

# Teaching Strategies of English Lexicology in Multimodal Environment

—Taking the Post and Telecommunication of Wuhan Institute of Technology as an Example

Ran Wei, Yong Ding

Post and Telecommunication of Wuhan Institute of Technology  
Wuhan, Hubei

**Abstract**—English lexicology is a subject that helps students systematically master English vocabulary from three aspects: sound, form and meaning. Based on the multi-modal learning theory, this paper constructs the lexicology teaching framework from four forms of multi-mode—multi-modal PPT presentation, online corpus, demonstration of audio and video, and mobile application of Bai Cizhan. Two English undergraduate classes of Grade Two in Post and Telecommunication of WIT were selected as the research objects. With testing and investigation as research tools, an 18-week teaching experiment was conducted. This research shows that, compared with traditional teaching methods, multimodal teaching method has obvious advantages in improving the vocabulary of English majors, and provides favorable conditions for personalized and diversified learning.

**Keywords**—Multimodal theory; corpus; lexicology; mobile application

## I. INTRODUCTION

English lexicology is the subject of studying the form, meaning and whole vocabulary system of English words. The importance of vocabulary is self-evident in the process of second language acquisition. As lexicologist Wilkins put it in his 1972 book: "Without grammar, very little can be conveyed, without vocabulary, nothing can be conveyed." As an English teacher in an independent college, the author finds that students' limited vocabulary is always a major obstacle to pass the English proficiency test. Students are generally troubled by problems such as long memory time, fast forgetting speed, lack of lasting motivation for a long time. The lack of vocabulary makes college students afraid of English and even gives up this subject.

The author found that, in recent years, Chinese scholars who study the theory of the multimodule has been on the rise, but few are on the teaching research of English lexicology under the multimodal environment. As the author has years' of teaching experience of intensive reading as well as English lexicology, combined with the multimodal environment, the author put forward the optimization tactics of the English vocabulary teaching, which aims to improve students' learning interest and subjective initiative, to cultivate the comprehensive ability of using language, ultimately achieve the goal of cultivating applied talents.

## II. MULTIMODAL LEARNING THEORY

Multimodal learning theory originated from human cognitive psychology. In 1977, linguist Barthes was the first to propose multimodal theory. He defined multimodule is the comprehensive application of visual images in language communication and information processing and reception. Barthes' theory revealed the essence of multimodal, but he only emphasized the application of audiovisual modes, ignoring the common role of other modes such as touch and taste. In 2001, Kress and other scientists found that the combination of different senses can effectively enhance the learning effect through the study of multiple modes. In 2007, Baldry and Thibault summarized previous studies and gave a comprehensive definition of the essence of multi-module: multimodule is the medium and channel for symbolic communication through the device of language, image, text, color and sound.

From the definitions of multimodule above, we find that multimodule is a learning theory put forward from the perspective of biology. Applying this idea to teaching, multi-mode refers to the process in which teachers comprehensively utilize human visual sense, auditory sense, touch, taste and other senses, and combine the information from the outside, including natural, scientific, social and other content, to reprocess, interact, digest and then transform the knowledge which is learned by students. When students use only one sense in the learning process, it is a single mode. When students use multiple senses, interacting with each other to feel, we call it multimodal. The five most common modes include visual, auditory, tactile, olfactory, and gustatory modes. Multiple modes can effectively develop students' overall sensory system. Although the five modes are independent of each other and in charge of distinct regions, they work in synergy with each other in the learning process to enhance the learning effect.

## III. MULTIMODAL APPROACH AND LANGUAGE TEACHING

As the dramatic development of science and technology, people's lives have an inseparable connection with the electronic information technology, daily communication between people not only limited to static language, but also a lot of pictures, emoticons, gif dynamic figures which contain large amounts of information symbols are assisted in communication. For example, when explaining new words,

teachers will not only present the exact meaning of words on the blackboard and powerpoint but also demonstrate collocation and idiomatic usage by utilizing vivid pictures, lyrics in songs and excerpts from movies. In the process, teachers use a variety of symbols, such as words, sounds, movements, emojis, and the symbols and ways of communication are called modes. Modality is a way to use human senses such as sight, hearing, smell and taste to receive and send information to achieve information communication. In the process of reading, students only utilize visual mode to get information; in audio-visual class, they use visual mode, auditory mode to receive information. Therefore, modal theory is using the senses such as vision, hearing, touch, and taste, combined with static words, pictures, actions and voices mode to communicate, so as to achieve the communicative purpose.

In unit time, different people can receive a limited amount of information for a single mode, which leads to low learning efficiency. However, there is a complementary relationship between multiple modes. The efficiency of conveying information after the superposition of multiple modes is much higher than the efficiency of a single mode. Multimodal learning theory fully affirms the important role of non-linguistic modes in meaning construction. In daily communication, information can be conveyed more accurately by using linguistic and non-linguistic modes. Therefore, the author thinks that multimodal learning theory is of great significance to the teaching of English lexicology.

#### IV. APPLICATION DESIGN OF MULTIMODE IN LEXICOLOGY TEACHING

From the year of 2017 to 2018, the author selected two parallel classes of English majors of Grade Two as comparative experimental study. Both classes have 24 students and the courses are taught by the same group of teachers. Before the teaching experiment, the vocabulary of students in both classes was examined. The tests were conducted on an authoritative website Test Your Word Knowledge VocabularySize.com, which was the corpus based on native English language designed and developed by researchers at Victoria University of Wellington with high reliability and validity. The test consists of 140 questions, at the end of the test, the system automatically estimates the examinee's vocabulary. After the test, the author wrote down the statistics of the two classes. Class one is the control group whose average vocabulary is 5075, while class two is the experimental group, whose average vocabulary is 5529.17. Using SPSS, the author compares two-class average analysis by independent samples T test,  $T = -0.497$ ,  $P$  value is  $0.621 > 0.005$ , which shows there is no obvious difference between the two classes, they are in the same level before the experiment.

TABLE I. INDEPENDENT SAMPLES T TEST BEFORE THE EXPERIMENT

Group	N	Mean value	standard deviation	T	P
Control group	24	5075	2020.170	-0.497	0.621
Experimental group	24	5529.17	3992.872		

This experimental study consists of three stages. The first stage is to test the vocabulary before the course and make statistics. The second stage is the implementation of teaching. Multimodal means are applied to the teaching of English lexicology, including visual modes, auditory modes, facial expressions and body modes. The third stage is the final test, which draws data and conclusions. In order to explore whether multimodal means can promote the teaching of English lexicology, the control group utilizes the single pure language mode to explain the language points, while in the course of the experimental group, the author added four forms of multi-mode methods multimodal PPT presentation, online corpus, demonstration of English audio and video, and mobile phone APP after class. The experimental research process is 18 weeks a semester, each class has 2 hours course per week.

#### A. Update Teaching Contents by Using Online Corpus

The multi-modal teaching concept advocates using multiple channels and means to fully mobilize students' sensory input into learning and cultivate students' multiple reading and writing ability. With the help of multimedia environment, teachers give full play to multi-modes to obtain, transmit, reorganize and receive information. In terms of teaching content, the author has used *English lexicology* published by Huazhong Normal University Press and edited by Professor Zhang Weiyu for many years. Although the content of the textbook has been revised three times, some chapters still lag behind modern social life. In addition, the textbook pays more attention to the elaboration of theoretical knowledge, and is not closely related to practical application. For English students who are under the pressure of taking the examination of Tem-4 and Tem-8, this course is of little use.

When explaining the language points of modern English vocabulary, teachers should take corpus which is closely related to the development of modern society and current affairs as examples, and link lexicology with real life, so that students can be involved and their subjective initiative can be cultivated. For example, in Chapter one Basic concepts of words and vocabulary, words can be divided as basic word stock and nonbasic vocabulary. In the classification of nonbasic vocabulary, neologism is a large group which means newly created words or expressions or words that have taken on new meanings. In the textbook, AIDS, internet, on-line education are presented as examples, which may seem uninteresting to students. Therefore, the teacher applies the flipped classroom method to assign homework in advance and requires students to search for "hot online words" in foreign countries on the Internet. In the class, students are required to make a presentation on stage and introduce the popular words and their origins through pictures, audio or video. This activity not only stimulates the interest of students, but also helps them understand the origin of vocabulary, the change of meaning, the development and the process of word-formation from the perspective of social environment. From the hot words on the Internet in 2018, students selected extra (to describe someone's behavior or reaction is too excessive), OTP (abbreviation of "one true pairing") dadbod (an untuned and slightly plump make physique, especially one considered attractive), facepalm (the gesture of placing the palm of one's hand across the face,

as to express embarrassment, frustration, disbelief, etc.) and other words as examples, which are much closer to life than those given in textbooks. The online corpus makes up for the lack of vocabulary divorced from reality in textbooks. Teachers can provide students with textual materials of different styles through corpus. A large amount of reading can help students better master the relationship between words and texts, words and contexts. The multi-modal environment can provide adequate guarantee for such needs.

Why you always gotta be so extra

Me:



**WHEN YOU SEE YOUR  
OTP HAVING A  
MOMENT AND YOUR  
JUST LIKE:**



**捂脸**

Fig.1. Explaining neologism with Online Corpus

### B. Reform Teaching Methods with Audio and Video

The course of lexicology in multimodal environment requires teachers to change the traditional cramming teaching mode and make full use of multimedia, network and mobile devices to construct interactive teaching mode. In the multi-modal environment, different modes convey information

through different combinations. Therefore, teachers need to first determine what is the contents of teaching, select the media means to be used, and identify the modes represented by various media, and make different modes work together.

In the textbook Chapter 5 Word meaning and componential analysis, the concept of motivation is mentioned, which means the relationship between linguistic symbol and its meaning. The author leads students to ponder: is there any connection between the pronunciation of a word and its meaning? The students all agreed, but they couldn't give an answer when asked for examples. So the author plays the English song *MacDonald had a farm*. Through this simple rhymes, students recorded the animals and the sound of words: sheep-baa, dog-woof, duck-quack, pig-oink, cat-meow, cow-moo, horse-neigh, chick-cluck. Therefore, students conclude that English words have motivation, and one of the categories of justifications for English words is onomatopoeia, which denotes words are created by humans to imitate sounds in nature. For abstract concept, if the teacher just directly tells the definition to the students, the students will not leave any impression and become the traditional teaching method of rote memorization. However, the utilization of three modes of image, sound and video can not only attract students' attention, stimulate their interest, but also deepen the impression of language points and make it easy to remember. Compared with the single static text module, multiple modules promote each other and comprehensively stimulate learners' senses, which will strengthen learners' internalization of input knowledge and ultimately improve teaching efficiency.

### C. The Implement of Flipped Classroom by Using Mobile APP

The course of lexicology is 2 hours per week. After class, the teacher put forward different requirements on the experimental group and the control group. The experimental group used the mobile APP Bai Cizhan to learn TEM-4 vocabulary, students are required to memorize 20 words per day, 100 words per week, and they are obliged to send screenshot of learning outcomes to the teacher every Sunday evening. While the control group used a vocabulary book of TEM-4, and the number of words is the same as the experimental group. In the semester, some students lack perseverance and self-control, and teacher's supervision and encouragement at this time are particularly important. Otherwise, the expected results of vocabulary learning in multimodal environment cannot be achieved. The improvement of the process-based evaluation system also plays a great role in supervision, linking learning outcomes of every week with their usual performance facilitates the persistence of students' learning.

18 weeks later, the final vocabulary test was carried out in the two classes, the experimental results as shown in chart 2, both group's levels have increased, but the growth rate of experimental group was obviously higher than that of control group,  $T=-2.129$ ,  $P=0.039 < 0.05$ , suggesting that there are significant difference, students in the experimental class improved their English vocabulary more than those in the control class under multimodal environment. Through this teaching experiment, the author draws the following

conclusions: 1. Under the multi-modal environment, students mobilize the visual module and listening module, which is helpful for them to input knowledge, and the efficiency is higher than that of the single modal approach, enabling the second language learners to absorb more knowledge in unit time. 2. Simultaneous input of multiple modes with text and vivid pictograms plays an important role in second language learning, which deepening memory and understanding the meaning of words in combination with the context. 3. Under multimodal environment, vocabulary teaching is more in line with students' personal development needs and provides favorable conditions for personalized and diversified learning. Second language learners can make their own personalized learning goals according to their own basis, progress and goals.

TABLE II. INDEPENDENT SAMPLES T TEST AFTER THE EXPERIMENT

Group	N	Mean value	standard deviation	T	P
Control group	24	5358.33	1996.119	2.129	0.039
Experimental group	24	7221.25	3793.325		

## V. CONCLUSION

To sum up, with the continuous progress of the teaching reform and the popularization of multi-media means, teachers should use more multi-modal means in the teaching of lexicology, such as updating the teaching content and selecting more teaching contents from the corpus of english-speaking

countries; Reforming teaching methods and using pictures, GIF and other visual modes to stimulate students' interest in learning, make abstract information more concrete; utilizing audio, video mode to explain the collocative meaning of words, not only stimulate the comprehensive development of hearing and pronunciation, but also help them to grasp the cultural connotation through different contexts.

## REFERENCES

- [1] Hu Z. L, Application of multimodal discourse theory and media technology in foreign language teaching. Foreign Language Education(04): pp15-20.2009.
- [2] Kress G & Van Leeuwen T. Multimodal Discourse: The modes and Media of contemporary communication. London: Rnold, pp.124-146.2001.
- [3] Zhang D. L, Application of Multimodal discourse theory and media technology in foreign language teaching. Foreign Language Education (04): pp.15-20.2009.
- [4] Cheng Ruzhang. The Application of Multimodal in College English Vocabulary Teaching[J]. Journal of Mu Danjiang University, 2001, 20(11):140.
- [5] Hu Zhuanglin. Multimodalization in the Study of Social Semiotics[J]. Foreign Language Teaching and Research Press., 2007(01):1-10.
- [6] Li Biyun, Hao Jialiang. A study on Students' Cognition under Multimodal Teaching Environment[J]. Cultural and Educational Information, 2019(03):222-224.
- [7] Zou Bingjun, Zhou Ruizhen, Gan Luoying. Research on English Vocabulary Teaching Based on Multimodal[J]. Teaching and Management, 2013, 12.