

Application of Multiple Intelligences Theory to English Vocabulary Teaching in College

Xiangyong Jiang¹, Lanzi Zhou^{2*}

1. Foreign Languages College, Jiangxi Normal University, Nanchang, Jiangxi 330022, China

2. Foreign Languages College, Jiangxi Normal University, Nanchang, Jiangxi 330022, China

*Corresponding Author

ABSTRACT. Recent years have witnessed the problems of low efficiency in English vocabulary teaching and learning between college teachers and students. However, due to the fact that the teachers can not work out an effective way to help students learn the vocabularies, vocabulary teaching is a challenge for teachers in college. Hence, it is high time for the teachers to explore an efficient English teaching methods and strategies to arouse students' interest as well as improve their English vocabulary levels. In this paper, the author regards the current situations of college English vocabulary teaching as the object of research, and tries to draw a conclusion to indicate the feasibility of vocabulary teaching based on MIT which can provide enlightenment to vocabulary teaching. The author presents different teaching methods and analyzes their characteristics through observing classroom vocabulary teaching, which greatly reflects students' performance in class. In brief, multiple intelligences theory has positive impact on the college English vocabulary teaching since it can improve our teaching quality and increase students' learning interests, therefore it is well worth our studying.

KEYWORDS: Vocabulary teaching, Multiple Intelligences Theory, College English Teaching

1. Introduction

Vocabulary teaching and learning have been regarded as an essential role in English education, because the more vocabularies the students get, the better they can manage the language. However, there are some problems existing in the current vocabulary teaching. For example, teachers focus on words which appear frequently in our spoken and written discourse, or they just pay more attention to the form of

the word rather than the usage in the context, which affects students' vocabulary learning.

Against the background of current vocabulary teaching, which mainly includes the traditional teaching ideas and methods, this paper explores an emerging teaching idea from the perspective of Multiple Intelligences Theory and tries to analyze the effectiveness of application of MIT to college English vocabulary teaching compared with the current vocabulary teaching methods. Through the analysis of MIT, we can find that students can gain more interests in learning English based on their individual intelligences. Moreover, there is a strong correlation between the number of vocabulary and reading ability, which means that the more words they can get, the better they can understand the reading materials.

2. Literature Review

Vocabulary teaching has been a hot issue in foreign language teaching since words are viewed as a basic step to express meaning accurately. Researchers at home and abroad try to use psychological ideas to explain educational phenomena. One of the most influential ideas in education field are Multiple Intelligence Theory, proposed by American psychologist Howard Gardner, which gains great popularity at first and it also draws much attention when introduced into China. Gardner puts forward the concept "Multiple Intelligence Theory" in his book *Frames of mind* in 1983[1]. Gardner's theory of multiple intelligences is a challenge to the traditional theory of intelligence, which urges foreign researchers to try to apply this theory to the field of psychology and education in theory and practice. Its positive effect is very obvious, so the most authoritative organization in the United States, the Educational Resources Information Center (ERIC), lists this theory as a separate category and encodes it for reading and research. One study led by Mindy Kornhaber and her colleagues, for example, in the Harvard School of Educational Research's "Zero Point Program," in which SUMIT (School Using Multiple Intelligences Theory) Project is carried out, the results show that most of the 41 schools surveyed have an important role in both student learning and teacher teaching. But there is also a problem, its theoretical research scope is mainly related to basic education and special education, the attention to higher education is not enough. Furthermore, multiple intelligence theory in China needs more studies since current research focuses on compulsory education rather than higher education, especially foreign language teaching.

Research in vocabulary teaching abroad follows a chronological sequence which dates back to the early nineteenth century-grammar-translation method. This method aims to improve learners' written language ability and exemplary reading and dominates the whole language teaching methods at that particular times. The main language teaching method in China is grammar-teaching method, audio-lingual method and communicative method. However, with the reform of College English Curriculum Requirement (2007), many Chinese researchers shift their attention from grammar teaching to vocabulary teaching and focus on the usage of language and

real communication. Research on vocabulary teaching steps into a mature stage since the 1990s and fruitful results indicate the effectiveness of vocabulary teaching.

3. Multiple Intelligences Theory

The Theory of Multiple Intelligences was put forward by Howard Gardner in 1983 in his book *Frames of Mind*. He pointed out that all the normal human beings have at least eight intelligences, and each has a unique combination of the eight intelligences. He defines intelligence like this:

To my mind, an average man's intellectual competence must entail a set of skills of problem-solving, which enable the individual to resolve genuine problems or difficulties that he or she encounters and, when appropriate, to create an effective product. It must also entail the potential for finding or creating solutions for problems, therefore it is useful for the acquisition of new knowledge.(Gardner,1993)

Gardner redefines intelligence as "bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture."(Gardner, 2000, 33-34)[2]

A summary of Gardner's eight intelligences is given as follows, and it can be further divided into two parts, which are commonly used and the non-commonly used in our daily studies[3].

3.1 Commonly Used Intelligences in Daily Studies

a. Verbal-Linguistic Intelligence: it mainly refers to a person's ability to use spoken language. The ability shows the characters as follows: the individual's ability to use language to describe events smoothly and efficiently, the ability to express thoughts and communicate with people, the ability to make combination of syntax, phonology, semantics, pragmatics and the ability to use sounds, meanings and rhythms of words.

b. Logical-Mathematical Intelligence: it refers to the ability to make complex mathematical operation, calculation, quantification and think proposition and assumption. It contains these elements: mathematical calculation, logical thinking, problem solving, inductive and deductive reasoning, identifying the model and the relationship, the sensitivity of the relationships among things (such as analogy, comparison, the cause and effect, and logic, etc.) for the individual. In a word, this kind of intelligence is the ability to think conceptually and abstractly as well as the capacity to discern logical and numerical patterns.

c. Visual-Spatial Intelligence: it refers to the ability to accurately express and feel the elements of the space, shape, location and so on. Main performance of it can be described as follows: the sensitivity for the individual to feel the line, shape, structure and spatial relationship and the ability to show them through graphics. In short, it is the capacity to think through images and pictures and to visualize them abstractly and appropriately.

d. Bodily-Kin esthetic Intelligence: it refers to the ability to use body to express thoughts and feelings as well as manipulate objects skillfully and adjust the body movement accordingly. Body language is a typical example of this intelligence.

3.2 Non-commonly Used Intelligences in Daily Studies

a. Musical-Rhythmic Intelligence: it refers to the ability to identify tone, rhythm, melody and sound. It expresses emotion through composing, playing, singing and other forms and makes people sensitivity to the melody, tune and rhythm.

b. Interpersonal Intelligence: it refers to the ability to make effective understanding of look, talk, gestures of other people, and make effective reaction. It requires us to observe and distinguish the emotions, intentions, motivations and personalities of people and give proper feedback. In brief, it is the capacity to detect and respond appropriately to the mood, motive and desire of others.

c. Intrapersonal Intelligence: it refers to the ability to learn knowledge, make insight and reflect on self-reliance. And it means that the individual can make good consciousness and evaluation of their own motivations and emotions. In short, it is the capacity to be self-awareness and in tune with inner feelings, values, beliefs and thinking processes.

d. Naturalist Intelligence: it refers to the ability to know natural phenomena, natural things and natural environment and adapt them. It includes the following elements: observation, reflection, integration and perception of contacting with the natural world and human world. In a word, it is the capacity to recognize and categorize plants, animals and other objects in nature.

4. College English Vocabulary Teaching

Great vocabulary researcher Paul Nation (2001) claims that a great number of vocabulary can be acquired with the help of appropriate vocabulary teaching methods and strategies ,which corresponds to other scholars and educators[4].Vocabulary teaching is in association with phonetic, morphological, lexical, semantic relations and word formation[5]. In short, a word principally contains pronunciation, form, meaning and usage. The paper analyzes the contents of vocabulary teaching from the following five aspects.

4.1 . Pronunciation of Words

The pronunciation of words is the most basic part, and it is the key to the vocabulary learning and remembering. It includes two parts, word spelling and word pronunciation in the sentence or phrase. However, the teachers usually emphasize the word spelling, and do not give the explanation about pronunciation features of words in the sentence or phrase, namely, nasalization, velarization and dentalization[6]. Moreover, pronunciation plays an important role in vocabulary

teaching, because it is the foundation for us to understand a language.

4.2. Morphology of Words

The morphology of word includes basic spelling and form changing. During the class, teacher gives priority to the form and the structure of words in language, which includes inflection, derivation, and the formation of compounds. In the morphology teaching process, teachers focus on the above aspects in English vocabulary teaching so that students can learn the rules of word formation in an organized and regular way.

4.3. Meaning of Words

The meaning of the word includes reference, connotation and denotation. The more frequently we use words, the more meanings a word has. In our daily studies, to a large degree, we usually learn the meanings which appeared frequently in our textbooks or reading materials. So the teachers pay more attention to the meanings of words through the context and co-text information. In addition, some words originate from Latin or Greek myths, therefore, the meaning of the words has something to do with etymology.

4.4. Usage of Words

The usage of words contains a series of contents which include phrases, idioms, collocations, style and register. The usage of word changes according to the context. The best way to test students' language ability is the usage of words in the target language. The more accurate they can use words in spoken or written discourse, the better they can manage the language. Therefore, teachers usually give homework assignment like writing essays or reading English materials, because these tasks can consolidate the usage of words they meet in the text.

5. Problems of College English Vocabulary Teaching

5.1. Problems in Teaching Methods

According to the College English Curriculum Requirement (2007), in the process of English teaching, teachers ought to regard students as the body part of study and development genuinely. Teachers should advocate the spirit of independence, cooperation and exploration in class which can change the traditional vocabulary teaching method based on exposition and adopt diverse teaching methods to inspire students' learning interests as well as help them translate learned vocabularies into language skills and ultimately reach the goal of studying and using English creatively[7]. In the following part, this paper will introduce three commonly used

vocabulary teaching methods in college. They are direct pedagogy, contextual pedagogy and repetitive pedagogy respectively.

5.1.1. Problems in Direct Pedagogy

Words appeared in the *Practical College English Integrated Course*, to a large degree, are mainly some commonly used and seen ones as well as some closely related to students' daily lives and studies. For instance, words which used to express thoughts and feelings like homesickness, anxiety, loneliness and stress; words which used to express characters like fresher, adviser, counselor and so on. When teaching such words, teachers use various direct methods through objects, pictures, gestures and actions to create vivid language learning environment for students, thus making them connect English words with objects and grasping words easily as well as enhancing their ability to memorize words. However, such method is useful for teaching concrete nouns or verbs as well as adjectives, namely, desk, table, sunglasses, sit, stand, joy, sad, etc. It cannot be used for teaching abstract words, such as truth, beauty, mentality, etc. Furthermore, it doesn't have clear grammar interpretations, hence, causing many grammar mistakes in the utterance as well as written discourse.

5.1.2. Problems in Contextual Pedagogy

Words may have different meanings and interpretations in different contexts, that is to say, we should avoid learning words exclusively, instead we ought to put the words into phrases or sentences in order to help us comprehend and study. One educator Brown H.D. said: "The best internalization of vocabulary comes from the words within the context of surrounding discourse rather than isolating words and/or focusing on dictionary definitions" (2001:365). For example, jack-of-all-trades, in which trade means profession rather than its literal meaning which connects with economy. Therefore, some words can be fully understood by students only through language practice. Just as another educator Mr. Zhang Weiyong said: Without context, there is no way to determine the very sense of the word that the speaker intends to convey. Taking the word "interest" for example, it has different meanings in different sentences:

- a. He was a man of wide interests outside his work. (他是个有广泛业余爱好的人。)
- b. The money was repaid with interest. (这笔钱是带息偿还的。)
- c. She was acting entirely in her own interests. (她所做的完全是为了自己的好处。)
- d. She has business interests in China. (她在中国拥有企业权益。)
- e. She watched with interest. (她兴致勃勃地看着。)

In the above examples, it is obvious that if students only grasp certain meaning of this word “interest” and apply it into other sentences which contain this word, then there must be something wrong with the sentence meaning. Therefore, this kind of teaching method attaches much importance to the overall structure perception, thus making student lack of a clear understanding of the language items [8].

5.1.3. Problems in Repetitive Pedagogy

According to *The Law of Forgetting Curve and The Law of Learning Curve* which proposed by a German psychologist H. Ebbinghaus, the former describes the exponential loss of information that one has learned. The sharpest decline occurs in the first twenty minutes and the decay is significant through the first hour. At the same time, the latter suggests that how quickly one learns information. The sharpest increase occurs after the first try and then gradually evens out, which means that less and less new information is retained after each repetition. College English, as a public course, only has two lessons each week, hence vocabulary teaching adheres to the principle of repetition for it can increase the degrees of familiarity to the vocabulary. However, we can see such a common phenomenon that most students accumulate their vocabularies by means of reciting them again and again, which means that the number of words is correlated with your frequency of repetition. In fact, this is called rote memorization. Therefore, once we stop to memorize the words, then our memory will drop and the ability to master the vocabulary becomes not salient.

From the above analysis, we can see that most teachers still stick to traditional and single method to teach vocabulary, like repetitive method, situational method and direct method, other possibly feasible language teaching theory are rarely used in vocabulary teaching. In other words, those methods can stimulate students' motivation to learn vocabulary and mobilize their multiple intelligences. If teachers want to avoid the problem of time-consuming and low effectiveness, the theory of multiple intelligences is well worth studying.

6. Application of MIT to College English Vocabulary Teaching

6.1. MIT-based Teaching Methods

Teaching method is a kind of method used for finishing teaching tasks. It includes teaching methods as well as learning methods. Besides, it is based on certain teaching ideas and teaching theories, it is a stable structure frame of teaching activity as well as activity process, and it is the application of teaching theory as well as the generalization of teaching practice. At present, English teaching methods are based on the Soviet Union educator-N.A. Kaiipob, its process goes as follows: reviewing last lesson — leading to a new lesson — presenting a new lesson — consolidating a new lesson — assigning homework. Such pattern is mainly from the perspective of how to “teach”, hence, it ignores the student's learning mentality and

the law of learning activity. Therefore, preferable teaching methods should be grounded on the model of teacher-guided and student-oriented or bilateral teaching patterns between teacher and student.

According to the differences of student's basic knowledge, intelligences vary from person to person, educators ought to adopt flexible teaching methods in order to satisfy the needs of different levels of students[9]. Vocabulary teaching is no exception. Combining with the multiple intelligences theory, the following teaching approaches can be listed out as reference.

6.1.1. Communicative Approach

Communicative approach regards language as a communication tool for the purpose of carrying out teaching activities, and it pays much attention to develop student's communicating ability. Communicative approach advocates interactive or cooperative learning strategies and emphasizes role play, group-work as well as team-work. Such activities offer students abundant language settings to use English. Compared with other teaching approaches, communicative approach focuses on the exploration of student's innate learning as well as the ability to use language. Its ultimate goal is to cultivate the communicative ability to apply foreign language to real life effectively. As a basic part of foreign language study, vocabulary teaching is of vital significance for having a good command of English. Therefore, making full use of various intelligences in communicating environment can help students memorize words as well as attract their learning interests and finally reach the goal of increasing the number of vocabularies.

6.1.2. Task-based Approach

Task-based language teaching approach is popular with teachers of English in language teaching nowadays. In fact, it is a further development of Communicative Language Teaching. It shares the same beliefs, as language should be learned as close as possible to how it is used in real life. However, it has attached importance to the form-focused teaching and communication-focused teaching. This approach allows students to participate in a goal-directed communicative task, aiming for exposing the learners to a more natural and meaningful way of learning a foreign language. In addition, students need to communicate with each other in the process of learning. Moreover, it is a good chance to enhance what they have learned during communication. As Willis(1996) claimed that the purpose of task-based approach is not just for learners to finish the tasks one by one but also to make the learners become skillful in finishing tasks, and at last they would pay more attention to the fluency of language instead of its accuracy[10]. Task-based approach calls for students to learn languages authentically so that genuine communication would happen. It also emphasizes the improvement of all the four language skills so that learners can learn a foreign language from fluency to accuracy.

In a task-based approach lesson, learners' interest can be aroused by joining in

the tasks and therefore their learning motivation can be increased as well. And it can also provide learners more chances to externalize the knowledge they have learned, and assist them to reflect on their thinking. Task-based approach offers students a platform for teamwork[11]. During the discussion, both students and teachers can express their own feelings and thoughts about the same situation freely and undertake meaningful discussions which can bring about reflection and the development of critical thinking ability. As for vocabulary teaching, teachers assign vocabulary exercises to the students, and require them to learn these new words and phrases in a cooperative way. For instance, offering students enough opportunities to practice and manipulate the language, so the tasks should be designed to encourage the students to develop their communicative ability in language use. Tasks should be designed as real as possible in order that students can understand the usage of the vocabularies in simulated or real environment and apply it into other communicative environment. Therefore, it can enlarge the number of vocabulary and enhance the ability to use such words, phrases and collocations appropriately[12].

6.1.3. The Interaction-oriented Approach

The interaction-oriented teaching methods involve communication with each other, namely, group work, discussion, dialogue, role play and so on. These concrete teaching methods can promote participation in class actively and arouse student's interests in learning activities[13]. They can be illustrated as follows.

a. The application of linguistic intelligence to vocabulary teaching

We can apply linguistic intelligence into vocabulary teaching by means of lecture, dialogues, group discussions, oral presentations, word games, story-telling, listening training or talking about books. From these activities students can debate and tell story in order to be familiar with the vocabulary they have learned. For example, we can teach students to distinguish similar vocabularies through the context or co-text: She conforms to the new rule after the reform. From this way students can use the knowledge they have known and can distinguish the meanings easily.

b. The application of bodily/kin-esthetic intelligence to vocabulary teaching

We can apply bodily/kin-esthetic intelligence to vocabulary teaching by means of dynamic movement, role play activities, contest or body language. Since vivid exhibition can inspire students to learn English vocabulary actively, students can get a more profound memory of vocabulary through such an interesting way. Another way is game-play: let one student perform the word which the teacher tells him/ her, then let the partner guess the word meaning from description. Such initiative and enthusiasm can stimulate students to learn English vocabulary eagerly.

c. The application of musical intelligence to vocabulary teaching

We can apply musical intelligence to vocabulary teaching according to the music, the music selected caters to student's tastes or lets students learn vocabulary by chanting or singing. For example, the teacher can explain the usage of "bitter" from the song of "Bitter Heart".

d. The application of interpersonal intelligence to vocabulary teaching

We can apply interpersonal intelligence to vocabulary teaching by means of designing group work, such as using structured teamwork. In addition, the teacher can organize competition among students to record marks which group remember gains more vocabularies than other groups during a limited time. The winner will get credit from the teacher. In this way students can cultivate their learning interests and become more self-motivated.

6.1.4. The Non-interaction-oriented Approach

The non-interaction-oriented approach usually develops students' independent thinking ability as well as critical thinking ability. It pays more attention to the abstract ability in the process of learning[14]. They can be illustrated as follows.

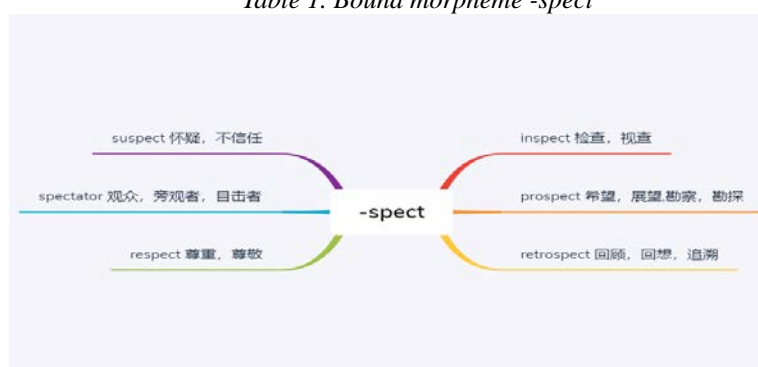
a. The application of logical/mathematical intelligence to vocabulary teaching

We can apply logical/mathematical intelligence to vocabulary teaching by the way of showing scientific data, providing student logic problems and puzzles, which can challenge students to discover some hidden patterns. Besides, we can analyze the prefix and suffix of a word to help students memorize the words and spell them correctly. Moreover, we can list appropriate procedures for memorizing vocabulary and create meaningful connections between the new words and old ones. Finally, we can use formula like "if...then. . ." to present the new words. For instance, if a word is viewed as an inflectional word, then it will not change the grammatical class of the stems to which they are attached.

b. The application of visual/spatial intelligence to vocabulary teaching

We can apply visual/spatial intelligence to vocabulary teaching by means of charts, pictures, diagrams, videos, flash cards, film-viewing, or a series of micro videos. Furthermore, we can create a mind map by arranging visual mapping activities such as word maze, and decorate or arrange environment. The following table is a typical example of mind map. We use a bound morpheme -spect as an example.

Table 1. Bound morpheme -spect



Teachers should encourage students to decorate word bullet. For instance, when the teacher teaches students the principle of irregular verb changing, we can use the following table to illustrate.

Table2. Irregular Verb Changing Example

Number	Verb	Past tense	Past participle
1	be(am, is, are)	was	were
2	bear	bore	born
3	break	broke	broken
4	draw	drew	drawn
5	hide	hid	hidden

c. The application of intrapersonal intelligence to vocabulary teaching

We can apply intrapersonal intelligence to vocabulary teaching by virtue of independent learning. For instance, students can set a goal during one semester or use a reflective learning method and keep study journal in English from which they can monitor their own learning process as well as review the vocabularies they have learned in class. Ultimately, they can evaluate whether they have reached the goal they set before or not. This is also a way to cultivate student's reflective ability as well as self-learning ability.

d. The application of naturalist intelligence to vocabulary teaching

We can apply naturalist intelligence to vocabulary teaching in order to help learners learn more new words by going outside for first-hand experiences in nature or bring nature to the classroom by virtue of videos, pictures, objects, plants and so on. Furthermore, we can perform experiments or activities that use objects from the natural world which help students memorize the vocabulary in a practical way.

In brief, we can help students with different dominant intelligences by undertaking different classroom activities. One important role of teacher is to nurture and help the learner aware their own intelligence and become successful learners by adopting various teaching methods which cater to different intelligences[15].

7. Conclusion

Due to the significant role of vocabulary in foreign language learning, vocabulary acquisition is a great challenge for most students, which means that having a better understanding of vocabulary teaching methods and strategies is of vital importance for teachers since they can help students memorize words and phrases efficiently. Multiple Intelligences Theory, as an emerging teaching idea, is well worth our studying for it can not only arouse student's interests in learning English based on their unique intelligence but also improve their vocabulary learning competence as well as speaking and reading ability. Moreover, the application of MIT to English vocabulary teaching is more suitable for the students

in independent colleges. Therefore, as educators, we can try to adopt such teaching method and strategy in English vocabulary teaching and make teaching reflections promptly after class. Through this way we can make use of the students' intelligence and design proper teaching plans which cater to their expectations, and ultimately achieve the goal of enlarging vocabularies as well as broadening their horizons of foreign language learning.

Acknowledgments

Fund Project: Jiangxi Provincial Educational Department Funding for Postgraduate Teaching Reform Project - A Flipped Classroom-Based Probe into the Construction of "Gold Course" for English Academic Postgraduate Candidates (JXYJG-2019-043).

References

- [1] H. Gardner (1983). *Frames of mind: The theory of multiple intelligence*. New York, NY: Basic Books.
- [2] H. Gardner (2000). *Intelligence Reframed: Multiple Intelligences for the 21st Century*, Basic Books, pp33-34.
- [3] H. Gardner (2006). *Multiple intelligence: New Horizons in Theory and Practice*. New York, NY: Basic Books.
- [4] P. Nation (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- [5] M. Wallace (1982). *Teaching Vocabulary*. London: Heinemann Educational Books.
- [6] M.J. McCarthy (1990). *Vocabulary*. Oxford: Oxford Cambridge Press.
- [7] H. D. Brown (2001). *Teaching by Principles: An Interactive Approach to Language Pedagogy* (2nd ed.). London, England: Longman.
- [8] P. Nation (1990). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- [9] L. Campbell, B. Campbell and D. Dickinson (2003). *Teaching and Learning through Multiple Intelligences* (3rd Edition). Allyn & Bacon.
- [10] J. Willis (1996). *A Framework for Task-Based Learning*. London: Longman, pp35-36.
- [11] R. Gairns and S. Redman (2011). *Learning in Doing: A guide to Teaching and Learning Vocabulary*. Foreign Language Teaching and Research Press.
- [12] T. Armstrong (2009). *Multiple Intelligences in the Classroom*. Association for Supervision and Curriculum Development.
- [13] D. Lazear (2003). *Eight Ways of Teaching: The Artistry of Teaching with MIT* (2nd ed.). New York: Pearson Education.
- [14] J.C. Richards and T.S. Rodgers (2014). *Approaches and Methods in Language Teaching*. Beijing: Foreign language teaching and research press.
- [15] L. Fu (2011). *Multiple Intelligences Theory and English Vocabulary Learning*. *Foreign Language Education and Teaching*, pp151-152.