

# The Application of Mind Mapping in Middle School English Vocabulary Teaching

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**Abstract:** Mind mapping, as a visual thinking tool, is an expression of radioactive thinking and a powerful graphical tool for expressing brain thinking. Applying mind maps to assist teaching activities in middle school English vocabulary teaching can help integrate new and old knowledge, cultivate students' divergent thinking ability, encourage students to participate in learning independently, promote personalized learning, strengthen cooperation and communication between students and teachers, and improve teaching efficiency.

**Keywords:** Mind mapping; Junior high school English vocabulary teaching

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## 1. Overview of mind mapping

### 1.1 The Meaning of Mind Mapping

Mind Map, also known as Mind Map or Mind Map, is a visual thinking tool aimed at expressing human divergent thinking. This definition first appeared in the early 1960s, proposed by Tony Buzan, Chairman of the British Brain Foundation. In his mind mapping series, he elaborates on the entire process of searching for effective learning methods by studying the working principles of the human brain. Tony Bozan believes that every human brain cell contributes to thinking, and the process of thinking diverging outward through the dendrites of cells is the process of thinking. He referred to the structure of brain cells and drew a pattern of branching outward from the center, which is called a mind map. As he said, "Your brain is like a sleeping giant, and mind maps are the tools to awaken this giant."<sup>[1]</sup>

### 1.2 The Structure and Drawing Method of Mind Map

As an effective and thought-provoking graphical tool, a complete mind map is composed of three parts: the central theme, main body, and branches. The central theme is the key point that the entire graphic aims to express, which is where the entire focus lies; The backbone is the most crucial core part that is close to the central theme, with a number generally ranging from 3 to 6; Branches are reasonable extensions based on the backbone. Tony Bozan also proposed five rules for drawing mind maps; Firstly, it is necessary to activate divergent thinking; Secondly, the lines need to be non-linear and naturally flowing, as they simulate the synapses of neurons; Thirdly, different colors should be used to describe different branches and stimulate the brain with different colors; Fourthly, it is necessary to use images to deepen memory; Fifth, a line can only connect one word.<sup>[2]</sup>

On the basis of the five principles of mind mapping, Tony Bozan pointed out that it is best to use hand drawn methods to draw mind maps, which can not only present the process of thinking on paper in a more intuitive way, but also develop the imagination and divergent thinking of the drafter. Hand drawn mind maps are generally drawn using the following specific steps.

### 1.3 The characteristics of mind mapping

As a concrete expression of divergent thinking, mind maps have the following advantages compared to textual expressions. Firstly, compared to textual information, visual information is more attractive and can express a larger amount of information. Compared to lengthy textual narratives, the information in the form of images is more concise, which helps to quickly understand the full picture of the information. Secondly, mind mapping can better meet the personalized needs of learning and has higher adaptability for individuals. The drawing of mind maps has a high degree of freedom, as individuals have different ways of thinking and have different angles of entry and divergent directions for the same problem. Therefore, even for the same theme, the mind maps presented

by each person are different and have a strong personal color. Thirdly, compared to textual information, mind maps have stronger logic and can directly indicate the primary and secondary structures of knowledge, with clear hierarchy.<sup>[3]</sup>

## **2. The Current Situation of Middle School English Vocabulary Teaching**

At present, junior high school English vocabulary teaching has the following characteristics; Firstly, teaching cannot be independent. English vocabulary is closely related to knowledge such as grammar, phonetics, and text, and cannot be independently studied without other knowledge. However, the current junior high school English vocabulary teaching cannot make use of this connection, and instead puts “memorizing words” in a passive and lonely situation. Secondly, the process is quite tedious. English vocabulary learning is often presented in written form, and in previous teaching methods such as mechanical memory, repeated training, and “penalty writing memory” were often used. The learning process is dull and uninteresting, making it difficult to arouse students’ interest in learning.

Thirdly, the teaching effectiveness is slow. In the process of learning English vocabulary, students often find it difficult to receive immediate positive feedback. In the vast majority of autonomous learning processes, no matter what methods students use for vocabulary learning, they cannot immediately discover results or receive signals that learning strategies should be adjusted. Therefore, it is easy to create a series of negative chain effects such as lack of learning motivation and low interest in learning.

## **3. The Application of Mind Mapping in Middle School English Vocabulary Teaching**

### **3.1 Utilizing mind maps to cultivate structured learning for students**

Simple textual information is not conducive to the learning and memory of the human brain. Only by constructing a relational schema based on the connections between knowledge can organized and systematic teaching be achieved. Mind mapping can help teachers and students build a framed knowledge system, integrate structured knowledge content, organize and encode vocabulary in a more logical way, and form a more convenient structured schema model for memory. There are several specific methods as follows.

Firstly, a mind map centered around the content theme. English textbooks in junior high school are often divided into units and modules based on different themes. Teachers can establish vocabulary maps related to the theme of each unit based on the specific content explained in each unit of the textbook. This vocabulary map not only enables students to quickly understand the specific content covered in this unit, but also accurately maps their thinking to the key content of each unit. Teachers can use such mind maps as an introduction part of the classroom to guide students quickly into the course content.

Secondly, a mind map based on word formation. Word formation refers to the rules and connections that exist between words, which are the rules that connect words to each other. Therefore, constructing a vocabulary map based on word formation can not only increase vocabulary but also enhance grammar learning. For example, when learning the word ‘dependent’, we can learn its noun form ‘dependence’ and adjective form ‘dependence’ by adding suffixes, and also learn related words such as ‘dependence’ and ‘independent’ by adding prefixes.

### **3.2 Make good use of mind maps and emphasize personalized learning**

The process of learning English vocabulary is often monotonous and dull, but the mode of mind mapping is not fixed, and there are various ways to construct mind maps. When learning English vocabulary, students can draw their own vocabulary mind maps in ways that interest them, including using their favorite colors, patterns, styles, etc. Moreover, due to the different ways in which each person thinks, even for the same theme, different people may think of different “branches”. Therefore, teachers can take advantage of this difference and encourage students to draw their own unique vocabulary mind maps, inspiring them to divergent their vocabulary from different perspectives. Not only can it deepen the memory of theme words, but it can also stimulate students’ personality development and arouse their interest in learning.

### **3.3 Applying mind maps for collaborative learning**

The middle school stage is a crucial stage that requires guidance. In the process of teaching English vocabulary in middle school, it is not enough for students to learn alone. It requires continuous guidance from teachers and mutual cooperation from other students. Teachers can present incomplete vocabulary maps during the introduction and review stages of the classroom, guiding students to supplement the maps. At the same time, assign students the task of independently drawing vocabulary mind maps, allowing them to collaborate in groups and work together to complete a mind map. After the students complete the task, the teacher promptly evaluates, corrects errors and problems in the students’ homework, and controls the overall direction without deviating from the teaching center. Through mind mapping, cooperation between teachers and students and between students can be achieved, which is very effective for middle school students.

## **4. The Advantages of Applying Mind Mapping to Middle School English Vocabulary Teaching**

### **4.1 Enhance memory effect and improve teaching efficiency**

Compared to a wide range of textbook knowledge, mind maps are more structured and logical graphical knowledge. Compared to the memory of words, the human brain has a significantly better memory effect on images. Therefore, graphical mind maps can optimize the brain's memory effect, and the human brain's memory of such knowledge is also more profound.

This structured learning approach is greatly helpful for both the teaching process of teachers and the autonomous learning process of students. For teaching, teachers can use mind maps to structurally summarize the course content, prioritize the teaching content, highlight the classroom center and key content, and teach along the main thread of knowledge. This helps teachers allocate teaching time and energy reasonably based on the development of knowledge and the main logic, and puts more effort into the key and difficult parts, providing effective guarantees for the reasonable development and stable progress of teaching.

For self-directed learning, students can not only observe the visualized knowledge outline provided by the teacher, but also construct their own mind maps based on the learned content, using various forms such as images, symbols, text, colors, etc. to construct their own brain knowledge into specific models. By applying this concrete knowledge structure, students can quickly find the center and key points in the process of learning and reviewing, and their overall grasp of knowledge is also more precise. From a teaching perspective, both teachers' teaching and students' self-directed learning can more accurately capture the center and key difficulties of knowledge, greatly improving teaching efficiency.

### **4.2 Stimulate learning interest and increase learning interest**

A single textual content can no longer maintain students' attention for a long time, and image based knowledge combined with various elements such as images, symbols, and colors can regain students' attention. The mode of mind mapping is very diverse, and it can even be presented in various forms such as pictures, animations, and videos, without reference to books. During the process of constructing their own mind maps, students can also choose the images and elements they are interested in, such as using their favorite colors, templates, sets, and small pieces. This colorful form of knowledge not only helps students focus their attention, but also adds joy to the tedious learning process.

### **4.3 Enhance learning ability and cultivate learning thinking**

The improvement of knowledge level cannot be equated with the improvement of learning ability and thinking level. The harm of blindly instilling knowledge and conducting "cramming" and "question sea tactics" on students is obvious. The thinking ability and memory level of students cannot be improved with traditional mechanical training, and their imagination and innovative creativity cannot be developed. Teaching people to fish is not as good as teaching them to fish. We cannot only focus on textbook knowledge and neglect the cultivation of thinking and learning abilities behind learning knowledge. The mind map is constructed based on the divergent way of thinking in the human brain, simulating the dendritic structure of the human brain, and forming a systematic and structured knowledge tree diagram. This type of schematic knowledge can stimulate the memory of the brain, stimulate students' imagination, and think in a constantly divergent and associative mode, thus enabling training in thinking patterns.

## **5. Conclusion**

To improve the effectiveness of middle school English vocabulary teaching, it is necessary to apply teaching methods and methods reasonably. Applying mind maps to the teaching of middle school English vocabulary can quickly improve the memory of words; Assist students in building a systematic vocabulary knowledge structure in a structured manner; Help students think about problems with divergent thinking; Improve the efficiency of classroom teaching; Increase students' interest in learning. But to apply mind maps more efficiently and cleverly, more exploration is needed.

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