

LEARNING VOCABULARY IN SEMANTIC SETS

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Abstract: New vocabulary items of a foreign language are often presented, taught and learned by means of word lists. One way of grouping new words is semantic clustering. The paper draws special attention to the benefits of semantic word sets which can be found in many textbooks intended for learning English both for general and special purposes. It has been shown that semantic clusters are compatible with different learning approaches. Justification for semantic clustering is presented along with theoretical background. Moreover, the most influential studies containing empirical evidence in favour of semantically related sets are stated in order to prove that this way of presenting target words facilitates vocabulary learning.

Key words: foreign language learning, vocabulary acquisition, English as a foreign language, semantic sets.

1. INTRODUCTION

A large amount of words that a student needs to learn and the complexity of the process of learning a foreign language make a huge challenge for students of all ages. That is why the researchers dealing with vocabulary acquisition have been trying to find out how to help students learn as many words as possible. Consequently, a large body of research has been conducted in order to provide empirical and theoretical evidence on the main issues related to vocabulary acquisition. Some of the questions are: which type of learning is more effective, implicit or explicit?; is it better to use monolingual or bilingual dictionaries?; will results be better if words are presented in context or in isolation?; which vocabulary learning strategies are more helpful?; how to test passive and active vocabulary knowledge?; how to test vocabulary depth and vocabulary breadth knowledge?, etc. In addition, a long-standing question within the field of foreign language acquisition has been how foreign language vocabulary should be taught: in semantic sets or not?

The paper addresses the semantic sets only. It describes the rationale for its application in EFL (English as a foreign language) textbooks and states the advantages of this type of presenting, teaching and learning new vocabulary items.

2. SEMANTIC CLUSTERING

Throughout the literature dealing with EFL vocabulary acquisition we come across several names for a particular way of grouping words having certain features in common. These sets are called lexical sets, semantic sets, semantic clusters, semantically related word sets. All these names refer to the words that are related in meaning and belong to the same semantic domain or lexical field [1]. In simple terms, these sets are composed of words that share the same semantic features, which implies that they have similar meanings. They also share the same syntactic features, which means they belong to the same part of speech thus conforming to the rules of syntax. The words are mainly nouns, adjectives and verbs and they are normally grouped under a common superordinate word called headword. There are numerous examples in textbooks intended for the students of all ages and knowledge levels who learn English as a foreign language. For example, the headword *family members* includes the words such as *husband, wife, mother, father, brother, sister, uncle, aunt*, while the headword *clothing items* comprises the following words: *shirt, dress, jacket, coat, trousers, jumper, T-shirt, skirt*, etc. The verbs *stare, gaze, glare, glance, glimpse, blink, wink, peer, peep* can be presented together under the headword *ways of looking*. When presenting words describing somebody's personality, the adjectives such as *quick-tempered, stubborn, absent-minded, talkative, shy, generous, selfish, brainy* can be employed.

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2.1. Semantic sets and language learning approaches

It seems that semantic clusters can be found in most EFL programs in order to facilitate vocabulary learning regardless of the language learning approach used. For instance, the situational approach, which was introduced in the 1950s and 1960s but still used worldwide, places grammatical structures and word lists in the focus of foreign language teaching. Here is an example of presenting vocabulary items in this approach: This is a _____. (book, pencil, ruler, desk) [2].

Then Wilkins proposed the idea of notional syllabi in which the focus is on what speakers communicate through language [3]. In this type of syllabus design the content replaces form so Wilkins suggested a lot of notional categories and list expressions which actually form semantic clusters. For example, the words *confirm*, *corroborate*, *endorse*, *support*, *assent*, *acquiesce*, *agree*, *concur*, *consent*, *ratify*, *approve* are listed under the category *agreement* [2]. This idea became popular in foreign language acquisition so the semantic clustering became a regular tool in EFL textbooks.

Semantic clusters are also present in the textbooks based on a structure-centered approach. In the substitution exercises the words from semantic lists fit into slots which enables students to change the meaning of the sentences [4]. For example, the names of days of the week and seven nationalities fit into slots in the following structure: On _____ he cooks _____ food. [5].

A learner-centered approach is focused on the communicative needs of the learners [4] so the units in such textbooks simulate situations in which students have to use English (e.g. ordering lunch in a restaurant). But the vocabulary items chosen to express notions and functions in this approach are grouped into semantic clusters as well. For instance, the list of words such as *meat*, *ham*, *beef*, *steak*, *chicken*, and *fish* are used in the mentioned situation in a restaurant.

2.2. Semantic sets in ESP textbooks

Organizing words according to their semantic or syntactic properties is widely used in EGP (English for General Purposes) textbooks (e.g. [6]). This way of introducing new vocabulary in semantic sets often appears in many ESP (English for Specific Purposes) coursebooks, too. A quick examination of several of the current ESP textbooks being used at the Academy of Professional Studies Sumadija reveals that the new vocabulary is typically introduced to engineering students in semantically related sets.

For instance, the students of mechanical engineering are presented with *basic geometric shapes* and *figures* through the nouns such as *circle*, *triangle*, *square*, *rectangle*, *hexagon*, and *prism*, *sphere*, *pyramid*, *cone*, *cube*, *cylinder*, respectively, in a unit titled Mathematics: some essential terms [7].

English for Students of Information and Communication Technologies [8] groups *data warehouse*, *enterprise resource planning system*, *enterprise system*, *expert system*, *geographic information system*, *global information system*, *office automation* as types of information systems in a unit titled Information systems.

In a similar vein, the students of road traffic learn the exterior parts of a car through a unit titled The exterior, within a coursebook named English for the Automobile Industry [9], where a vocabulary list includes *bonnet*, *bumper*, *headlight*, *tire*, *windscreen*, *boot*, *exhaust pipe*, etc.

2.3. Justification for semantic clustering

It seems that English language teaching systems have largely relied on semantic grouping to present vocabulary. Apparently, course designers, curriculum designers, textbook writers and teachers have all assumed that learning new vocabulary items in semantic sets is beneficial to the students of English language.

There have been some authors who claim that grouping new vocabulary items in related sets facilitates learning. The first authors who provided justification for semantic clustering were Gairns and Redman claiming that grouping words by meaning 'can provide greater precision in guiding students towards meaning, and in helping them to define the boundaries that separate lexical items' [10]. They believe that semantic clusters help the learner see the distinctions between semantically related words, understand the semantic boundaries, see where meaning overlaps and learn the limits of

use of an item. According to these authors this method of words grouping facilitates learning and speeds up the learning process.

Seal also believes that the new items to be presented should share similar features. He notes the following advantages of presenting and learning words in semantic sets: 'First, by learning items in sets, the learning of one item can reinforce the learning of another. Second, items that are similar in meaning can be differentiated. Third, students may more likely feel a sense of tangible progress in having mastered a circumscribed lexical domain' [11, p. 300-301].

Neuner states that learning words in semantic sets does not require much effort and that learners can easily store the words in the memory and retrieve them from memory [12].

Dunbar says that semantic sets make learners notice the similarity and difference between the words learned in such a way. He puts forward that semantic sets provide learners with an opportunity to see how knowledge can be organized [13].

2.4. Some theoretical bases for presenting vocabulary items in semantic sets

Many theorists and practitioners studying vocabulary acquisition believe that teaching and learning new vocabulary in semantically grouped sets is an efficient method. Their arguments rely mostly on the studies of the organization of the mental lexicon in first language. According to these studies, when children start to acquire and expand a lexical domain, they learn several words of the same domain simultaneously [14]. Moreover, words are semantically organized in the human brain and individuals tend to recall words on the basis of the semantic field in which they are conceptually mapped [15]. Therefore, the researchers infer that the students are able to form a pattern of interrelated words in their mind, they make more effort to differentiate words that belong to the same semantic set, their learning will endure longer and they will get involved in deeper levels of mental processing.

Other theoretical bases can be found in the concepts of semantic activation theory in cognitive psychology. The words are processed in memory by mental structures called nodes [16]. If a node is activated, activation spreads through interconnected links to associated concepts, making them more available for further cognitive processing. Therefore, if words in our mental lexicon are related in associative networks, presentation of words in semantic sets may facilitate the word-learning process. This theory is consistent with the concept of associative priming, according to which the process of gaining access to information is easier if associated items are presented at the same time [17].

2.5. Literature review

However, there are some authors who do not believe that grouping new vocabulary items in related sets facilitates learning. They also think that a common practice found in many textbooks is just an unexamined assumption. They maintain that methodology of presenting new words grouped in semantic clusters is not founded on empirical and theoretical support [4], [18]. Waring even claims that 'when words are being learned at the same time but are too similar or share too many common elements, then these words will interfere with each other, impairing retention of them' [18, pp. 261-262]. Both authors agree that there has been very little empirical evidence that can support the assumption that teaching new vocabulary in semantically grouped sets is an effective method of vocabulary building. They also add that this common practice in vocabulary teaching results from a widespread belief among coursebook writers and their personal convenience rather than on empirical basis or theoretical concerns.

From this point on, vocabulary experts called for systematic and scientific research in the controversial topic. So 1990s and after have seen a great interest in the actual effectiveness of vocabulary presentation methods. We have made a brief review of the research work which favours presentation of new vocabulary in semantically related words.

The study was conducted with 60 Iranian students ranging from 20 to 30 in age. They were presented with thirteen lexical sets and a semantically unrelated set, each consisting of 100 words. All target words were given in a short sentential context. Their results were measured in terms of vocabulary depth and vocabulary breadth knowledge, using the vocabulary knowledge scale. All

students achieved greater gains in vocabulary depth and vocabulary breadth knowledge in lexical sets [19].

Aksoy designed a study in which 37 Turkish high school students participated. The author composed three word lists consisting of 15 semantically related words, 15 semantically unrelated words and 15 thematically related words. The students were required to provide translations of all target words from English to Turkish. The participants showed the best results in delayed tests of semantically related words. Thus, the author concludes that the participants in her research best learn and recall new vocabulary when it is organized and presented in semantic sets [20].

Twenty-three Japanese college students were presented with new vocabulary items in three word lists: 14 semantically related words, 14 thematically related words and 14 formally similar words. Translations in both directions, so called receptive and productive knowledge, were tested in immediate and delayed tests. The results of the study showed that recent scepticism towards the semantic clustering of vocabulary is not justified because semantically grouped words were recalled better than other grouping methods in most testing conditions [21].

Similar research was done with 45 Serbian engineering students who learned English as a foreign language. The study investigated the difference between three word groups organized in terms of semantic relation, thematic relation or no semantic relation at all. The results of both immediate and delayed tests of receptive and productive vocabulary knowledge revealed that the students recalled more words in semantically related set than in other two word clusters. The authors conclude that this type of vocabulary presentation does not make word-learning process more difficult than other types [22].

3. CONCLUSION

The central part of foreign language learning is vocabulary acquisition. The last 30 years have generated a number of research articles, studies and books dedicated to vocabulary teaching and learning. Vocabulary specialists agree that, among various vocabulary teaching techniques, word lists can be very useful for EFL learners. One way of grouping words in a list is according to their semantic similarity. Any EFL teacher can witness the presence of semantic sets in textbooks written for the students of all ages, various needs and knowledge levels. The textbook writers and curriculum developers have widely used semantic clusters to present learners with new vocabulary items. Here are several examples of grouping words with a shared theme: colours, days of the week, months of the year, occupations, fruits, animals, places in community, kitchen utensils. The paper focuses on the benefits of presenting target vocabulary in semantically related sets. According to the theoretical and empirical evidence provided by numerous researches, the following arguments for presenting vocabulary in semantic sets are stated in the paper:

- learning of one item can reinforce the learning of another,
- items that are similar in meaning can be differentiated from other words in the set,
- the students may feel a sense of progress in having mastered a given lexical domain,
- learning words in a semantic set requires less effort,
- it helps learners see how information is organized and stored in the brain,
- it is easier to retrieve related words from memory.

We have emphasized the advantages of vocabulary building through semantic sets. It should be noted, however, that other ways of presenting target vocabulary, such as thematically related sets or semantically unrelated sets, should not be excluded from vocabulary learning.

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