

On the Three-dimensional Teaching of English Vocabulary for Senior High School Students from the Perspective of Constructive Information Technology

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ABSTRACT

The importance of vocabulary in language learning and teaching cannot be overstated. It is the focus and difficulty of English Vocabulary Teaching in senior high school. However, the effect of traditional teaching mode on vocabulary teaching is not ideal. With the development of social science and technology, information technology plays a more and more important role in English vocabulary teaching in senior high school. Currently, there is plenty of room to investigate the changes and advances brought about by the application of information technology to traditional teaching methods. From the perspective of constructive information technology, this paper studies English vocabulary teaching in senior high school. Firstly, it expounds the evolution and implementation of information technology. This paper analyzes the current state of English Vocabulary Teaching in senior high school, including the importance of vocabulary learning, teaching mode and existing issues. It provides a valuable reference for teachers to explore the theoretical and practical strategies of vocabulary teaching in senior high school.

Keywords: Vocabulary Teaching, Constructive Information Technology, Three-dimensional Teaching, Senior High School

1. INTRODUCTION

With the development of globalization, the importance of foreign language learning has been more affirmed, and language learning and teaching have received higher attention. English is one of the most widely used languages in international communication. English learning in senior high school has gained lots of popularity and support in China.

Vocabulary is a pivotal part of second language (L2) proficiency, which can be defined as the words of a language. Michael (2013) contends that it should not only include single items with specific meanings, but also lexical phrases or chunks [1], in accordance with the notion that knowing a word should involve its form, meaning and use. Learners' receptive vocabulary knowledge benefits from both incidental and intentional vocabulary education [2]. Due to a lack of second language (L2) input, incidental vocabulary learning is

limited, and most terms are learned via classroom teaching [3]. Therefore, vocabulary teaching in senior high school becomes paramount to a language teaching.

For senior high students who have learnt English for at least 6 years, they already have a certain vocabulary base, what they need is no longer the mechanical memorization of words, but also how to use them in context. Despite much research done upon vocabulary acquisition and teaching strategies, vocabulary teaching still remains problematic for EFL (English as a Foreign Language) teachers. One of the difficulties is that many teachers prefer to apply the traditional model in which they are the leaders rather than instructors in class. Under this circumstance, students are forced to absorb knowledge with less autonomy, which is against the principle of constructivism. Another is the lack of technology application in class, that is to say, the modernization of vocabulary teaching still lags behind. The application of technology can provide context for learners.

Based on the above information, this paper discusses the application of three-dimensional teaching in English vocabulary teaching from the perspective of constructivist information technology, in order to promote the transformation of English vocabulary teaching from teaching centered to learner centered.

2. ENGLISH VOCABULARY TEACHING UNDER THE ENVIRONMENT OF CONSTRUCTIVE INFORMATION TECHNOLOGY

2.1 The Development of Constructive Information Technology

Educators and researchers have applied technologies to assist language learning and instruction for many years [4]. In 1995, Hooper and Rieber elaborated on two important concepts, technology in education and educational technology [5]. The first concept is often considered as the concrete technologies and tools that were used in a real class. And many researchers found that the use of technologies brought effectiveness to teaching and learning [4]. The second concept involves that ideas from different fields were applied to create the greatest learning environment for students. Educational technology advocated that the teacher-center classroom shift to student-center status [6]. With the development of time, these two concepts are integrated and developed with each other.

It is consistent with the constructivist teaching view. The general teaching view of constructivism emphasizes that teaching cannot be completed by teachers by lecturing students individually, but by learners in a certain situation, that is, under the social and cultural background, with the help of others, using necessary teaching materials and meaning construction. Teaching cannot ignore learners' existing knowledge and experience, and cannot simply instill knowledge into learners from the outside. Instead, it should take learners' original knowledge and experience as the growth point of new knowledge, and guide learners to actively build new knowledge and experience from the original knowledge and experience [7].

Nowadays, here the item constructive information technology does not only include the use of tools and techniques in classes [6], but also means using information technology to cultivate students' information quality. That is to say, students have the knowledge of identifying, processing, utilizing, innovating, and managing information. Students should have the ability to process and innovate by mastering the comprehensive application methods of various information tools including computers and networks, to lay a good foundation for adapting to the work, study, and life of the information society [8].

It can be seen that the future development of education is inseparable from the support of information technology. Information technology education not only focuses on the application of classroom information technology, but also focuses on cultivating students' development and growth.

2.2 The Importance of the Application of Information Technology on English Vocabulary Teaching

2.2.1 Students Can Enhance Their Perception of Vocabulary

The attention and acquisition of information to people are mainly finished through visual and auditory channels, while the transmission of information is realized through hand and mouth sense [9]. Hoogeveen mentioned that learners respond to multimedia in a complex way and give the feeling of experiencing information instead of simply acquiring it 1995 [10]. In foreign language teaching, teachers use information technology to manage and synthesize text, pictures, sound, videos, and other multimedia information to create an immersive environment for students. When students are in this environment, they can deepen their impression of words from multiple dimensions such as vision, hearing, and touch. Yu (2005) described that in this way, students could be easy to have an interactive understanding and application of the content provided by information media in the process of learning [9]. From perceptual knowledge to rational judgment, students can improve their ability to digest the information obtained.

2.2.2 Teachers Can Enrich the Context of Vocabulary Teaching

In the past, the main resources for vocabulary teaching came from textbooks. The traditional way of vocabulary teaching was that teachers read word lists and explained the meaning and students had to listen and memorize the vocabulary directly without actual usage. But with the emergence and popularity of Computer-Assisted Language Learning and Teaching, many English teachers have shifted their focus from book-centered instruction to classroom-based instruction [10]. Vocabulary learning can be substantial in content with proper information and teachers' preparation. Song (2021) and Fu (2021) both agreed that networks can provide more lexical resources for teachers and multimedia technology can help teachers show them in classes [11-12]. Teachers can update the content and knowledge by using new materials such as short videos and social media to stimulate students' interest in vocabulary learning. Meanwhile, teachers can build up a virtual vocabulary learning environment throughout the network. Song (2021) also mentioned that a large number of data

technologies are conducive to creating an immersive context in the teaching and learning process [11]. These technologies can integrate the learning environment into students' real life instead of just being carried out in short lessons.

The application of information technology is beneficial to both students and teachers. The application in the teaching process provides a multi-dimensional environment for student to learn vocabulary. Under the perceptual environment, students' cognition of pronunciation, form, and meaning of the word will not be only connected to the textbooks but also will be more closely related to reality, which can help students improve their perception of vocabulary. Information technology also brings abundant lexical resources into lessons and provides a technical basis for teachers to enrich the context in class. Meanwhile, the application of information technology increases the possibility of continuity of teaching from class to after class.

2.3 The Enlightenment of Information Technology on English Vocabulary Teaching in Senior High School

2.3.1 Teachers Should Improve Their Skill in Technology and Select Proper Education Resources

Courseware is one of the most commonly used tools in classes. Courseware with high quality can improve the quality of teaching and learning, which might stimulate students' interest in studying further. On the contrary, courseware of low quality will bring negative effects. Courseware is produced by teachers. The quality of courseware depends on teachers' mastery of information technology [13]. With the development of information technology, many schools have established their multimedia platform [12]. At the same time, there are also many public platforms such as MOOC, Maker Space, and Wisdom Zoom, which can provide resources for teachers to teach and students to learn vocabulary [14-16]. Although there are a huge number of resources, not everyone is suitable for teaching. Teachers need to have a good command of information technology and choose suitable materials for teaching.

2.3.2 Teachers Should Focus on Students' Differences and Meet Students' Demands

Students are the object of education and the center of lessons. One of the purposes of teaching is for students to acquire new knowledge through lessons with guidance. Though there might be a large number of students in a class, it does not mean that teachers can treat them in the same way directly. Each student has his own learning habits and characteristics. Teachers should attach importance to their difference. Students' characteristics

and learning status can be collected, recorded, and analyzed by using information technology. When teachers design teaching courseware or assign exercises, they can use the data to combine the existing level and characteristics, so as to better grasp the actual learning situation of each student and teach students according to their aptitude [13,17].

2.3.3 Teachers Should Stimulate Students' Ability to Study Independently.

Vocabulary is the basis of linguistic abilities as well as the standard to evaluate a learner's English level [10]. In high school, students are not only required to master a number of words and phrases [18], but also required to improve their self-study ability and lay a good foundation for the future [14]. Wang (2015) mentioned that teachers should inspire students to analyze, discover, explore, and summarize vocabulary language knowledge by themselves [18]. As a guide to students' learning, teachers can use traditional and modern information tools in teaching and show students the usages. After class, teachers arrange various inquiry tasks to guide students to experience different tools, learn vocabulary and form self-study habits and learning strategies suitable for themselves.

The primary task of teachers is to educate and cultivate students. In senior high schools, students encounter more challenges in their study and life. It is important for teachers to grasp the situation of students and promote their growth by applying different technologies in education. In the meantime, as educators, teachers should also continue to learn, drive their own development, cultivate development thinking, make rational use of various tools and enrich their teaching.

3. THE CURRENT SITUATION OF VOCABULARY TEACHING IN SENIOR HIGH SCHOOL

Vocabulary represents all the words in a certain language. Once Harmer compares language structure to the skeleton of language, and in such case, vocabulary works to provide organs and flesh [19]. Therefore, vocabulary is of great value and significance to a language, which makes it a necessary part of teaching.

3.1 The Significance of English Vocabulary Teaching in Senior High Schools

According to Alquhtani (2015), teaching vocabulary is an important part of learning a language because languages are made up of words [20,21]. The crucial value and significance of English vocabulary teaching is the focus of this paper.

3.1.1 Vocabulary Plays an Important Role in Language Learning

Vocabulary is to language is what heart to our body. One who wants to learn or acquires a new language skill should start with vocabulary. Linguists claim that a baby acquires the mother language through the following stages, namely the babbling stage, holophrastic/one-word stage, two-word stage and finally the telegraphic speech stage [22]. Both holophrastic stage and two-word stage put an emphasis on words. The same goes with the process of learning a new language. Without vocabulary, the grammar rules will be meaningless to a language and conversations can hardly be set off or continued. In short, vocabulary is a language element that links the four language skills including listening, speaking, reading, and writing in learning a foreign language [2,23].

3.1.2 Vocabulary Teaching Enhance Students' Awareness to Learn Vocabulary

Vocabulary is very important for language learning, but many students pay little attention to or even ignore vocabulary learning. Their limited vocabulary can be a huge obstacle for them to learn English well. This kind of situation can be alleviated there is vocabulary teaching in school, as Yali (2010) found that both incidental and intentional instructional vocabulary teaching resulted in significant gains in learners' receptive vocabulary knowledge [2]. Teachers should take the responsibility to provide students some instructions when learning vocabulary and that is one reason why vocabulary should be taught in class.

3.1.3 Vocabulary Teaching Promotes Students' Understanding of Words

To know about how teachers and students perceive vocabulary teaching and learning, Asyish adapted Smith' questionnaire (1997) for students and Oxford and Crookall's questionnaire (1990) for teachers to make a survey [2]. Both teachers and students agreed that vocabulary teaching will have significant to students'

cognitive skills, behaviour skills and affective skills. Also, students believed that vocabulary teaching will positively help them to have a better understanding of the taught vocabulary and to apply them easier in similar situations. This study supports McCarthy's contention that the goal of vocabulary learning should be to not only memorize words but also to be able to apply them instinctively in a variety of language contexts when the need arises [2]. As a result, teachers should not only do vocabulary teaching but also apply certain techniques to promote this process.

3.2 The Common Models of English Vocabulary Teaching in Senior High School

Since vocabulary teaching is of such great significance, researchers and teachers have created various approaches to promote this process. For a certain time, several teaching models have come into being. However only three kinds of them will be elucidated here in detail, namely the traditional model, the three-Cs model and the incidental vocabulary teaching model.

3.2.1 The Traditional Model

The traditional model is based on grammar-translation method, which can be traced back to the late nineteenth and early twentieth centuries. As its name suggests, it emphasizes on grammar rules and the literal meaning. Applying this method, teachers frequently use a mother-tongue equivalent to explain a foreign term, phrase, or sentence. This indicates that the new words were learned through translation [24]. In China, teachers who follow this model usually make use of the bilingual vocabulary list (showed in Figure 1) in the textbooks, believing that vocabulary is generally a matter of remembering or memory—first they will teach students how to read each word and then ask them to follow the tape to practice, later they will explain these vocabularies one by one in Chinese with some collocations and several examples provided, finally comes to students' personal task to recite them. On the second day, teachers will make a dictation to test whether students remember the words.

Unit 1

lantern /'læntən/ *n.* 灯笼; 提灯
carnival /'kɑ:nɪvəl/ *n.* 狂欢节; 嘉年华
costume /'kɒstjʊ:m/ *n.* (某地或某历史时期的) 服装; 戏装
dress (sb) up 穿上盛装; 装扮
march /mɑ:tʃ/ *vi. & n.* 行进; 前进; 示威游行
congratulation /kən,grætʃu'leɪʃn/ *n.* 祝贺; 恭喜
congratulate /kən'grætʃuleɪt/ *vi.* 向 (某人) 道贺; (因某事) 为自己感到自豪
riddle /'rɪdl/ *n.* 谜语; 神秘事件
ceremony /'serəməni/ *n.* 典礼; 仪式
samba /'sæmbə/ *n.* 桑巴舞; 桑巴舞曲
make-up *n.* 化妆品; 性格; 构成方式
after all 毕竟; 别忘了
range /reɪndʒ/ *n.* 一系列; 范围; 界限
vi. 包括; (在一定范围内) 变化
range from ... to ... 包括从……到……之间
origin /'ɒrɪdʒɪn/ *n.* 起源; 起因; 出身
religion /rɪ'lɪdʒən/ *n.* 宗教; 宗教信仰
religious /rɪ'lɪdʒəs/ *adj.* 宗教的; 笃信宗教的

grateful /'ɡreɪtfl/ *adj.* 感激的; 表示感谢的
feature /'fi:tʃə(r)/ *vt.* 以……为特色
n. 特色; 特征; 特点
decorate /'deɪkəreɪt/ *vt.* 装饰; 装潢
church /tʃɜ:tʃ/ *n.* (基督教的) 教堂; 礼拜堂
significant /sɪɡ'nɪfɪkənt/ *adj.* 有重大意义的; 显著的
fade /feɪd/ *vi. & vt.* 逐渐消失; (使) 褪色;
(身体) 变得虚弱
fade away 逐渐消失; (身体) 变得虚弱
typical /'tɪpɪkl/ *adj.* 典型的; 有代表性的; 平常的
firecracker /'faɪə,kɹækə(r)/ *n.* 鞭炮; 爆竹
evil /'i:vəl/ *adj.* 邪恶的; 有害的; 罪恶的
n. 邪恶; 罪恶; 恶行
in spite of 不管; 尽管
commercial /kə'mɜ:ʃl/ *adj.* 商业(化)的; 以获利为目的的
commercialise (*NAmE* also **-ize**) /kə'mɜ:ʃəlaɪz/ *vt.* 使商业化; 利用……牟利
commercialisation (*NAmE* also **-ization**) /kə'mɜ:ʃəlaɪ'zeɪʃn/ *n.* 商业化
take advantage of 利用; 欺骗; 占……的便宜

Figure 1 Word List from English Textbook Compulsory B3 [25]

In short, when teaching vocabulary in such a traditional way, vocabulary is presented primarily through direct translation from the native language and memorization, with a bilingual word list. [26]. Students are forced to recite words in a mechanical way and are likely to use what they have recite in real conversations or in their writing.

3.2.2 The Three-Cs (convey, check, consolidate) Model

The three-Cs model refers the process to convey, to check and to consolidate. First, teachers should convey meaning with the help of a mine, an anecdote or other similar means. After that, they will check whether students have understood the meaning or not. During this process, there are various devices that can be applied including a series of questions, categorization games, word-picture matching and so on. For example, after conveying the meanings of “stagger”, “crawl” and “march”, teachers can invite students match them with pictures of “an elderly couple in the park”, of “a baby” and of “a soldier” respectively. Finally, teacher should consolidate and thus encourage these words with their personal experience or daily life.

The model is commonly used to teach vocabulary, as it is introduced in *Curriculum and Teaching Methodology for English* [27], one of the widely-used textbooks for English majors in normal universities. It

has made three improvements to the traditional ones: first, by checking, students can have a better understanding of the new words. Second, through consolidate, students get the chance to connect what they have learnt to their daily life. In another word, they are using words in context so that what they learnt is not “dead” but “alive”. Finally, teachers usually design various activities for different stages in which students would not feel rigid and dull.

3.2.3 The Incidental Vocabulary Teaching Model

This model means to teach vocabulary in the process of hearing, speaking, reading, and writing, whose original purpose is not vocabulary itself. In another word, teaching vocabulary in this way is a by-product. One of the most common methods in this model is to teach vocabulary through guessing from context. Nation (2010) claims learning from context should not be limited in reading materials, but also from conversations, films, televisions and so on [21]. In China, where English is not usually used out of English classes, the context of English language mainly depends on the printed reading materials. When guiding students to understand the reading materials, in where there are unfamiliar words for students, teachers will help them to guess according to the certain context. Of course, sometimes teachers play music, videos or films, through which they teach only several words. However, as Susanto proposed that clues in the contexts is a pivotal element activate guessing from context [21]. If it is missed, students will fail to guess and

teachers have to go back to the tradition model by giving an equivalent Chinese word.

Despite students can also learn how to use the newly-gained words in certain context, this model also has its limitations that without teachers' emphasis on vocabulary, they may ignore them quickly after class and that students can only learn one of the word's usages, which is far from mastery.

3.3 The Difficulties of English Vocabulary Teaching in Senior High School

Even though scholars and teachers have explored this field a lot to enhance the efficiency of vocabulary teaching, it still faces several difficulties, among which three are prominent and will be discussed.

3.3.1 Senior High School English Vocabulary Teaching Lacks the Effective Integration of Learners' Roles

For a long time in China, teachers have occupied the central role in class. To get students ready to take the examination to college, teachers prefer to teach everything in a pedagogical way, which makes students bored and tired. Thus, students are usually forced to learn with low interest and motivation rather than explore new things by themselves. In the class, teachers explain the new words in Chinese, aiming to help student remember the "one-to-one correspondence" between both. In order to expand vocabulary, students will invest lots of time to recite the words by matching them with the equivalent Chinese translation after class. However, Gui (2004) found that the first on the list of Chinese students' English mistakes was vocabulary spelling, which could account for 17.4% among all [10]. Obviously, such kind of mechanical memorising is ineffective, for teachers ignore the learner's learning autonomy.

3.3.2 The Modernization of English Vocabulary Teaching and Education in Senior High School Sags Behind

In 2019, the Communist Party of China Central Committee and the *State Council issues China's Education Modernization 2035*. It has laid out ten strategic tasks for education modernization, one of which is to speed up education reform in the information era. However, the modernization of English Vocabulary Teaching and Education in Senior High School still sags behind. On one hand, many teachers pay less attention to modern teaching model, adhering to the traditional methods and focusing on students' grades only. On the other hand, the use of modern equipment is limited. For some rural areas, blackboard and chalks are the only teaching aids [28]. For those school with renewed equipment, they face the problem that some old teachers

refuse to or fail to use the modernized tools. Like so, the teaching is monotonous.

China's educational modernization 2035 puts forward ten strategic tasks for educational modernization, one of which is to speed up educational reform in the information age. The modernization of English vocabulary teaching and education in senior high school needs to be improved. On the one hand, many teachers do not grasp the modern teaching mode, and the traditional teaching methods cannot be replaced for the time being. The students' grades closely related to entering a higher school have great guidance for teaching. On the other hand, the use of modern equipment and hardware updates continue to improve. In some rural areas, blackboard and chalk are the only teaching aids [28]. For those schools with updated equipment, the scale training of teachers' information technology needs to be completed as soon as possible. The entry of educational technology into the classroom needs material guarantee and talent training.

High school teachers and educators have realized the importance of vocabulary teaching, and the classroom teaching model needs to be improved urgently under the background of modern education. Using educational technology to effectively carry out vocabulary teaching reform, improve vocabulary teaching process through innovative teaching mode and the application of more and more new technologies, and improve teaching quality and effect is the prospect of continuous pursuit of education.

4. THE STRATEGIES OF VOCABULARY TEACHING FROM THE PERSPECTIVE OF CONSTRUCTIVE INFORMATION TECHNOLOGY

With the deficiency of vocabulary teaching approaches in senior high school mentioned above, it's conspicuous that since few teaching methods were utilized in traditional English teaching, teachers often broke away from the specific language environment to carry out English teaching. For students, however, it's virtually difficult to learn vocabulary in this mode, resulting in low efficiency of both teachers and students [29]. In view of this phenomenon, this paper puts forward the corresponding strategies based on the constructivist information technology teaching theory.

4.1 The Implement of the Three-Dimensional Teaching of English Vocabulary

4.1.1 Teaching Mode and Three-Dimensional Teaching Mode

Teaching mode refers to a relatively stable teaching structure and operating mode centering on a certain theme under the guidance of a certain teaching thought

for the completion of a specific teaching goal [30]. The so-called three-dimensional teaching mode, compared with the one-way knowledge imparting teaching mode, is a three-dimensional and all-round teaching system with courses as modules, ability cultivation as the core, teaching resources as the platform, and comprehensive use of all teaching elements [31]. The key of three-dimensional teaching is students-centered, which arouses students' motivation and cultivates their autonomous learning ability.

4.1.2 The Use of Multimedia in English Vocabulary Teaching in Senior High School

With the increasing development of technology, information technology was brought into most of classes. As one of the most typical approaches, the application of multimedia provides a realistic context for students and arouses their interests in classes. Actually, the application of multimedia technology is a change in teaching concept and a challenge to the teacher-centered teaching mode that simply imparts language knowledge and skills. Instead of teaching general language knowledge and skills to students, the application of multimedia technology pays more attention to the cultivation of language application ability and independent learning ability [32].

With the presentation of words, voice, pictures, videos, as Zhang remarked "students' senses rapidly establish the connection of all aspects of vocabulary under the synergistic effect, and accurately master the vocabulary, which is conducive to understanding and memory" [32]. Whether real conversation context or relaxing learning environment created constructs more opportunities and methods for students to partake in and put vocabularies into practice.

On the basis of teaching theory of constructivism, trace of cultural connections of vocabularies, supply of relative context and relationship among vocabularies could be provided. While with the aid of multimedia, a further intuitive, concise and graphic situation is represented. For instance, in an abstract vocabulary teaching process, teachers should impart the meaning of it to students by "Guessing from context". Several pictures or a video could be shown in Power Point so as to instruct students to join in the class while their passion is aroused.

4.2 Create Three-dimensional Exercises for Students by Information Technology

4.2.1 Cultivate Students' Awareness of Independent Learning Conscience After Class

From the core of three-dimensional teaching mode - ability cultivation, students-orientation is matter. That is to say, as learning instructors, teachers should be aware

of their position in case students' over-reliance on them. As Xingzhi Tao, an illustrious Chinese educator, observed, "I reckon that a good teacher teaches students how to learn knowledge rather than knowledge." With the same principle, a good student must possess effective approaches to learn and make a conscious effort to learn on his own. Thus, teachers should provide opportunities for students to learn independently to the greatest extent.

Cultivation of students' independent learning ability does not mean that teachers can indulge students to learn arbitrarily. In regards to students' grasp of the skills of autonomous learning, higher requirements are put forward to teachers in essence [32]. Some after-class tasks, like preview videos materials or homework, raised should be appropriate and effectively exercise their independent learning habits. Only when students have good autonomous learning ability can they organically connect autonomous learning with classroom learning, while build the expected goal of three-dimensional teaching [33].

4.2.2 Provide After-class Web-based Learning Platforms for Students by Information Technology

With high development of information technology, an increasing body of great knowledge resources are uploaded to the Internet. As Zheng argued that "Students have limited time to learn knowledge in class" [33], teachers should instruct students to leverage the spare time in effectively extracurricular independent learning. Hence, the existence of learning platforms is necessary.

For instance, after each class, teachers could post some corresponding exercises and reflection questions on the platform. In order to complete them well, students have to search for relative materials on the Internet, which facilitate the process of independent learning. Furthermore, some reading materials could be recommended on the platform to expand students' lexical resources. However, teachers should pay attention to the degree of difficulty of materials, namely, distinct appropriate content should be set up for different children.

4.3 Cultivate Students' Constructive Thinking Ability

Language learning does not merely imply the process of language knowledge learning, but the acquisition of way of thinking. According to Davydov, the fundamental task of modern school education ultimately lies in changing students' thinking types designed by teaching objectives, contents and methods. As the ultimate goal, higher-order thinking is an important ability to adapt to the knowledge characteristics of contemporary society [34].

4.3.1 Cultivate Students' Creative Constructive Thinking Ability

The application of information technology not only optimizes classroom teaching methods, but facilitates students' creativity. Creative thinking is a way of thinking in different directions and figuring out problems in different ways [35]. This sort of thinking way motivates students' imagination and encourages them to find approaches to settle problems by themselves.

In virtue of the utilization of multimedia, teachers should create appropriate vibes and language contexts so as to direct students to launch a series of associations and to express their perspectives. Meanwhile, taught with the same approach every time, students might form a stereotyped thinking habit. Hence, teachers should actively seek for innovation in English teaching mode and optimize the existing teaching program according to the actual situation of their classes [34].

4.3.2 Cultivate Students' Critical Constructive Thinking Ability

As Zhang mentioned that critical thinking is an indispensable approach to explore the world, and dare to make exploratory evaluation and reflection in the face of set thinking [36]. Through the process of learning, students shouldn't merely acquire perspectives from others, but carry out self-questioning and self-reflection. By absorbing, arranging, analyzing and reflecting information, students' cognitive structure will be enhanced.

Some videos deserving discussion and analysis could be shown by the media, which encourage students to think deeply. By then, some activities for students' output should be provided as well, such as a speech or debate competition. Participation of those kind of activities are not barely limited in vocabulary teaching, but over the knowledge to the further significance of language learning. Students with more independent thinking ability and insight will be cultivated.

In the view of the phenomenon of low efficiency of modern teaching methods, three-dimensional teaching is considered to be great in vocabulary teaching. With the utilization of information technology, multimedia creating context and relationship among vocabularies while corresponding after-class learning platforms play an important role in vocabulary learning. Meanwhile, the constructive thinking ability of students, which motivates students' imagination and encourages them to analyze and settle problems, cannot be ignored.

5. CONCLUSION

This paper introduces the application of the three-dimensional teaching in English vocabulary teaching

from the perspective of constructivist information technology, and puts forward effective methods to promote the improvement of vocabulary teaching process. By reviewing and analysing the journals on vocabulary teaching strategies published by other scholars, it is found that the three-dimensional teaching model is an effective method. It provides the cultural connection, relative context and relationship between vocabularies, stimulates students' thinking ability, and produces further language learning significance. With the help of constructive information technology, three-dimensional teaching can improve the teacher-centered phenomenon to a certain extent, improve students' learning interest and motivation, and exercise students' learning ability to master knowledge more easily and stronger.

This strategy is also subject to some restrictions in use. It provides students with too much additional unfamiliar information, which may lead to cognitive overload that they cannot understand. Since a large amount of evidence about the limitations of three-dimensional teaching cannot be found, a reasonable explanation is given at the end of the discussion, so that researchers can systematically evaluate its effectiveness in the future.

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