

The Application of Semantic Field Theory in Vocabulary Learning

Zhenyu Wang

Beijing Forestry University, Beijing, China

Abstract

Vocabulary acquisition plays a significant role in English learning. For the sake of improving the efficiency of vocabulary learning, a better method of vocabulary learning should be explored. Present research derives methods that can facilitate vocabulary learning through exploring the interaction between semantic field theory and sense relations. First, this paper introduces sense relations between word, including synonymy, hyponymy, antonymy, etc. And then, this research depicts semantic field theory: Trier's paradigmatic semantic field theory and Pozig's syntagmatic semantic field theory, trying to construct different semantic relations. Finally, this thesis explores the application of semantic field in vocabulary learning, which helps develop learners' awareness of English thinking and systematic thinking skills. By associating and expanding new and old words with a core meaning in the field, it is helpful to expand the breadth and depth of students' vocabulary and improve their interest in learning vocabulary and their ability of comprehensive application.

Keywords

Vocabulary Learning; Semantic Field Theory; Sense Relations.

1. Introduction

Vocabulary Learning is always an important part in English learning process. Wilkins (1972:111) once pointed out in his book that "Without grammar very little can be conveyed; without vocabulary nothing can be conveyed." It clearly stipulates that vocabulary learning is one of the crucial components of English learning. In fact, English has a tremendously rich vocabulary. According to the study of Richards (1943), the most commonly used English words are 850, but the number of English vocabulary is more than two millions at present (Wang, 1999). Traditional vocabulary learning methods only use mechanical memory to learn new words. It may be a difficult task for learners to remember the spelling and meaning of so many words and distinguish similar words. It is found that it is easy for students to forget these words after a period of time. One possible reason may be that traditional methods cannot help learners consolidate short-term memory into long-term memory. Therefore, to find a more effective way of vocabulary learning has become an urgent problem for English learners.

This paper will try to explore vocabulary teaching from a new point of view: sense relations and semantic field. For students, the learning of English vocabulary includes not only the learning of word meaning, but also the learning of pronunciation, spelling and vocabulary application. Therefore, students' learning of English vocabulary is not simply to be able to read, write and remember the meaning of each word, but to be able to flexibly use the words they have learned in a certain context. According to the viewpoint of constructivism, "learning is an active process of meaning construction and social interaction. Teaching is not to put knowledge and experience into students' minds from the outside, but to guide students to construct new experience from the original knowledge and experience, and this cognitive construction process is often completed by participating in the social interaction of the community" (Chen & Liu, 2010:140-141). The traditional English vocabulary teaching method ignores the students' initiative in English vocabulary learning, which leads to the students' passivity in learning

English vocabulary and makes them lose interest and confidence in English vocabulary learning. The English vocabulary learning method based on semantic field is in line with constructivism, which can fully exercise students' learning initiative and make them construct meaningful semantic fields, such as synonymous field, antonym field, hyponymy field, etc., which makes English vocabulary learning more meaningful.

In this thesis, the data, or the examples, were collected from textbook, authoritative academic paper, the internet or the mass media, etc.

This paper adopts non-empirical research on semantic theory and English vocabulary acquisition. First, this paper introduces sense relations between word and semantic field theory. And then, this thesis explores the methods of application of semantic field in vocabulary learning.

2. Literature Review

2.1. Senses Relations

Reference or denotation is extra-linguistic, that is, there is "reference" to the entities, objects, and states of affairs, etc. in the external world to which linguistic expressions refer. At the same time, it should be recognized that words have sense relations: the system of linguistic relationships which a lexical item contrasts with other lexical items. (Ronald Carter, 1998) There are a lot of relations between the single words of a language and the meanings of these words, respectively. Among linguists, these relations are called "semantic relations", "sense relations" or "lexical relations".

According to Jackson (1988:65), sense relations, also called lexical relations, refer to the meaning relations that hold within the vocabulary of a language between words themselves. Sense relations have an important contribution to the meaning of a lexeme. For some researchers (e.g., Deese, 1965; Lehrer, 1974; Fellbaum, 1998) relations among words constrain or determine meaning, rather than vice versa. And according to Lyons, the sense of an expression may be defined as the set, or network, of sense relations that hold between it and other expressions of the same language (1995). These positions are often stated as background to other discussions, as if they are uncontroversial. Constructing sense relations of words can make precise elaboration in word learning. Gairns and Redman (1986), in their well-known book *Working with Words*, argue that grouping words by meaning "can provide greater precision in guiding students towards meaning, and in helping them define the boundaries that separate lexical items". Similarly, Seal (1991) explains that when words are learned in semantic sets, "the learning of one item can reinforce the learning of another" as well as facilitate understanding because "items that are similar in meaning can be differentiated". These authors assume at least two benefits associate with learning words in semantic sets: (a) serves to facilitate the learning task and (b) causes the learner to notice fine-grained distinctions between words, which leads to a better understanding of the words that are learned. By providing sense relations of a word, a semantic set is established which gives great precision in guiding students towards meaning and in helping them to reinforce the command of the old words.

Most of the researches on sense relations and English vocabulary teaching and acquisition adopt empirical research method, which involves three aspects: first, the known semantically related vocabulary is helpful to the acquisition of unknown new words; second, the co-occurrence of semantically related vocabulary in classroom will cause interference and burden to vocabulary acquisition, which is not conducive to vocabulary acquisition. The above two types of studies are based on empirical studies, which provide theoretical explanations for different research results, and also provide some suggestions for English vocabulary teaching;

thirdly, semantic association training is carried out for students to promote English vocabulary learning through sense relations.

In this paper, the author combines Trier's theory of paradigmatic semantic field with Pozig's syntagmatic semantic field theory, trying to construct different semantic relations. These two versions of semantic field theory have their own advantages. Syntagmatic relation specifies file structure of a language, but the paradigmatic relation pays more attention on file lexis of a language. Both the paradigmatic relationship and syntagmatic relationship are very important for vocabulary learning.

2.2. Semantic Field Theory

Before componential analysis emerged as a first concrete approach to describe word meaning, Trier (1931), Weisgerber (1951) and others distinguished and analyzed "semantic fields", that is, groups of words whose meanings are closely interrelated. Through a simple topological metaphor, the author can place words with the meaning of "contiguous" to each other, just like a piece of puzzle. The original semantic fields defined contiguity on a mixture of intuitive factors including, among others, both the paradigmatic (synonymy, hyponymy, antonymy, etc.) and the syntagmatic relations, which mainly refer to collocation, among word meanings.

In a word, according to the theory of semantic field, words in a language are composed of different lexical fields, and words belonging to the same field are closely related (either because of similarity or difference) in meaning. A given word would have meaning according to the whole semantic scope of its field and how its function is shared with all other words in the same field. According to the theory of semantic field, it is better not to regard the lexical content of a language as a set of independent words or a list of unstructured words, but as a collection of interrelating networks between words (Stubbs, 2001).

The enlightenment of semantic field theory to vocabulary learning may be: we should learn vocabulary by establishing sense relations. Because vocabulary is composed of a series of interrelating systems, not just a series of random item sets, there seems to be a clear case, that is, presenting vocabulary to students in a systematic way can not only explain the organization of vocabulary, but also enable students to internalize items in a coherent way. In addition, it is also an effective way to expand students' vocabulary. Vocabulary learning should establish a clear relationship between semantically related words. In other words, to make vocabulary learning complete, there must be comparison and contrast.

There are many papers on semantic field theory and English vocabulary teaching and acquisition, and the research contents mainly cover three aspects: first, to help students construct hyponymy, synonymy, antonymy, etc. in English vocabulary teaching, so as to enrich students' vocabulary teaching; Second, the application of semantic field theory in professional English vocabulary teaching, such as: Business English, Sports English; third, the application effect of semantic field theory in English vocabulary teaching. Most of these studies are empirical studies. When the vocabulary of English learners accumulates to a certain extent, a word stored in the semantic network will automatically activate other semantically related words in the output or input stage. Therefore, the application of semantic field theory in English vocabulary learning will help to activate semantically related words many times, so as to consolidate the effect of vocabulary learning.

In conclusion, there are plenty of papers, belonging to the empirical study, that explore the application to the vocabulary teaching rather than acquisition or learning. Therefore, this paper, as a non-empirical study, derives methods that can facilitate vocabulary learning by exploring the interaction between semantic field theory and sense relations.

3. Theoretical Framework

3.1. Sense Relations

3.1.1. Synonymy

"Synonymy refers to the sameness or close similarity of meaning. Words that are close in meaning are called synonyms" (Hu, 2006:109). Synonyms can be defined as words with different pronunciation and spelling, but almost the same or exactly the same meaning. But a better definition may come from *Webster's New Dictionary of Synonyms* (1978). A synonym always refers to one of two or more words with the same or almost the same basic meaning in English. Expressions with the same essential meaning are synonymous. And we must know that synonyms have similarities in meaning and part of speech. Verbs cannot use adjectives as synonyms, and adverbs also cannot use nouns as synonyms: start/beginning or first/ firstly.

Synonymy is one of the characteristics of natural language vocabulary. As a highly developed language, English is known for its abundant synonyms. English is very rich in synonym, which had its historical origin. Palmer, F.R. (1976) pointed out that English vocabulary has two main sources: Anglo-Saxon, called native language; and French, Latin and Greek, called borrowed words. Baugh (2002) stated that the ingenious combination of these two kinds of words enriches English synonyms. Many synonyms are a mixture of native and borrowed words, such as kingly (Anglo-Saxon), royal (French) and regal (Latin). With the development of history, more and more countries take English as their first language. Among them, the influence of American English on British English is significant, so many synonyms in English are composed of British English words and American English words.

Synonyms can be divided into two categories: absolute synonyms and relative synonyms. Absolute synonyms refer to words with the same grammatical and lexical meanings, including conceptual and associative meanings (Zhang, 1999:105). Synonyms of this type are interchangeable in any way. In fact, these synonyms can be found in highly specialized vocabulary or scientific terms, such as word-building and word-formation in lexicology. Relative synonyms are similar or almost the same in denotation, but have different semantic meanings or different styles. There are at least five ways to see the difference. Relative synonyms are similar or almost the same in denotation, but have different semantic meanings or different styles. There are at least five ways to see the difference.

3.1.1.1 In Different Regional Dialects

Dialectal synonyms refer to the words with more or less the same meaning used in different regional dialects. British English and American English are the two major geographical varieties of the English language. And their usages are different, although they are sometimes the same in meaning. For instance, the term *baggage* is used in the United States and in some western countries of Britain where *luggage* would be used. The British live in *flats* and drive the *lorry* to farm while Americans live in *apartments* and drive the *truck*. The works of dialects are full of examples like these. In China, when you feel like drink water, the Chinese, using Mandarin Chinese, would say 喝水, while, I, using the dialect of Henan, would say 喝茶. This phenomenon seems a bit complicated, but in fact it's just that people speak different forms of language and have different words.

3.1.1.2 In Style

Stylistic synonyms refer to the words having the same meaning may differ in style, or degree of formality. In other words, some words tend to be more formal, others casual, and still others neutral in style. Such as, there are a group of noun words: *daddy*, *father* and *male parent*; obviously, *daddy* is very casual and colloquial, *father* is neutral and *male parent* is more formal; therefore, *daddy*, *father* and *male parent* is stylistic synonyms. And *die*, *pass away* and *kick the bucket* are also stylistic synonyms, but they are different in their social meanings; the word *die*

is the simplest word of tins group and stylistically neutral, *pass away* is a euphemistic word used in the formal context, and the phrase, *kick the bucket*, is a slangy expression used on very informal occasions.

3.1.1.3 In Evaluative Meaning

This kind of relative synonyms refers to the synonyms differ in their emotive or evaluative meaning and the words that bear the same meaning but express different emotions of the user, indicating the attitude or bias of the user toward what he is talking about. For example, the words *hide* and *conceal* are relatively synonymous in that they share the meaning of “to put sb. or sth. in a place where it cannot be seen or found”, but *hide* refer to the general meaning, while *conceal* means hiding with intention. In Chinese, 欠 and 赊账 are relatively synonymous, sharing the meaning of owing money; but 欠 has some negative meaning, and 赊账 means owing money for right reasons: forgetting to bring money to purchase.

3.1.1.4 In Collocation

Collocational synonyms refer to some synonyms differ in their collocation, i.e. in the words they match with. In other words, some words are limited in collocation, that is to say, in a certain environment, they can only appear together with other words. Synonyms are also no exception. For example, when we want to show some thoughts, we may use *take for* or *regard as* and the prepositions cannot be changed because they cannot represent the thought if the prepositions were changed. Another example is the words *rancid* and *addled* are both adjectives meaning of ‘not fresh’. But *rancid* occurs with bacon or butter, whereas *addled* is used only with eggs or brains. So we cannot neglect the collocative meaning.

3.1.1.5 In Meaning

Semantically different synonyms refer to the synonyms differ slightly in what they mean. The words *finish*, *complete*, *close*, *conclude*, *end*, *terminate*, and *finalize* are relative synonyms. The common idea of these seven words is in the sense of accomplishing a task or completing an activity. But the differences in semantical meaning can be seen as follows (Hayakawa, 1971: 214-215):

Finish and *complete* refer to achieving the expected goal by doing all necessary or appropriate things. But the word *complete* means that a task has been completed, so we can't always replace *complete* with *finish*. For example, an author can *complete* or *finish* his novel, but a reader can *finish* the novel. We can't say that the reader will *complete* the novel unless he reads it as a school assignment.

Close and *conclude* emphasize the final stage of completing an action. Here's an example: She *closed* her speech with a funny joke. Here the *close* means to bring an end. The meeting *concluded* at 10 o'clock this morning. Here the *conclude* means to come to an end.

The words *end* and *terminate* have more general meanings. An action may be ended or terminated before it is complete, e.g. ‘Heckling from the audience ended the speech before the speaker had concluded his remarks.’ and ‘The truce terminated hostilities.’

End and *terminate* have more general meanings. Actions can be ended or terminated before completion, such as, Questions from the audience *ended* the speech before the speaker concluded the speech.

The word *finalize* means to bring to a conclusion, something that has been worked on for a long time, “He *finalized* a budget estimate” is a typical example.

3.1.2. Antonymy

Contrary to the views of synonymy, antonymy refers to oppositeness relation. “Words that are opposite in meaning are called antonyms.” (Hu, 2006:110). The term antonymy is a standard technical term used for oppositeness of meaning; words that are opposite in meaning are

antonyms. And oppositeness can be found on different dimensions and different kinds of antonyms have been recognized.

Hurford and Heasley (2007) put forward that antonymy has two characteristics (a) all the members of the same set of relation are mutually incompatible, and (b) the terms in same relation together cover all the relevant area. The so-called incompatible means that if you choose one member of the antonym, the other members of the relationship are excluded. For example, big excludes middle, small and other sizes. Relationships like this are called mutually incompatible relationships. Meanwhile, the several members from big to small cover all areas of the size, meeting the second requirement of antonym. Therefore, these words are antonyms. There are three main sub-types: gradable antonymy, complementary antonymy, and converse antonymy.

3.1.2.1 Gradable Antonyms

Some antonyms are gradable because there are often intermediate forms between the two members of a pair. So it is a matter of degree. This is the commonest type of antonymy. When we say two words are antonyms, we usually mean pairs of words like *good/bad*, *long/short*, *rich/poor*, *big/small*, etc. As the examples show, they are mainly adjectives. And they have three characteristics.

First, as the name suggests, they are gradable, that is, the members of a pair are different in degree. The denial of one is not necessarily the assertion of the other. Something which is not *good* is not necessarily *bad*. Maybe it's just "average". Therefore, they may have comparative and superlative levels. Sometimes the intermediate level may be lexicalized. For example, between the two extremes of temperature, *hot* and *cold*, they form a pair of antonyms, and may have a further middle word *warm*.

Secondly, these antonyms are graded according to different nouns. There is no absolute standard by which we may say something is *good or bad*, *long or short*, *big or small*. The criterion varies according to the object described. A *big eye* is actually much smaller than a *small apple*.

Third, one member of a pair, usually the higher degree term, is used as the cover term. We ask someone, "how *old* are you?" and the person asked may not be old in any sense. He could be young or even a child. The word *old* is used here to cover both *old* and *young*. The sentence means the same as 'What is your age?' Technically, the cover term is called 'unmarked', i.e. usual; and the covered 'marked', or unusual. This means that, in general, cover words are more commonly used. If the covered is used, there are some strange and unusual things here. The speaker may already know that someone or something is *young*, *short and close*, and he wants to know more about it. This feature is also reflected in the corresponding nouns, such as *length*, *height*, *width*, *width* and *depth*, which are cognates of the cover words.

3.1.2.2 Complementary Antonyms

A pair of complementary antonyms is characterized by the feature that the denial of one member of the pair implies the assertion of the other. In other words, it is not a matter of degree between two extremes, but a matter of either one or the other.

Antonyms like *alive/dead*, *male/female*, *pass/fail* are of this type. Different from the first type, the paired members of this are complementary. In other words, they completely separate the whole semantic field. Not only the assertion of one means the denial of the other, the denial of one also means the assertion of the other. *He's alive* not only means "*he's not dead*", *he's not alive* also means "*he's dead*". There is no middle ground between the two. And they do not have comparative or superlative degree either. Another example is "*turn on the light*" and "*turn on the light*".

3.1.2.3 Relational Opposites

Pairs of words that exhibit the reversal of a relationship between the two items are called relational opposites. For example, if A *bought* B's product, then B *sold* the product to A. So *bought* and *sold* are a pair of relational opposites. A is the *doctor* of B means the same as B is the *patient* of A.

This type of antonymy is typically seen in reciprocal social roles, kinship relations, temporal and spatial relations. There are always two entities involved. This is the main difference between this type and the first two types. For gradable or complementary antonyms, one can say "A is good", or "A is male", without presupposing B. It can be said that it's just a matter of A, not B. But for relational antonyms, there are always two sides. If there is a *buyer*, there must be a *seller*. *Parents* must have *children*. The degree of comparison such as *bigger/smaller*, *longer/shorter*, *better/worse*, *older/younger* also belongs here, because they involve the relationship between two entities. (Hu, 2001)

3.1.3. Polysemy

In the process of vocabulary learning, the sameness of word meaning is not easy to deal with, but the difference of word meaning seems not difficult to deal with. Not only do different words have different meanings, but the same word may have a different set of meanings. This is polysemy, which is defined as "a term used in semantic analysis to refer to a lexical item with a series of different meanings (Crystal, 1980:274)." Such words are polysemous. Polysemy is a common characteristic of all natural languages. It is also a basic feature of a language's economy and efficiency.

Zhang Yunfei (2004:109) defined polysemy as "a lexical item which has a range of different means." In other words, polysemy refers to the word which has more than one meaning. Polysemy is caused by a variety of reasons. Ulmann (1962) analyzed the five main sources of polysemy. Lu Guoqiang (1999) gave a detailed analysis of the seven ways of semantic change. According to their inductions, there are four reasons to produce polysemy in the process of semantic change: shift of application in different fields, mutual transformation between common words and specialized words, the figurative use of words, and ellipsis in language.

There are many polysemic words in English. The more commonly used a word is, the more likely it has acquired more than one meaning. For example, the word *glass*, a very common word, has more than the following seven meanings:

- a. a hard, usually transparent, substance used, for example, for making windows and bottles
- b. a container made of glass, used for drinking out of
- c. the contents of a glass
- d. objects made of glass
- e. a protecting cover made of glass on a watch, picture or photograph frame, fire alarm, etc.
- f. two lenses in a frame that rests on the nose and ears. People wear glasses in order to be able to see better or to protect their eyes from bright light
- g. a mirror.

3.1.4. Homonymy

Homonymy is a term used to refer to the linguistic phenomenon that two or more words which have the same form, but differ in meaning. Concretely speaking, homonyms are words different in meaning, but either identical both in sound and spelling or identical only in spelling or sound. Homonymy refers to the linguistic phenomenon that two or more than two words are the same in spelling or sound but different in meaning. The pairs or groups of words which have the same sound or spelling, or both, though different in meaning are called homonyms. The way of the homonym formation is diverse. According to Lu Guoqiang (1999), homonymy can be produced by the following situations: split of polysemy, converging sound development, and shortening

of words. English homonyms can be classified into three different types (Zhang, 2004): complete homonyms are the words which have same spelling and sound and different meanings, such as *bear* (noun) and *bear* (verb); homophones refer to the homonyms which are the same in sound but different in spelling and meaning, such as *meet* and *meat*; homographs or heteronyms are the words which consists of same spelling but different sound and meaning, such as *lead* /li: d/ (verb) and *lead* /led/ (noun).

3.1.5. Hyponymy

In natural language, hyponymy is loosely defined as a kind of relation: it deals with the relation of semantic inclusion. In other words, the meaning of a more specific word is contained in the meaning of a more general word (Lyons 1977, Jackson 1988). These specific words are called hyponyms. For example, *apple* and *lemon* are hyponyms of *fruit*, and *pen* and *eraser* are hyponyms of *stationery*. The general words *fruit* and *stationery* are the superordinate terms and the more specific ones *apple*, *lemon*, *pen*, *eraser* are the subordinate terms.

A hyponym may have its own hyponyms. For example, *pen* is the hyponym of the word *stationery*, which is also the superordinate of the words *ball pen* and *marker pen*. There is an interesting phenomenon in English, that is, a word may be both its own superordinate and hyponym.

3.2. Semantic Field Theory

3.2.1. Definition of Semantic Field Theory

The German scholar Ipsen first used the concept and term of semantic field in his book *Ancient Oriental and Indian Germanic*. However, it was not until the 1930s that Trier, another German scholar, put forward the theory of semantic field. Therefore, Trier is regarded as the founder of semantic field theory.

Semantic field theory is one of the most important theories in modern semantics. This means that words are not isolated from each other, that is to say, they are interrelated with each other, and they can form different semantic fields. Through the construction of semantic field, we can clearly see the semantic relationships of words in the same semantic field. "Words cannot be defined independently of other words that are (semantically) related to them and delimit their sense. Seen from a semantic point of view, the lexical structure of a language — the structure of its vocabulary — can be regarded as a network of sense-relations: it is like a web in which each strand is one such relation and each knot in the web is a different lexeme" (Lyons, 1995:102).

The theory of semantic field was first put forward by the German scholar Trier in 1930s. He created a new field of modern semantics, which is regarded as the paradigmatic study. In his paradigm research, he mainly focuses on the paradigmatic relationships between words. For example: synonyms, hyponyms, antonyms, etc.

Wu Qiangang (1988: 94-95) summarizes Trier's semantic field theory as follows: a. The vocabulary in a language system is semantically related, which builds up a complete lexical system. This system is unsteady, changing constantly. b. Since the vocabulary in a language system is semantically related, we are not supposed to study the semantic change of individual words in isolation, but to study vocabulary as an integrated system. c. Since lexemes are interrelated in sense, we can only determine the connotation of a word by analyzing and comparing its semantic relationship with other words. A word is meaningful only in its own semantic field.

Compared with Trier, there is also a German semantics scholar Porzig, who has made great contributions to the theory of semantic field. Porzig's theory focuses on the syntagmatic relations between words. He also claims that words are closely related not only in grammar but also in meaning. (Zhang, 2002). In the semantic field of Porzig, it can be either an adjective with

a norm or a verb with a noun. It mainly analyzes the internal relationship of co-occurrence between words and the probability of co-occurrence between a word and other words in the same context, such as bite and tooth, bark and dog, blonde and hair, etc. (Lei, 2012). They are syntagmatically related, because when we define the verb “bark”, we need to use the norm “dog” to express what it is that barks. As another example, when we want to explain the meaning of the adjective “blonde”, we’d better use the norm “hair” to explain that it is human hair which is blonde. (Lyons, 1977). From these examples, we can see that words in the same semantic field are not only grammatically related, but also semantically related.

Although there are two different versions of semantic field theory, they have one thing in common: in some certain field, lexical items are interrelated in different situations. In the objective world, things are disordered. In order to master them better, students need to memorize them by processing, analyzing and classifying.

In this paper, the author combines Trier’s theory of paradigmatic semantic field with Pozig’s syntagmatic semantic field theory, trying to construct different semantic relations. These two versions of semantic field theory have their own advantages. Syntagmatic relation specifies file structure of a language, but the paradigmatic relation pays more attention on file lexis of a language. Both the paradigmatic relationship and syntagmatic relationship are very important for vocabulary learning.

3.2.2. Sense Relations in Semantic Field Theory

As we can see, there are many different types of sense relations. A specific word can be related to other words through many such semantic relations simultaneously. Therefore, we should regard vocabulary as a network rather than list some words in isolation (Saeed, 2000). Hu (2012) also notes words are in different sense relations. Some words have more similar relations compared with other words. For example, word *desk*. A *desk* is more like a *table* than a *chair*. However, they all belong to the same semantic field. *Table* and *desk* have the same meaning, while *table*, *desk* and *chair* all belong to the semantic category of *furniture*. According to the theory of semantic field, words are not isolated, but interrelated. Therefore, words can form different semantic fields according to different semantic relations. The semantic relations in semantic field theory include synonymy, antonym, hyponymy, polysemy and collocation. The first four relations, belonging to the paradigmatic semantic field, are specifically explored at the last part 3.1, and then, this paper would discuss collocation relation of the syntagmatic semantic field.

Collocation is an indispensable part of semantic field theory. It means that when a word is used, other words will follow it regularly. We can also say that collocation is the regulation of how words can be used together. (Richard & Jack, 2001). Collocation can be divided into two types, grammar collocation and lexical collocation. Grammar collocations usually begin with nouns, adjectives or verbs, followed by prepositions, infinitives or clauses. While, lexical collocation can be composed of all kinds of vocabulary, such as nouns, verbs, adjectives, adverbs and other words. For example, *remind of*, *well-educated*, etc.

There is no doubt that collocation is indispensable in vocabulary acquisition and teaching. Students must know that it is easy for them to understand a large number of combinations, but they also make mistakes when using them, because some elements cannot be freely combined. In order to make as few mistakes as possible, students need to develop collocation knowledge by doing corresponding exercises. Mechanical memory collocation is a common means of traditional learning methods, which is inefficient and time-consuming.

This part first clarifies the related concepts of sense relations, which is conducive to the in-depth understanding of semantic field theory. And understanding different types of semantic fields can better apply the semantic field theory to English vocabulary learning. Through the summary of previous studies, we know that the application of semantic field theory in English

vocabulary teaching is helpful for students' English vocabulary learning. However, the application of semantic field theory in English vocabulary teaching and learning has not formed a complete model in China. Therefore, based on the previous studies, this study will draw on the advantages and avoid the disadvantages of previous studies to explore the application of semantic field theory in vocabulary learning, and try to explore a vocabulary learning method based on semantic field theory.

4. Application of Semantic Field Theory in Vocabulary Learning

According to the theory of semantic field, the lexical system of any language is not isolated in meaning. In daily vocabulary learning, we can make full use of various connections between words to construct different semantic fields, promoting the understanding, storage and extraction of words.

4.1. English Derivatives Learning Based on Semantic Field

English Derivatives refer to new words formed by adding prefixes or suffixes to the roots of words. Prefixes change the meaning of words, and suffixes affect the part of speech of words. The derivation formed by the same root and different affixes forms the same root semantic field. For example, *changeable*, *available* and *comfortable* form a semantic field with same root of *-able*. On one hand, students can easily deduce that the root word, *-able*, means "that can or must be, or having the quality of", which is not only the common morphological part of these three words with the same root, but also determines their basic meaning. On the other hand, when the origin words, *change*, *avail* and *comfort* respectively add a suffix, *-able*, their part of speech has been changed. When students know the word *change* adds a suffix, *-able*, the part of speech of the origin word has been changed. And then, even though students have never been taught the other words, they would guess the part of speech of other words has been changed after adding suffixes.

Therefore, in the process of learning, students should pay attention to summarizing the meaning of roots, and should continuously accumulate affixation. This is not only helpful to improve the efficiency of students' vocabulary learning, but also helps to cultivate students' thinking ability of reasoning and association, so that students can learn vocabulary more actively.

4.2. Lexical Association Based on Semantic Field

English, as a hypotactic language, students should be good at grasping the various connections between words, making reasonable association and scientific memory. For example, when *right* is used as an adjective, it means "the right side, correct and appropriate". Its synonyms are *correct*, *exact*, *true*, *proper*, *fitting*, *just*, etc., its antonyms are *left*, *wrong*, etc., and its superordinate is *locality*, and its co-hyponyms include *left*, *front*, *under*, *back*, *behind*, etc. Through the establishment of synonym field, antonym field, hyponym field and semantic field of word combination, students can think more extensively to gradually form a complete semantic network from point to surface, making the new and old vocabulary system more orderly, and improving the efficiency of students' vocabulary learning and the effect of vocabulary memory.

4.3. Discrimination and Analysis of Word Meaning Based on Semantic Field

There are differences between any language system. A word in one language may not be able to find its equivalent in another language. In other words, in the process of English vocabulary learning, it is inevitable to encounter some words, which have the same Chinese interpretation, but have differences in syntax and semantics. It is difficult to make clear the differences only

with the help of dictionaries, but if they are put in the corresponding semantic field, the differences will be obvious.

For example, *happen* and *occur* both mean “to take place”. Usually, we consider them as absolute synonyms, which can be replaced by each other. However, if we search it in the corpus, we will find that the subjects collocated with *happen* are mostly *accident, disaster, failure, misfortune, problem, suicide*, etc., with the negative semantic prosody accounted for 68.31%, and the neutral semantic prosody accounted for 30.69%. However, *occur* has no obvious tendency of negative semantic prosody. It is mixed by both negative semantic prosody and neutral semantic prosody. The proportion of the two cases is equal. The subjects of collocation are mostly neutral semantic nouns, such as *developmental changes, the biological spring, spotted pattern* and so on. (Zhang & Liu, 2006) Through the semantic field of their semantic combination, we can understand the differences between synonyms in detail and accurately, so as to choose the most appropriate words according to different situations. Therefore, students need to learn this in order that they could use the appropriate word to express more native in written or spoken pattern.

4.4. Semantic Graph Constructing based on Polysemy

Polysemy is an inherent feature of many languages, including English. In English vocabulary, there are very few single-sense words and polysemy is very common. Moreover, in content words, the more frequent words are used, the more meaning they have, so their vitality is more vigorous. According to the *Oxford English Dictionary*, a simple *get* has more than 150 senses. Although a word can have many meanings, as a polysemous word, there are always some ways of connection between its various senses. When it comes to polysemous words in English, there are mainly two ways of meaning connection: meaning radiation and meaning connection. As for the way of semantic radiation, we should first determine the central meaning of the word, and then take this meaning as the center to establish the connection between its other senses and the central meaning in all directions. In this way, all the meanings of the word become an organic whole.

Taking the word *power* as an example, it has a central meaning: ability to do or act; special factor of body or mind. Taking this as the center, it can radiate many senses, such as vigor, energy; active property; government, influence, authority; influential person, body or thing, etc. They are no longer isolated, but become an organic whole, which is not only conducive to understanding, but also improves the efficiency of memory. For some polysemous words, their meanings are not the relationship between central meaning and extended meaning, but a chain relationship. For example, the original meaning of *candidate* is “a person dressed in white”. On this basis, it is further derived in the meaning: a white-robed applicant for office, because the Romans wore white robes when standing for office. On this basis, it is further derived in the meaning of an applicant for office; or a person taking an examination. The relationship between these meanings is a kind of connection, rather than a radiation centered on a certain one. Through the above two methods, a vivid and connected semantic graph is constructed between multiple meanings of a polysemous word, which is very effective for accurately grasping its various meanings and improving memory efficiency.

5. Conclusion

Sense relations, also called lexical relations, refer to the meaning relations that hold within the vocabulary of a language between words themselves. Semantic relations have an important influence on the meaning of a lexeme. In vocabulary learning, the sense relations of a new word can be explained accurately. “The sense of an expression may be defined as the set, or network, of sense-relations that hold between it and other expressions of the same language” (Lyons, 1995). It is an effective vocabulary learning method to present new English words by providing its sense relations. It will provide accurate elaboration in vocabulary learning, and has a high

degree of practicality. It can effectively deepen the understanding of new projects and promote the long-term retention of words. Assuming that a vocabulary learning method considers the psychological process behind semantic relations, then this method is certainly more effective than the method without considering semantic relations. Therefore, it is logical to learn some foreign words explicitly in the sense relations.

In a word, according to the theory of semantic field, words in a language are composed of different lexical fields, and words belonging to the same field are closely related (either because of similarity or difference) in meaning. A given word would have meaning according to the whole semantic scope of its field and how its function is shared with all other words in the same field. According to the theory of semantic field, it is better not to regard the lexical content of a language as a set of independent words or a list of unstructured words, but as a collection of interrelating networks between words. There seems to be a clear case for presenting words to students in a systematized manner which will both illustrate the organized nature of vocabulary and at the same time enable them to internalize the items in a coherent way. Vocabulary learning should make overt associations between semantically related words.

References

- [1] Baugh, A.C. & T. Cable. *A History of the English Language* (Fifth Edition) [M]. London: Routledge, 2002.
- [2] Deese, J. *The Structure of Associations in Language and Thought*. Baltimore: John Hopkins Press. 1965.
- [3] Fellbamn C. editor. *WordNet: An Electronic Lexical Database*. MIT Press. 1998.
- [4] Gairns, R. & S. Redman. *Working With Words: A Guide to Teaching and Learning Vocabulary*. Cambridge: Cambridge University Press. 1986.
- [5] Hayakawa, S. I., et al. *Use the Right Word* (Modern Guide to Synonyms and Related Words) [M], Hong Kong: Reader's Digest Asia Ltd, 1971.
- [6] Hurford, J. R. & B. Heasley. *Semantics: A Coursebook* [M]. New York: Cambridge University Press, 2007.
- [7] Jackson, H. *Words and Their Meaning*. London: Longman. 1984.
- [8] Lehrer, K. *Knowledge*. New York: Oxford University Press. 1974.
- [9] Lyons, John. *An Introduction to Semantics*. Cambridge: Cambridge University Press. 1995.
- [10] Palmer, F.R. *Semantics* [M]. Cambridge: Cambridge University Press, 1976.
- [11] Seal, Bernard. *Vocabulary learning and teaching*. MA: Newbury House. 1991.
- [12] Trier, Jost. *Theory of Semantic Fields*. Oxford: Clarendon Press. 1931.
- [13] Webster's New Dictionary of Synonyms [Z], G&C Merriam Company Publishers, 1978.
- [14] Wilkins, D.A. *Linguistics in Language Teaching* [M] Cambridge, MA: MIT Press. 1972.
- [15] Hu Zhuanglin. *Course of Linguistics* (Third Edition)[M]. Beijing: Peking University Press, 2006.
- [16] Lu Guoqiang. *Modern English Lexicology* [M]. Shanghai: Shanghai Foreign Language Education Press, 1999.