Effect of Schema-Based Instructions on Senior High School Students' Vocabulary Learning Strategies

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Abstract

Vocabulary is the basic element in language and the containment of form, semantic and phonetic. However, most teachers and students neglect the importance of vocabulary learning. Many students only acquire a small amount of vocabulary and can not apply those words flexibly in writing or speaking. In view of this, teachers should help students to have a good command of vocabulary learning strategies. Schema theory originated from Kant's observation. Based on psychological model of a learner's background knowledge, schema theory is used by the psychologists to explain the understanding process. It guides the students to motivate their background knowledge in the mind and ultimately to understand the current knowledge, constructed in the vocabulary teaching. Schema theory-based instructions have positive influence on students' vocabulary learning strategies.

Keywords: Schemata; Schema theory; Vocabulary learning strategy

1. Introduction

Vocabulary is regarded as a crucial element for a language and it plays a significant role in language communication. It is held that vocabulary is an indispensible element in language learning, including reading, listening, and grammar and so on so forth. Schemata refer to concepts of a person about the world, which is based upon previously acquired knowledge, such as cultural knowledge and linguistic knowledge. At present, teachers spend too much time on the reading comprehension. The present paper attempts to provide some suggestions for senior high school students in vocabulary learning.

2. The importance of vocabulary teaching

McMarthy (1990) points out that no matter how well the student learns grammar, no matter how successfully he masters the sounds of a second language, without words to express a wide range of meanings, communication in that language cannot happen in any meaningful way. Vocabulary is the eternal theme of language (Ma,2007). Therefore, vocabulary learning should be attached great importance to in the course of language learning. We can get ahead in language acquisition in this teaching way, especially at the main stage of language learning.

Vocabulary is the basic element in language and the containment of form, semantic and phonetic. It is the

principle carrier of the information. Vocabulary is very important in English learning and plays a vital role in communication. (Chen & Zhang, 2001).

Students should learn vocabulary in the process of English learning. According to British linguist Wilkins （1972）, without grammar, very little can be conveyed; without vocabulary nothing can be conveyed. Another British linguist H. Winddowson(1983) said, "In the abundant language environment, compared with the communicative functions of grammar, vocabulary is major, but the grammar is the subordinate." Vocabulary teaching can be put forward by some pedagogical implications. To start with, the vocabulary should be taught with students centered. Secondly, the new words should be taught by evoking students' background knowledge. Thirdly, a proper teaching plan should be well-designed in vocabulary teaching.

However, most teachers and students neglect the importance of vocabulary learning, they hold that vocabulary should be taught in an easier way. Teachers have too much work to do on how to improve students' vocabulary competence, but they are still teaching vocabulary in the traditional way. Moreover, it is hard for students to master a certain amount of vocabulary when the teacher undertakes to teach them every word because there is no enough teaching time to teach students each word. The students need to further learning their vocabulary after class, otherwise they can't enhance their English competence in their lifetime learning. Nevertheless, the result of learning vocabulary is not optimistic. Many students only acquire a small amount of vocabulary and can not apply those words flexibly in writing or speaking even after several years' English learning. In view of this, to help students to have a good command of vocabulary learning strategies can be regarded as an essential part of English teaching.

If language structure makes up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh. An ability to manipulate grammatical structure does not have any potential for expressing meaning unless words are used (Harmer, 2002: 153). The study of vocabulary learning strategies, as a subclass of language learning strategies, focuses on how vocabulary is acquired. It is urgent to find out the effective way of vocabulary teaching in the high school in order to help the students enhance their vocabulary level. Teachers have the responsibility to motivate students to master a few vocabulary learning strategies so that they can effectively acquire more vocabulary on their own, especially outside the class.

3. The schema theory in vocabulary teaching

The schema which promotes to learn the new knowledge can activate the original knowledge system and make a connection between the old and new knowledge. When they try to learn new things, people need to connect new things with acquired cultural knowledge and linguistic knowledge. The acquisition of new things depends on the previously existing schemata, and the language inputs should be acquired in accordance with them.

Schema theory originated from Kant's observation. The term "schema" was first put forward by the German psychologist I. Kant in 1781. He said that schema was made up of people's previous knowledge and he explained it as an "active developing pattern" where continuous developing and concept construction were implied. He thought that schema could help the reader to fill the detailed gap in the text by activating his previous knowledge. According to Anderson and Pearson (1984), schema is active, self-activating and self-revising. These characteristics imply that schema has a great influence on cognitive learning processing. Schema conduce us to focus, to understand, to interpret, to memory, to ratiocinate and to handle problems. Schema is an abstract set of experiences. One of the most important characters is that it becomes more substantial continuously with perceptual experience, and it is an organ in a state of living development.

4. Taxonomy of Vocabulary Learning Strategies

Based on psychological model of a learner's background knowledge, schema theory is used by the psychologists to explain the understanding process. It guides the students to motivate their background knowledge in the mind and ultimately to understand the current knowledge, constructed in the vocabulary teaching.

Gu and Johnson's (1996) classifications of vocabulary learning strategies include the following categories: meta-cognitive regulation, guessing strategies, dictionary strategies, note-taking strategies, rehearsal (memory strategies), encoding (memory strategies) and activation. It is common to see that meta-cognitive strategies, social strategies and cognitive strategies are frequently recommended by many scholars.

In the following classes, new words are presented and taught in the schema-based methods as follows:

4.1 Using relative pictures.

New words can be mastered when they are accompanied by pictures which indicate their meanings more than definitions. For example, when the teacher teaches the word "altitude" in unit 3, she gave the students a picture of a high mountain. So when they wanted to describe the height of the mountain, they can associate the word "altitude" with it.

4.2 Using imagery.

Imagery has proved to be more effective than mere repetition of reading passages (Steingart & Glock, 1979). When the teachers teach the new words, they can use the imagery of the words, because students can create their mental images of the meanings of words more successfully. For example, a student can mentally connect the word "winner" with his memory of winning the first prize in a race.

4.3 Using the relativity.

The memorization of new words is closely related to one's previous knowledge. It is not just a single way flow of information into the brain after what is heard or seen, but an interactive process of dual-way communication in which the schematic knowledge of the learner affects the heard or seen content interactively. New words can be connected to previous words that the learners have learned. That is to say, when a learner hears or sees a new word, the memory of his brain will immediately search the related information, which involves some types of sense relationship, such as coordination (run other kinds of sports like joy, play soccer, swim, skate), synonymy (happy–glad), or antonym (close–open).

4.4 Making classification.

Classification is an effective way to facilitate recall. People according to the recall, organize words into classification naturally. In free-recall studies, subjects are given lists of words to learn and recall in any order. It is typical that words belong to each meaning category and need to recall together. For example, all animals before moving on are another category like names (Bousfield, 1953). In this way, words can be classified together in a story. The narrative chain method is a highly effective way to learn new wards.

In Unit four of Book two, there is a new word, namely "garbage". When the class came to this word, the teacher could offer the word "waste" and "rubbish" which had been learnt in junior school. Garbage is a waste material, especially referring to waste from kitchen. Rubbish consists of unwanted things or waste material such as used paper, empty cans and bottles and waste food. Waste is a material that has been used and is no longer wanted. Therefore, these three words could form a "waste group". In this group, when one word appears, the other two could be easily recalled.

4.5 Presenting through language description.
People always follow the concrete-to-abstract cognitive process. When teaching some abstract words, teachers use the words which their students have already known to make a description of them. In unit three, while teaching the phrase "make fun of …", teachers could analyze the meaning of the phrases by citing an example that the students who play a joke on their fellow classmates.

4.6 Using contextual knowledge.
Students may increase their vocabulary through extensive reading. When reading, they can guess the meanings of some new words by making use of contextual clues which are kept as schemata in their mind. It would be thus easier to acquire the new words than before. For example, James always falls behind others. If he had made utmost effort to study, he would have caught up with others. According to the subjunctive mood used in this sentence, we may infer that the expression "fall behind" has an opposite meaning to the phrase "catch up with".

4.7 Drawing semantic map
Drawing a semantic map is the best way to present a kind of schema, in which some necessary information is generally accepted by the relation between the new and old information in background knowledge. When drawing a semantic map for students, teacher can explain the semantic map by retrieving their existing knowledge. A semantic map is like a geographical map introduced into the class. This semantic map is also like a city map in which every key word appears in its position and you can find out and understand it by referring to this map.
Some words are grouped according to content schema, formal schema and the cultural background. This requires teachers to make an explanation and plan detailed procedures in the teaching process. Therefore, well planned teaching design is needed to sort out the explanation in proper procedures. Teachers need to design the plan according to the students' requirement so that the students can understand the new words by connecting their background knowledge and can learn the application of these new words effectively at the same time.

4.8 Applying interactive teaching methods
Carrell (Carrell, 1983) suggested that teacher should apply interactive teaching methods with all kinds of activities in the classroom. It can list the words which are related with a new word in the way of brainstorming and then summarize the result. It is a vivid, direct and visual method to help the students acquire knowledge effectively. New knowledge can be understood by comparing with a framework of previous existing experience which is stored in memory. According to Bartlett (Bartlett, 1932), the memory is organized in the form of schema which constructs a mental framework for storing and retrieving information.

5. Conclusion
Schema theory-based instructions have positive influence on students' vocabulary learning strategies. A word is a joint of the word network in brain. One word of one joint is linked to another word of another joint through meaning, form and sound, composing an integrated system of word network. The motivation of one joint may motivate its neighboring joint via automatic spreading. Therefore, vocabulary learning is a cognitive process, such as input, comprehension, reconstruction with previous knowledge, reinforcement and memorization. They could promote students to learn vocabulary and explore effectively cognitive strategies. The effective strategies include relating the picture, using the

imagery, using the relativity grouping, making the classification, presenting through language description, using contextual knowledge, drawing semantic map and applying interactive teaching methods to promote vocabulary acquisition.

Vocabulary strategy instruction is creative. Students can optimize their learning strategies in the multi-level teaching method. The teacher should help students to set up their background knowledge and enhance students' competence of supposition to motivate the schema which previously existed in students' mind. Students should be cultivated to learn vocabulary in context and find out the most suitable learning method to them.

The schema-based instruction proves to be very useful for students to distinguish some vocabulary with similar meanings. They help the students consolidate old words, increase new words and enhance expression skills. They can memorize new vocabulary in an atmosphere of relaxed by connecting new vocabulary with their previous knowledge. Learning new vocabulary based on schema theory might help them to develop positive attitude towards and arouse their interest in learning new vocabulary and then gradually form keen interest in English learning. So vocabulary teaching is not only the key to enhance the student's English vocabulary, but also a vital way to improve their English proficiency as a whole.

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