

The Application of Mind Mapping to English Vocabulary Teaching in Senior High School

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Abstract

Mind mapping is a tool for radioactive thinking using images and associations. It has the characteristics of visibility, divergence, radioactivity and multi-dimension. It is a popular revolutionary thinking tool in the 21st century. It was developed in the 1970s by Tony Buzan. This method is famous for inducing the development of left and right brain functions, and making it concrete by assisting memory with shapes, colors and symbols. It has far-reaching influence in many fields. At present, there are still some problems in English vocabulary teaching in China. What's more, mind mapping is rarely widely used in vocabulary teaching. Therefore, this paper aims to explain how to use mind mapping to help solve the current problems of students' vocabulary.

Keywords

Mind Mapping; Vocabulary Teaching; Senior High School.

1. Introduction

Mind mapping is a tool for radioactive thinking using images and associations. It has the characteristics of visibility, divergence, radioactivity and multi-dimension. It is a popular revolutionary thinking tool in the 21st century. In English teaching, teachers can break through the traditional English vocabulary teaching form combine mind mapping with vocabulary teaching, as well as guide students to pay attention to the characteristics of vocabulary and its internal relations, help students build vocabulary network to improve their learning efficiency and language use ability.

D. A Wilkins (1972) once described the important role of vocabulary as follows: "Without grammar very little can be conveyed; Without words nothing can be conveyed." Mind mapping was created in the early 1960s by Tony Buzan-- famous "Mr. World Brain", which was also known as brain mapping. Mind mapping divides the frame system of knowledge in an orderly way, and it also reflects the radioactive thinking mode of the brain. In the case of specific thinking, we can understand information more clearly and remember it better. Mind mapping uses lines, symbols, colors, images and other methods which can be easily accepted and recognized by the brain to draw seemingly boring information into colorful, easy images that can be remembered. The combination of pictures and texts can not only enhance memory, but also improve work and learning efficiency (Wen Ting, 2014). Vocabulary is one of the three basic units of language and the basic part of language learning. The scope of vocabulary affects the development of listening, speaking, reading and writing directly.

About significance of the research, the thesis will analyze it from two aspects: the practical significance and the theoretical significance. Firstly, teachers teach students vocabulary without context. The traditional English teaching method is to write the new words on the blackboard, or open the new words list in the textbook, and then teachers concentrate on teaching the new words. This process is about reading- explaining-remembering-dictation. Meanwhile, teachers explain the meaning of words in isolation. It not only makes students feel

boring, but also make students don't understand the true meaning and usage of the words (Shi Chunyan,2014).

Secondly, teachers weaken the output of the words. In many schools, teachers often let students to recite the words, but students don't have opportunities to use words. It will lead the students to forget the words easily and quickly, and it can also cause students couldn't use words correctly in different contexts.

Thirdly, teachers weaken the relationship between words. Some teachers teach derivatives of the same word separately. Therefore, the pressure of reciting words will be improved.

Furthermore, according to the Syllabus of senior English for China students, English teaching in senior school aims at developing the students 'integrating skills in using language. It emphasizes the comprehensive cultivation of students' language ability, cultural consciousness, thinking quality and learning ability, which is characterized by the integration of instrumentality and humanism. Therefore, to solve these problems is extremely necessary.

Mind mapping can not only let people know quickly notice the emphasis point, but also can help us to think by imagination. It uses lines, colors, arrows, branches and other methods to better map our brains. It can also help us organize complex ideas and processes to improve our understanding.

2. Literature Review

2.1. Introduction to Mind Mapping

Tony Buzan, Famous psychologists and education historian, who founded the mind mapping in the 1960s. He pointed out that each kind of information into the brain will become a thinking center, and then radiate outward several some joint points. These joint points will become new central themes to spread out many key points again, presenting a radial three-dimensional structure. It shows that "Mind mapping is an interactive mode of learning derived from brain neurophysiology, and it is characterized by radiative thinking and multi-sensory learning." (Tony Buzan,2000: 26-30.)Mind mapping is an effective tool for activating the skills of the left and right brain. While we use mind mapping as a way of thinking, we should also use it as an idea in our work and study. In the drawing process, mind mapping can stimulate the imagination and creativity of the brain by using color lines and so on. Sometimes just a mind mapping can clarify the context of a book and help us to grasp the main content and writing ideas of the book. As a whole, mind mappings are often presented in a tree structure. Mind mappings help us organize our thoughts and clarify the relationship between priorities.

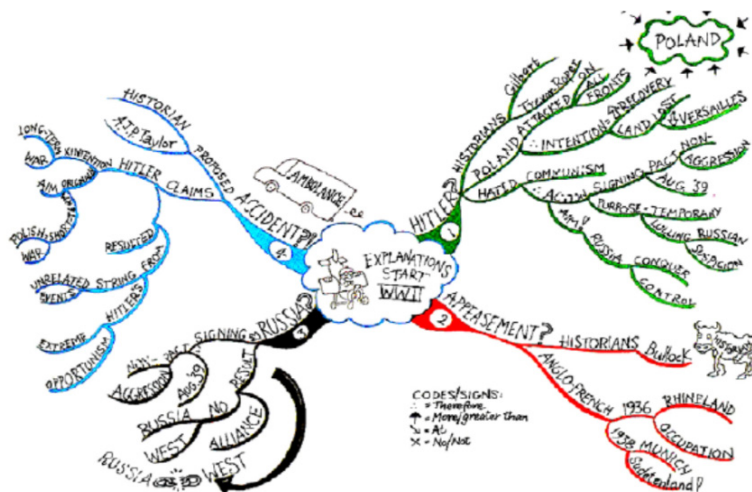


Figure 1. Sample of a mind mapping (Buzan, 1993:215)

Mind Mapping is “an expression of Radiant Thinking (Radiant thinking will be explained later) and is therefore a natural function of the human mind. Mind Mapping is a powerful graphic technique which provides a universal key to unlocking the potential of the brain. The Mind Mapping can be applied to every aspect of life where improved learning and clearer thinking will enhance human performance.” This definition cannot do without the four essential characteristics of Mind Mapping: “The subject of attention is crystallized in a central image; The main themes of the subject radiate from the central image as branches; Branches comprise a key image or key word printed on an associated line, topics of lesser importance are also represented as branches attached to higher level branches; The branches form a connected nodal structure.”(Buzan,1993:59-60) Figure 1 is an example to show what a mind map is.

2.2. Previous Researches of Mind Mapping Both at Aboard and Home

Mind Mapping has been widely used by many researchers in many fields, but when it comes to the researches of Mind Mapping on language learning, a Japanese scholar has got the Conclusion that “this mind mapping based teaching might be put into practice, but it has been rarely reported.” (Shiina et al, 2008:158). Wen Qiufang (1993) showed that vocabulary learning can promote the improvement of English level. Only when students have a sufficient vocabulary can they read and understand, and thus they may provide "comprehensible input" for writing. The larger the student's vocabulary, the higher the level of reading and listening skills will be.

Mento et al. (1999:1-25) combined mind mapping and story-boarding into the teaching of EMBA program, and concluded that it significantly enhanced learning, memory, and creativity. Yan & Wang (2007:277-279) stated the theoretical foundation and advantages of Mind Mapping in teaching application, believed that Mind Mapping fitted for the nature of cognitive theory of memory, structural knowledge, Gestalt, meaningful learning, the nature of knowledge, and the theory of visual symbols and non-verbal communication in dissemination theory, and take word root as an example introduced Mind manager software in vocabulary teaching. Mao & Shan (2008:59-60) proved Mind Mapping's significant effects in part of speech, roots/affixes, semantic field and synonyms/antonyms, and pointed out some problems which should be paid attention in the operation. Liu & Tan (2009: 90-93), from the perspective of empirical research, through English word memory test, prove that Mind Mapping was effective in promoting short-term memory and long-term memory.

Chen Min (2005:36-41) mentioned the significance of scaffolding teaching strategies and the epistemological basis of Mind Mapping teaching strategies from three aspects: encouraging cognitive schemata, promoting meaningful learning and being an effective mnemonic tool. Li Junhua (2007:46-50) applied Mind Mapping into three links of high school English teaching: lead -in, discussion and writing, and found out that Mind Mapping could stimulate interest and enhance learning outcomes. You (2007:149-150) introduced the usage of Mind Mapping in English “learning” and “teaching”: from the “learning” aspect, it could be used for note-taking, studying, group learning and English writing, etc.; from the “teaching” aspect, it could be used for lesson preparation, school plans, test and portfolio production. Bai (2008:70-72) pointed out that Mind Mapping in English classroom teaching had multiple functions, such as it could check whether students prepared lessons before class or not and help to find out blind spots in language knowledge.

In addition to the aspects mentioned above, there was a study examined Mind Mapping's effect on meta-cognitive ability and learning strategy. Wei & Guo (2007:80-82) took the language learning process as an example pointed out that Mind Mapping might not only help English learners develop meta-cognitive ability, speed up internalization, and might also reduce anxiety, access to enjoyable experience. Huang&Hu (2009:38-42) explored the meaning of Mind Mapping culture learning strategies. High school students were tested in experiment, results showed that Mind Mapping could improve memory, form effective learning strategies, and

develop self-learning ability. This paper was innovative and had informative discussion. Howitt (2009:42-46) explained Mind Mapping in children's education that it was better to use real objects to make three-dimensional mind mappings to promote children's sharing of knowledge and the creation of connections.

In senior high school English teaching, vocabulary teaching is the basic link of English teaching. The new curriculum standards and the examination syllabus of the past years also require clearly that senior high school students should master the vocabulary, customary phrases and fixed collocations, which shows firmly that the basic status of vocabulary teaching cannot be shaken. In addition, from the analysis of the English college entrance examination in recent years, it is not difficult to find that increasing the vocabulary of the examination is the inevitable trend of the development of the college entrance examination. Furthermore, there are few researches and papers about mind mapping of vocabulary teaching. Therefore, this paper will talk about how to use mind mapping in vocabulary teaching. Farrand et al (2002:426-431) through an experiment examined the effectiveness of using Mind Mapping to improve factual recall from written information.

3. Theoretical Foundation

3.1. Radiant Thinking

Buzan (1993:57) defined radiant thinking (the word 'radiant' is from 'to radiate', meaning to spread or move in directions from a given center.) as the associative thought process that is from or connects to a central point. The other meanings of 'radiant' are also similar to the "burst of thought": "shining brightly, the look of bright eyes beaming with joy and hope" and "the focal point of a meteoric shower". Radiant thinking is the natural way of human brain's thinking. Each of the data entering the brain will become a thinking center which can send out thousands of hooks. The data are various such as feeling, memory, ideas, language, numbers, symbols, food, fragrance, line, color, imagery and rhythm. Each hook is an association from the central theme, and each association can also become another central point and produce other thousands of hooks. These links can be regarded as our memory, our personal database or our own library.

3.2. Left/Right-Brain Thinking

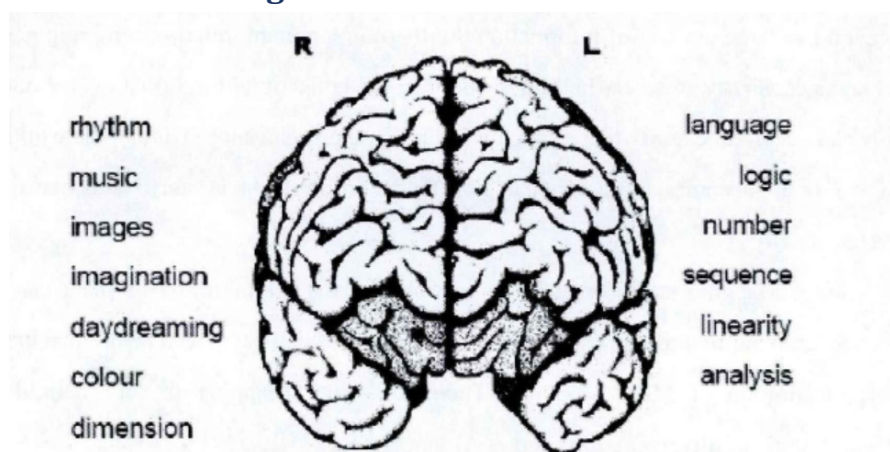


Figure 2. Front view of the two sides of the brain and their functions (Buzan, 1974)

Many researches and clinical experiments show that human brain has left and right hemispheres. The left side charges language, calculation, logic and reasoning, which has the features of continuity, order, and analysis; the right-side charges imagine, creation, and magical thinking, which has the characteristics of uncontinuity, diffusibility, and globality. Therefore,

the left brain is called thinking brain and the right brain is also called creative brain. Dr Sperry and Dr Ornesein in 1960s found out that the two halves of the upper cortex of the brain are responsible for different functions. The left brain is responsible for words, logic, numbers, sequence, linearity, analysis, lists, etc., while the right brain is responsible for rhythm, spatial awareness, gestalt (whole picture), imagination, daydreaming, color, dimension, creativity, etc...

4. How to Use Mind Mapping in Vocabulary Teaching

4.1. Use Mind Mapping to Learn the New Word

English vocabulary has a large number of polysemous words and homonyms. In this case, although students could remember one meaning of the words, the same word in different context has different meaning. In the process of learning polysemous words, we can teach students to draw a relatively clear brain map conveniently with the help of mind mapping. For example, the word "hunt" can be used as a noun, transitive and intransitive verb. And as a different part of speech, it has different meanings and collocations.

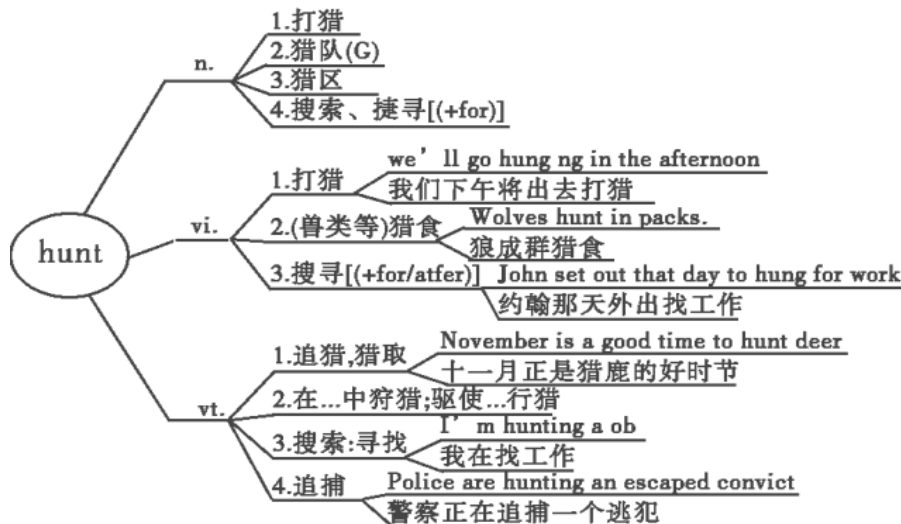


Figure 3. A mind mapping of word “hunt” (Ma and Chen, 2008)

4.2. Use Mind Mappings and Semantic Fields to Learn Words

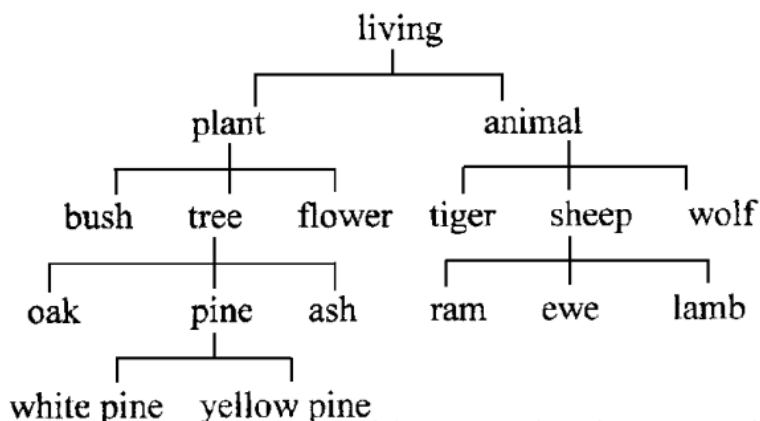


Figure 4. A mind mapping of word “living” (Ma and Chen, 2008)

In the 1930s, linguists discovered that people could use the semantic field features of the English language to learn words. Linguists have found that the words of English language are not a series of independent individuals, but have their own domains or scopes, and they are formed into a semantic field because they share some common features. For example, we can divide the relationship between words into antonyms, synonyms, and synonyms according to

the relation between semantics, such as contrast, similarity and inclusion. These relationships can be mentally drawn so that learners can grasp them more clearly. The context relation of words refers to the relationship between general words and specific words, which usually exist in general words. General words are also called superordinate words, and specific words are also called hyponym words.

4.3. Use Mind Mappings to Identify Synonyms and Synonyms

The difficulty of learning vocabulary is that many of them are not only similar in shape, but also similar in usage, which can easily confuse learners. Using mind mapping to guide students to draw a brain map of these words cannot only improve students' memory ability, but also greatly help their organizational ability and creativity.

5. Conclusion

Wen Qiufang (1993) showed that vocabulary learning can promote directly the improvement of English level. She (2004) also pointed out vocabulary strategy training has a significant effect on learners' using of strategies, and it has a significant effect on the improvement of English scores. It is more helpful for low-level students than for high-level students. Only when students have a sufficient vocabulary can they read and understand and provide "comprehensible input" for writing (Krashen, 1984). It is an obvious fact in English teaching that the larger the students' vocabulary, the better their reading and listening skills will be. Interviews with some students revealed that the top writers had a large vocabulary of English and a history of memorizing vocabulary books (e.g., quick memorization of words, classification of words) or experience in systematically learning English affixes.

Mind mapping is a very popular thinking tool in the 21st century. It is also a visual knowledge representation tool. The application of this tool in high school English teaching can greatly improve students' enthusiasm in learning English and transfer English teaching from repetitive memory training to dynamic training system (Ding Jiqun, 2016). It can not only effectively help students improve their English vocabulary memory ability and reading comprehension ability, but also cultivate and develop their thinking quality, stimulate their independent thinking and creative thinking, and finally achieve the comprehensive improvement of students' English application ability.

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