THE APPLICATION OF MULTIPLE INTELLIGENCE THEORY TO ENGLISH VOCABULARY TEACHING FOR VOCATIONAL COLLEGE STUDENTS IN CHINA

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ABSTRACT – English is one of the important courses in vocational schools of China. and the teaching of English vocabulary is of great importance. However, there are few researches on how to effectively improve English vocabulary teaching in vocational colleges. In recent years, the application of the theory of multiple intelligence to the teaching of various subjects, change the traditional teaching methods, improve students' interest in learning, and rise attention on students' personality differences home and abroad. The purpose of this paper is to study the current situation of integrated English vocabulary learning in vocational colleges, and whether students' interest in learning English vocabulary can be improved under the guidance of Gardner's multiple intelligence theory, and whether students' vocabulary learning performance can be improved. This study takes students majoring in primary math education as the research object, applies multiple intelligence to English vocabulary teaching and carries out vocabulary teaching through three kinds of teaching activities organized by logical and mathematical intelligence, including mind mapping, English songs, listening sounds and identifying sounds. This study uses a combination of quantitative analysis and qualitative analysis to conduct research in three ways: questionnaire, interview and experimental test. Statistical analysis software SPSS20.0 and Microsoft Excel 2003 were used for data analysis. The research results show that the English vocabulary teaching driven by multiple intelligence can improve students' interest in English vocabulary learning and vocabulary achievement and achieve the purpose of effective teaching with ideal effect. The English vocabulary teaching method based on the theory of multiple intelligence is worth popularizing and helps to improve the interest and effect of English vocabulary learning for primary math education majors.

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INTRODUCTION

Vocabulary is the basic building block of a language, forming larger structures such as sentences, paragraphs and even whole texts. Linguists Zimmerman(1997) believes that in language learning, it is vocabulary learning who plays an important part as the center. The research results of psychological studies show that one's IQ is in direct proportion to the number of words he knows. Vocabulary supports speech and grammar. Without efficient vocabulary learning, it is impossible to master language.

Allen and Velette (1972) pointed out that no matter what kind of target language is learned, vocabulary is important in language teaching. Second language learners are generally aware that vocabulary acquisition is a problem that needs to be solved in second language acquisition. Even at an advanced stage of learning, learners are accurately aware of their limitations of vocabulary knowledge. The reason why learners cannot understand the new words they encounter in reading, or why they cannot use the language as they could in their first language usually lies in poor vocabulary competence. As Wilkins(1972) presented "Without grammar, very little can be conveyed, without vocabulary nothing can be conveyed", the language use of learners is greatly affected by the vocabulary proficiency of the target language. Therefore, teachers are required to adopt appropriate teaching methods in vocabulary teaching, helping and promoting learners to internalize knowledge that they have learned.

At present, English has become the key subject with vocabulary teaching being one of the most fundamental aspects of language teaching . As the most essential and important part of English teaching, English vocabulary teaching has attracted much attention from the teachers. Despite the

emphasis laid on it, the effect of English vocabulary teaching is far from satisfactory. At present , the most common way of teaching vocabulary in English classroom is rather simple and mechanical; Most teachers use the traditional way and ignore the importance of finding effective ways to help students remember the new words. The classroom atmosphere is not active, and the students lack the initiative and enthusiasm to learn. How to help the students enlarge their vocabulary in an effective way has been puzzling most English teachers for a long time.

Based on the Multiple Intelligence theory(MI), advocated by Howard Gardner, this paper aims to help teachers enhance students' English vocabulary effectively and studies on how to apply the Multiple Intelligence Theory to English vocabulary teaching. This chapter will highlight the background of the study, the problem statement, the research questions, the research objectives, significance of the study, the scope and limitations of study, the operational definition of terms, the organization of the thesis, and the summary.

PROBLEM STATEMENT

Currently, many scholars studied on English teaching of listening, speaking, reading and writing , but only a few studied on vocabulary teaching. Most researches focus on the teaching based on MI theory for primary students , middle school students and college students, while few studies are on vocational college students major in primary math education.

Although there are some experts studied vocational education from the theoretical level, very few studies start from the practical situation of English teaching. Some of them studied English teaching without regarding to the latest curriculum in China. So few research the level of achievements among vocational college students major in primary math education towards English vocabulary learning.

Most of the studies on vocational education are too broad, lacking in empirical analysis and data statistical analysis. Few of them find out the factors that influence students' vocabulary learning and help them to improve their English competence. Thus, the application of the research results is not practical.

Vocabulary runs through the whole process of linguistic learning. It maintains the pronunciation, grammar and discourse of the language. The mastery of vocabulary restricts the level of students' ability to use language. Too low vocabulary not only does not help to reduce the burden of students, but also makes it difficult for students to form a certain ability to use language due to too few available words. Vocabulary learning is the foundation of English learning (Nation 1990).

To enable students to acquire the ability to use language knowledge and language skills comprehensively in communication. The classroom teaching target not only meet the students' English learning, but also reflects the people-oriented, and apply the teaching principle of Gao Yongting (2016).

This thesis aims to discover the current situation of English vocabulary teaching in vocational college students major in primary math education, to explore their interest and achievement towards traditional vocabulary learning and the teaching method based on MIT and design the teaching activities of English vocabulary teaching under the guidance of multiple intelligence theory.

LITERATURE REVIEW

An Overview of Literature Review

This part provides a review of the literature on vocabulary learning and teaching strategies, with a particular focus on teaching and their impact on vocabulary learning in English as a Second Language (ESL) contexts.

Studies on Vocabulary Teaching at Home

Ecological Many schools emerged like lexical approach and communicative vocabulary teaching approach. The vocabulary approach (Wang Ying, 2004) think vocabulary is a collection of many lexical

chunks (chunk) and they distributed in a Generative Power Spectrum. The communicative approach (Liu Xiaoling, 2000:12) argues that "remember vocabulary in an isolated way is not good. Communicative vocabulary teaching requires teacher leads the students to take advantage of their studies and learn to talk about the topic which students interest in. By this way the teacher can arouse the real communication needs of students and make students learned vocabulary in a relaxed and enjoyable environment".

Firth (1968) believes that the word collocation is a companion relationship between the words and the word items. The special meaning and usage of this word depends on "common expectation". And in the same field, the scholars in our country have had a thorough research and suggested that: "let the students master the collocation or the collocation of the English word term. The knowledge of combination is good for enlarging vocabulary and improving language ability" (Qian Yuan, 1997:46)

Some scholars also pay attention to the memory of vocabulary, learning attitude of vocabulary, strategies and vocabulary culture. When refer to vocabulary memory, Mr. Li research the level of achievements among vocational college students major in primary Xuezhi insisited that the "English vocabulary logical memory" (2006), which reveals many features of English word structure and concludes a lot of structure law. Some scholars, such as Dai Jun, Hua Ting (2003),they revealed the positive correlation between learning attitude, idea, strategy and vocabulary level, which indicates that teachers should help students improve their vocabulary learning by use effective vocabulary learning strategies. They also emphasized that teachers should should help students to establish the correct vocabulary learning attitude. Study on vocabulary teaching of culture, Deng

Yanchang, Liu Runqing (1989:87) said: "by comparing differences between Chinese and English Language from the aspects of culture background, daily life, social etiquette, gender, emotional etc. By this way, we can get the real purpose of vocabulary teaching.

Studies on Vocabulary Teaching Abroad

Many scholars have expressed their opinions on the content of vocabulary teaching. Richard puts forward eight ideas about what vocabulary should be mastered, specifically including vocabulary, colloquial language, the differences between written language, applicable context, syntactic features, semantic components, variations of words, and the different meanings of words and so on.

Harmer, in his Practice of English Language Teaching, discusses vocabulary teaching, and the content of vocabulary teaching is from the meaning of vocabulary, the use of vocabulary, the information of vocabulary and the grammatical meaning of vocabulary are stipulated. Lewis opposed to the traditional idea of separating grammar and vocabulary, he proposed the concept of lexical chunks, which holds that language is practical. The top is a consistent and coherent text composed of chunks of words. He emphasized textual awareness and vocabulary learning, the systematization of sentence structure from a macro perspective to analyze the collocation of words and their expression. And then he will divide vocabulary learning into vocabulary combination, collocation, and vocabulary fixation.

In terms of vocabulary teaching strategies, Nation makes a thorough and systematic analysis of classroom vocabulary teaching from the perspectives of listening, speaking, reading and writing in his book Vocabulary Teaching and Learning. He distinguishes direct vocabulary learning from indirect vocabulary learning in class, and arranges classroom activities from the preparation of learning materials, when vocabulary appears In his vocabulary teaching skills, Allen divides students into beginner, medium and top students according to their different vocabulary levels, and puts forward corresponding classroom vocabulary teaching skills for students at different learning levels For example, for beginners' vocabulary teaching, attention should be paid to the use of visual teaching AIDS such as physical pictures. For middle school students, they should pay attention to the connection with the words they have learned, and pay attention to the teaching of lifeoriented words. Schmitt, by redefining and dividing the use frequency of words, proposed the concept of low-frequency words, middle-frequency words and high-frequency words, and further studied the status quo of high-frequency words and low-frequency words. The teaching strategies are sorted out and the problem of the lack of effective teaching strategies for mid-frequency vocabulary is pointed out.

Ooi believes that vocabulary is equivalent to teach the meaning of the word in traditional teaching (1996). But vocabulary teaching is not only help students know the meaning of the word, but also to promote and help students gradually to realize how to use it.Palmberg R. (1990) it was considered that the vocabulary teaching should be emphasized on the cultivation of students' contact behavior. He proposed two methods: (1) Based on the practice of native speaker which aim to combine learning vocabulary with the appropriate semantic web and gradually to experience as a native speaker. (2) Emphasized the connection, the article concludes 8 connection.

Stahl (Hague S.A.:217-225) proposed another vocabulary teaching principle is to promote the deep thinking: the establishment of the new information and known information as much as possible. The methods as follow: establish of psychological shape, comparison, contrast and use their own words to express. Schmitt's (1995) article gives us a lot of inspiration in vocabulary teaching. He designed word card to help students remember vocabulary and summarized 1 1 kinds of vocabulary learning principles and methods. Nation's (1982) article is about foreign language learning and vocabulary teaching which aims to provide experimental data for teachers in vocabulary teaching. This article contains the way of learning vocabulary (direct, indirect), method of vocabulary learning (direct and indirect) and skills.

Studies on MI at home

Since 2003, the study of multiple intelligence theory has gradually appeared in China, and published corresponding works or translations. For example, The Art of Diversified Teaching, translated by David Lazir (2004), Strategies for Teaching and Learning by Huo Liyan (2004), and Research on Diversified Intelligence Theory and Curriculum by Huo Liyan (2003). At that time, although there were many translations on the introduction and evaluation of intelligence theory in China, most of them introduced foreign English teaching. There were not many works on how to localize the theory and apply it in Chinese classrooms.

- 1. Wang (2003) proposes two important points that are concerned with using MI theory to innovate English classroom teaching design, which are "teaching in order to develop multiple intelligence" and "applying multiple intelligence in teaching".
- 2 . Zeng (2009) puts forward the guiding principles that should be followed in the teaching design through deconstructing teaching mode. In his opinion, combing the teaching content with the real life and using a wide range of teaching materials can help students achieve better learning outcomes.
- 3. Chen (2012) points out reading teaching principles and provides some excellent examples of reading teaching for teachers in his book.
- 4 . Chen and Wen (2014) combine MI theory with multimedia to prompt university students' learning interest in their research.

Studies on MI abroad

After entering the 21st century, the theory of multiple intelligence gradually began to cause considerable influence in the United States and around the world. It has been widely used and become the guiding ideology of classroom teaching reform in many countries. Later in the process of continuing to study multiple intelligence, some research results with practical guiding significance and academic value have emerged.

Linda Campbell and Dickinson et al. (2004) illustrate by illustrating typical cases of each type of intelligence, how to improve the learning process of relevant intelligence, the learning environment that needs to be created, and what kind of approach should teachers adopt.

The application of the multiple intelligence theory in the educational field is pushed to a climax, providing practical operation methods for teachers on how to practice the multiple intelligence theory in the classroom teaching. Integrating Multiple Intelligence and Learning Style, by Harvey Silva (2003), explains how to integrate multiple intelligence with learning style and how to evaluate teaching and performance. In his book (2004), David Lazier analyzed four teaching models and related practical

cases, explaining how to combine multiple intelligence with the curriculum. In terms of guiding the school teaching practice, the longest duration, the largest scale, and the most representative research is the

"Zero Point Project" from Harvard University. It includes "colorful spectrum" in kindergarten and lower primary school, whose evaluation goal is to discover children's intelligence strengths, "art advancement" project in higher primary school and middle school, which develop three artistic abilities of perception, creation and reflection, and "practical school intelligence" project in middle school to help students with low achievement master practical ability of self-management and use interpersonal intelligence and cooperation.

Application of Multiple Intelligence Theory to English Vocabulary Teaching

The most important reason why students failed in the examination is that they do not recognize words, let alone to say grasp the meaning of the word accurately (Wang Qiuhong, Shi Xuefen: 2012). There was no doubt that it is a gradual process in college vocabulary teaching, and it also requires teachers update the teaching concept from which the teacher can really understand students' psychological characteristics and can cultivate students' learning ability (Ma Jianhui:56-59). Applied MIT in English class can not only create a harmonious and interesting English classroom atmosphere and also can stimulate students' interest in learning and can help students improve their English.

According to the theory of multiple intelligence, school education aims to develop students' various forms of intelligence and adopt a "people-oriented" school education mode. Educators should try to know as much as possible about each student's strengths and weaknesses in learning. Based on extensive research in psychology, biology, and brain science, Gardner proposed eight independent human intelligence as follows:

Verbal and Linguistic Intelligence

Human's ability to master and use language flexibly. People who use language effectively to describe events, express ideas, and communicate usually excel in speechlinguistic intelligence.

Logical-Mathematical Intelligence

Logical - Mathematical intelligence refers to the ability to understand and reason the relationships between logical structures. The person who has good generalization, classification, comparison, analogy, induction, deduction and other ability of the relationship between things is the person with strong logic-mathematical intelligence.

Visual-Spatial Intelligence

Visual-spatial intelligence is the ability to perceive color, shape or location and sensitivity to these relationships. They prefer to look at pictures, watch videos, draw pictures, and play maze games rather than read words.

Music-rhythmic Intelligence

Musical rhythmic intelligence is the ability to perceive, appreciate, remember, compose music and express emotions through this form. These people are very sensitive to melody, intonation and timbre.

Bodily-Kinesthetic Intelligence

The ability to express an opinion or emotion through body language is body-kinesthetic People who are good at body - kinesthetic intelligence enjoy participating in outdoor activities or sports, and are also good at making products by hand, such as sewing, sculpting, etc.

Interpersonal -- Social Intelligence

Interpersonal and communication intelligence is the ability to understand others, get along with them and communicate with them. It is accurately manifested as the sensitivity of facial expressions,

voices and actions of others. It is good at recognizing the emotions and motivations of others and taking appropriate responses.

Intrapersonal Introspective Intelligence

Self-introspective intelligence is the ability to recognize and reflect on oneself. It includes a good awareness of one's emotions, intentions, and individuality and a strong sense of self-esteem and self-control. As a result, they always make plans for their lives and reflect and adjust their lives. They excel at working alone rather than in groups.

Naturalist Intelligence

Natural observation intelligence is the ability to be good at observing, identifying and classifying species characteristics in nature. It is mainly manifested as: loving animals and plant s, being good at distinguishing biological species, caring for ecological environment, and having strong sensitivity and curiosity to changes in sound, shape and environment of species in nature.

METHODOLOGY

Research Design

Two classes in a parallel grade were chosen to be samples of the research. The researcher firstly got to know the students' interest in English vocabulary learning and their vocabulary learning situation. Then the intelligence types of students in the experimental class were tested. According to what had been known, the author designed some class activities based on MI to teach the experimental class English vocabularies. After the experiment which lasted for 3 months, the students in the experimental class finished a test of their vocabulary learning and went through an interview about their interest in English class.

After the analysis of data, the following fact were found out:

- 1. the intelligence types of vocational college students major in primary math education.
- 2. whether the new teaching method can stimulate students' interest in English vocabulary learning.
- 3. whether the English vocabulary teaching guided by Multiple Intelligence Theory can improve the students' English competence.

Population and Sampling

In The population in the study is the college students major in primary math education in Sichuan Preschool Educators' college in China.

The object of the study is two parallel classes majoring in primary math education in Grade 2 of the Primary Education Department in Sichuan Preschool Educators' College. Class 1 with 45 students is the experimental class, which applies multiple intelligence in vocabulary teaching; Class 2 which includes 48 students is the control class, using the traditional teaching method for vocabulary teaching. The basic information of the students' grades, gender and age are the closest, so these two classes are selected for comparison. To ensure the fairness of the experiment and the accuracy of the result, all the subjects are taught by the author, with the same textbook and teaching hours.

In general, the subjects are generated by sampling. Overall sampling was used in this study. The experimental and main control variables of this experiment are in the following table.

Class	experimental variable	Main control variables
EC	vocabulary teaching based on multiple intelligence theory	same class time slot In addition to vocabulary teaching, reading, writing, grammar and other teaching content, teaching methods are the same The test time is the same as required same teaching process same teacher
СС	traditional vocabulary teaching	

Research Procedure

Before the experiment, first of all, through the "students in vocational English vocabulary learning survey volume", collected and collated students of the experimental class in English vocabulary learning problems, and then through the "students in vocational multiple intelligence questionnaire" survey, analysis and collate the basic situation of all the students in the experimental class. At the same time, let the students complete the pre-test, which is based on the "Upgrading examination English paper" adapted into record their test results, and used to test the "vocational English vocabulary test volume" results are analyzed and compared.

In the experiment, under the guidance of multiple intelligences, the students in the experimental class were taught English for a semester, mainly focusing on vocabulary.

Data Collection

This study mainly adopts data collection instruments as the following: questionnaires, interview and experiments.

1. In the quantitative study, three questionnaires are used: a vocabulary learning situation questionnaire a lexical learning interest questionnaire and multiple intelligence questionnaire.

The questionnaire of English Vocabulary Learning to collect students' individual information including their gender, their family's income-level, their marks for the college entrance exam, as well as their attitude towards English vocabulary learning, difficulties, their learning habits and methods. A lexical learning interest questionnaire to know whether the students' interest in English vocabulary learning change before and after the experiment. Multiple Intelligence for vocational students questionnaire is divided into eight intelligence questionnaires. The questionnaire was compiled through the interpretation of various intelligence characteristics in Gardner's "Structure of Intelligence" and combined with the "Multiple intelligence in the Classroom" and the "Adults' Multiple Intelligence Table" in the book, which was used to survey the distribution of the students' intelligence in the class.

To ensure that all subjects fully understand the contents and requires in them, all the questionnaires are written in Chinese.

- 2 . According to what has been known, the author will design some class activities based on MI to teach the experimental class English vocabularies. After the experiment which lasts for 3 months, the students in the experimental class will finish the second test of their vocabulary learning and go through an interview about their interest in English class.
- 3. The researcher shall conduct two kinds of tests, that is, pre-test and post-test, totally 2 vocabulary tests, of which English vocabulary learning competence are also examined. In the qualitative study, there will be an interview about vocabulary learning attitude after the application of MIT for students.

Data Analysis

The data collected are analyzed by using SPSS 22.0 for Windows. The researcher adopts "Descriptive Statistics and Frequency" to analyze the collected data, and the current situation as well as difficulties of students' vocabulary learning can be summarized, which shall offer suggestions for the

researcher to conduct effective vocabulary teaching strategies. "Reliability Analysis" is applied to test the internal reliability of the interview is analyzed through "Descriptive Statistics and Frequency".

This data analysis includes questionnaire analysis, interview analysis, and test results analysis. Then the collected data was analyzed through "Means Analysis" and "Independent-sample T Test", and we can find whether there are significant differences in the ability of vocabulary learning of. What's more, the analysis of "Regression Analysis" attempts to find a correlation between vocabulary learning and English comprehensive proficiency.

In the experiment, an important part is to collect, analyze and compare the results of the two tests and to know whether the English vocabulary teaching under the guidance of multiple intelligence is better than the traditional vocabulary teaching, and whether the students' enthusiasm for learning is higher.

RESULTS

Before the author carried out the teaching experiment, there was no significant difference in the statistical data obtained by the experimental class and the control class. The two classes were at the same level, which ensured the accuracy and effectiveness of the experiment. After about 3 months of experimental activities, the scores of the experimental class guided by the theory of multiple intelligence were 5.7 points higher than the mean value of the control class, and their academic scores were significantly improved without statistical difference. In addition, compared with before and after one semester, the average score of the experimental class increased by 5.5 points, showing significant progress. Therefore, this study considers the experimental results to be authentic and credible. There are individual differences among students, as well as different intelligence distributions. Teaching methods based on the multiple intelligence theory can just meet the requirements put forward in the New Curriculum Standard (2022), which advocates that schools and teachers should take into account individual differences of students to improve learning results. Since vocabulary learning is very important to English learners, it is the responsibility of educators to find effective ways to help students learn. The implementation of the theory of multiple intelligence makes it possible for students to use their different intelligence strengths to help them learn more effectively. The author finds the following points. First of all, students have different personalities They all have a unique blend of dynamic intelligence. There is a difference in the way they listen, feel and think. They all have preferred learning styles. Teachers should respect these differences and provide different ways to help students learn better. The teaching strategies based on the multiple Intelligence theory are more flexible and effective, which can meet the needs of learners with different learning styles. Compared with traditional teaching methods, the authors found that by adopting different teaching strategies adapted to their intellectual strengths, students learn with more confidence, participate fully in class, and pay more attention, thus improving learning outcomes. Second, when vocabulary teaching methods based on the multiple intelligence theory are adapted to their intellectual strengths, students become more engaged and learn more effectively.

CONCLUSION AND IMPLICATIONS

The main research question of this experiment is whether the students' interest in learning English vocabulary can be improved under the guidance of the theory of multiple intelligence, and whether the students' vocabulary learning performance can be improved.

Combined with the usual classroom observation and the analysis of experimental data, it can be known that: Under the guidance of diversified classroom activities, students can more actively participate in classroom activities, the classroom atmosphere is more active, students can more effectively carry out vocabulary learning, but also can experience the sense of achievement, stimulate the interest and enthusiasm of the students to learn more English vocabulary.

The important part of this study is through the paired sample test of the experimental class students' vocabulary learning performance before and after testing, and the conclusion is drawn: under

the guidance of the theory of multiple intelligence, the vocabulary learning of students in vocational schools has been improved.

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