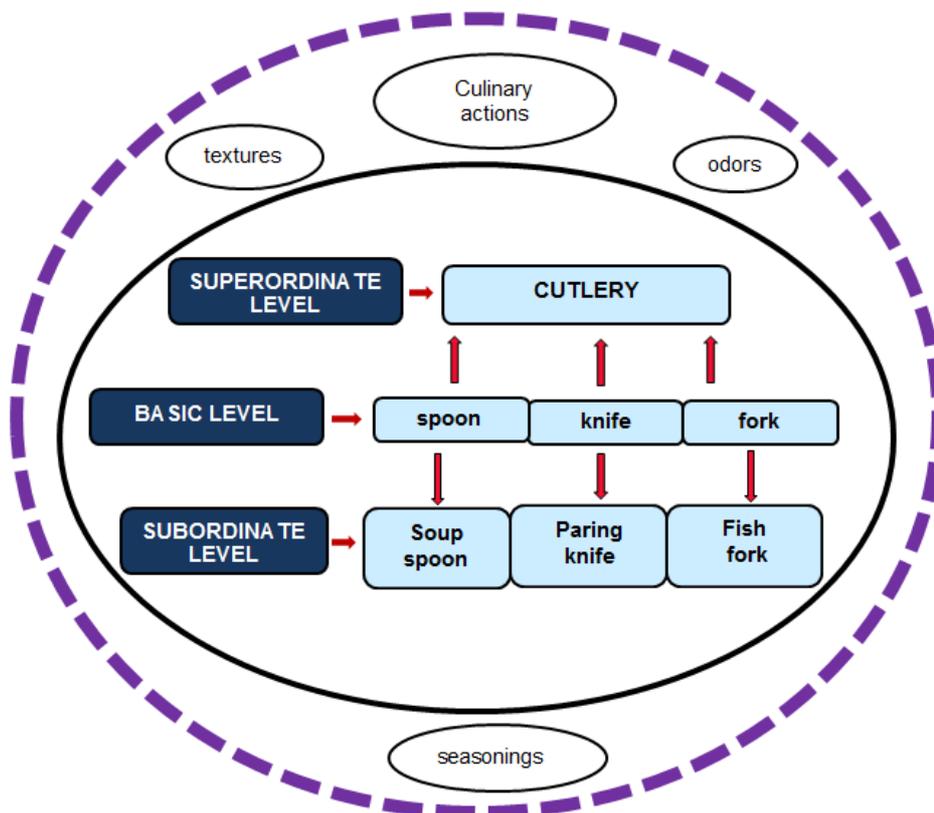
Figure 1. The COOKING DOMAIN

The COOKING DOMAIN consists of many concepts which are related in experience. Those concepts (for instance people, ingredients, culinary actions, kitchen utensils, textures, etc.) can in turn be arranged in terms of the previously explained levels of categorization. As figure 1 shows, there are basic level elements within this domain, such as SPOON, KNIFE and FORK, which in turn can be organized on the basis of the superordinate category CUTLERY. Finally, the most specific categories are the ones at the subordinate level, as categories like SOUP SPOON specify a particular type of spoons.

The notion of cognitive domain shares important similarities with the notion of frame (see section 2.4).

4.3. Frames

A more specific knowledge configuration than a cognitive domain would be a frame, which Fillmore (1982) defines as 'any system of concepts related in such a way that to understand any of them you have to understand the whole structure in which it fits.'

Fillmore illustrates this idea with the example of the commercial transaction frame. We would not be able to understand, for example, the word sell without knowing about the circumstances of commercial transfer, which at least involves, among other things, a seller, a buyer, goods, money, the relations between the seller and the goods and the money, the relation between the money and the goods, the relation between the buyer and the goods and the money, etc.

Thus, frames could be considered as "tools that cause listeners to activate certain areas of their knowledge network" (Littlemore, 2009).

V. Application to education

Implementing CS to EFL classrooms could definitely help learners' process of vocabulary entrenchment. The different levels of categorization could be easily employed so that the input the learners are faced with matches their reasoning capacities.

As previously explained (see section 2.1.1), categories at the basic level provide the greatest amount of information at the lowest processing effort. Accordingly, students at secondary education (approximately equivalent to CEFR levels A1, B2), would be the perfect target for this level, as it would be the most appropriate level for them to best comprehend concepts.

As for B2, C1 and even ESP (English for Specific Purposes) learners, they can obtain more benefit from categories at the subordinate level. This kind of categories require a harder cognitive processing because elements at this level are more specific, and thus, more difficult to identify. As Laufer (2005) states, when high proficiency is the goal, many low frequency words must be explicitly taught. As subordinate terms are, to a great extent, low in frequency in everyday language use, they are optimum for learners at a more advanced level.

Regarding superordinate categories, they can be utilized in order to organize and have access to the basic categories, having also a unifying function among the members of the subordinate and the basic level. Categories at this level might be useful at any level of proficiency.

On the other hand, the insights on CS can also be helpful when dealing with figurative language like idioms. These elements of language are of paramount importance to gain a more native-like command of the language, since figurativeness is a natural and common phenomenon in language.

In short, we can introduce vocabulary taking into account the students' reasoning capacities (with the different levels of categorization), and the students' previous knowledge (focusing on domains and frames). In order to illustrate this, we have designed a task which focuses on frames and basic level terms as a way of dealing with vocabulary (see section 6).

VI. Methodology

With regard to the methodology followed to undertake this study, we collected basic categories pertaining to the cooking domain and organized them into CULINARY ACTIONS, ODORS, TASTES, APPEARANCE, TEXTURE, DAIRY PRODUCTS, VEGETABLES, MEAT, SEASONINGS, COOKING UTENSILS, KITCHEN UTENSILS and TABLEWARE. Those terms were aimed at being used in the learning task created.

Due to the specificity of the field chosen, specific sources related to cooking and gastronomy (websites, encyclopedias, blogs, etc.) were used. Since we also wanted to check the wide range of contexts in which those words occurred and see the metaphoric projections of the figurative language grounded on this field, we also made use of computerized corpora available to the public, namely the COCA (Corpus Of Contemporary American English) and the CREA (Corpus de Referencia del Español Actual).

VII. Task

The task proposed in this paper consists of several activities addressed to 4ºESO learners. These activities are aimed at extending the students' vocabulary by means of introducing it in terms of semantic frames and dealing with basic level categories. Some metaphorical senses (often considered as unrelated and unsystematic) are introduced as well, so as to draw learners' attention to specific metaphorical expressions within this domain through contextualized use.

By means of these activities, students can relate their previous knowledge to the new elements in an appropriate context and get used to the different semantic relations a lexical item can have with other components of the frame or even other frames.

FOOD FOR THOUGHT

ACTIVITY 1

Think about the 'baking a cake' frame and discuss with your partner the different frame elements that could be evoked by it and write them down. Try to use as many basic categories as possible.
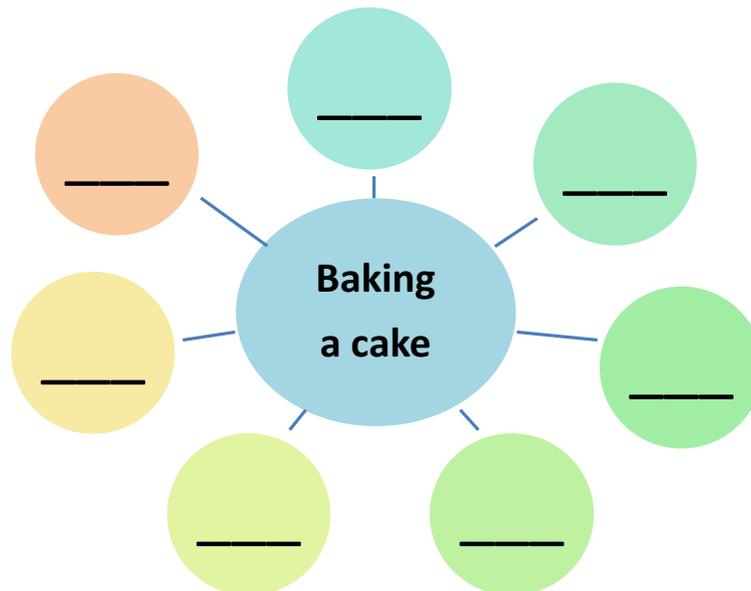
ACTIVITY 2

Look at the following words and think of what frames they could activate. Then, discuss your results with your partner and work together to figure out the different meaning they may have depending on the frame.

Sour	Slice
Blend	Menu
Hot	Powder
Burn	Bitter
Cup	Bite

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ACTIVITY 3

Underline all the expressions in the following sentences which refer to a conceptual metaphor related to food/cooking and discuss their meaning with your partner.

1. The little girl is the apple of her grandfather's eye.
2. That singer moves among the cream of society.
3. She was forced to eat her words.
4. Passing the exam was a piece of cake.
5. Those new cars are selling like hotcakes.
6. My uncle went out of the frying pan and into the fire when he got angry and quit his job.

VIII. Conclusion

All in all, neglecting the essential role of vocabulary can represent a stumbling block for the appropriate learning of a foreign language. In this sense, EFL teachers could definitely improve their students' performances by applying new techniques based on CS in the classroom.

A frame-based approach to vocabulary teaching offers a new and more effective way of introducing vocabulary in the EFL classroom, as it enables to present vocabulary in relation to the students' previous knowledge and taking into account how the lexicon is arranged in the human mind. This would undoubtedly have a positive impact on the students' comprehension and retention of lexicon in their long-term memory.

Last but not least, research concerning the application of CS in EFL should become an object of considerable interest, since the insights provided by CS can shed light into new strategies of practical value for developing appropriate, relevant and effective vocabulary learning programs.

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