

The Vocabulary Teaching Mode Based on the Theory of Constructivism

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Abstract—Vocabulary teaching is an important research topic in English teaching, this paper combines constructivist theory with English vocabulary teaching and proposes a new model of vocabulary teaching on the basis of qualitative analysis and modular construction, that is “The Word Parameter Contextualized Meaning Construction Mode and The Embodiment-activation Schematic Construction Mode”, the former point out that some words, in vocabulary teaching, do not appear in the vocabulary list, but teachers can hint parameters or clues in the context, such as: time, categories, comparison etc. to guide students to recognize and construct the meaning of unknown words autonomously; the latter means that the human brain systematically stores the learned knowledge and experience and divides it into several units to form a "schema" of which some incomplete places will continue to be supplemented and improved with people's cognition and practice's development. At the same time, the accumulation of new knowledge will activate the old knowledge in the brain, which enables learners to connect messy knowledge into a systematic network. It is worth promoting in teaching practice. This study selects the college English textbook "New Vision" as the case material to analyze and prove that this new type of vocabulary teaching mode not only can broaden the teaching thinking of teachers and improve teaching efficiency, but also can help students explore the cognitive laws of vocabulary, build a vocabulary system, and effectively stimulate their potential in the short term.

Index Terms—vocabulary teaching, constructivism, contextual parameter, schema, motivations

I. THE INTRODUCTION

Vocabulary is not only an important component of language expression, but also the most basic content of language application. For most learners, the breadth and depth of the vocabulary will affect their listening, speaking, reading, writing and translation level, therefore, vocabulary teaching is particularly important. However, the current situation of English vocabulary teaching and learning is not optimistic. English teachers have the following problems in vocabulary teaching: the first problem is that teachers in schools generally use the grammar translation teaching method in vocabulary teaching, which focuses too much on the explanation of grammatical structure and sentence structure, but seldom explain the vocabulary part. The second problem is that due to the influence of traditional teaching concepts, teachers often use the three-step method to teach vocabulary when explaining words, that is "pronunciation + spelling + word meaning", ignoring the interpretation of contextual meaning and cultural connotation, which is not conducive to the improvement of students' vocabulary cognitive ability and self-construction ability of knowledge. As a result, students only passively accept language knowledge and their motivation to learn is stifled. The third problem is that roles of teachers and students are not appropriate, teacher play the role of instructor in the classroom, and rarely explains language learning strategies, leaving the important task of learning vocabulary after class. These teaching problems cause students to memorize vocabulary books or vocabulary lists mechanically, and they always forget old words after learning new words, therefore, it is difficult to expand the breadth of the vocabulary (Laufer, Parabakht 1998). In addition, students lack the depth of vocabulary learning, and only master the literal meaning of the words they learn, but do not really master the dynamics of the semantics in the context. As a result, students are bored with vocabulary learning and feel that vocabulary learning is boring, resulting in poor speaking and writing ability (productive ability), as well as some common problems in class and examinations, such as, poor semantic flow and inaccurate collocation or word selection.

Therefore, how to efficiently teach vocabulary has become an important research topic in college English teaching. As an important theory of teaching, constructivism thought that knowledge does not exist objectively, but is actively constructed by individuals or learners under a specific social and historical background, therefore, in vocabulary teaching, teachers should stimulate students' knowledge construction ability and make students the main body of classroom learning. Based on this theoretical point of view, this thesis takes the teaching practice of "New Horizons College English Reading and Writing Course (2011)" (referred to as "New Horizons") as a case study to discuss the constructiveness of English vocabulary teaching and learning.

II. CONSTRUCTIVISM

The theory of constructivism was first proposed by the Swiss cognitive psychologist Piaget in the 1960s, which revealed the cognitive rules of human learning process in a unique perspective. Later in the 20th century, with the

further efforts of Piaget, Dewey, Vygotsky and other scholars, constructivist ideas is constantly being developed and improved, and gradually formed a relatively mature theoretical system. The two basic core concepts of constructivism are activity theory (Leont'ev, 1981) and the area of recent development (Vygotski, 1930). The former refers to the activities, behaviors, operations of individuals and groups which are affected by social institutions, that is to say, social institutions determine the background or context of educational activities. The latter discusses the basic characteristics of learning. It mainly explores that how participants in learning activities obtain the assistance from more capable learners, and predicts the development and changes from their potential capabilities, according to the individual's performance in interactive activities. Both the activity theory and the recent development zone reveal an important idea, that is, the change in the concept of learning, students no longer regard learning as a process of simply receiving knowledge, but believe that learning is a process that learners participating in various learning activities and acquiring knowledge. For example, when students have a conversation, they consciously mention a lot of information materials, especially some new vocabularies that they have previously unknown, will be learned accidentally, which seem to be more effective than just the knowledge imparted by teachers. Therefore, in the process of interactive learning, students can improve their learning ability, one of the performances of the learner's progress is that they no longer need their teachers to remind them to use a certain learning skill but are able to independently and consciously apply a certain skill, that is, the development of metacognitive ability. However, the cultivation of students' autonomous construction ability in vocabulary teaching is inseparable from the teacher's guidance, teachers should give critical scientific guidance in whole vocabulary teaching process, and provide necessary help and give some materials in time when students are uncertain or doubtful, at this time, teachers' language should be instructive, not prescriptive. Except that, teachers should pay attention to learners' past learning experience, and encourage students to seek learning assistance from their learning partners, make sure that the classroom atmosphere is active, teachers and students are very involved, because the classroom is "us", not "me". The communication between teachers and students should be not only the transmission of information, interpersonal communication, but also instructive. Based on the requirements of the two principles above, this paper designs the following teaching models, they are the word parameter contextualized meaning construction module and the embodiment-activation schematic construction module.

III. ENGLISH VOCABULARY TEACHING FROM THE PERSPECTIVE OF CONSTRUCTIVISM

How to efficiently conduct vocabulary teaching has become an important research topic in college English teaching. Because the traditional vocabulary teaching mode always takes the teacher as the main teaching channel, listing the meaning and collocation of each word in isolation without the context of the article, and asks students to memorize mechanically. In order to solve these problems, Constructivism advocates student-centered and emphasizes that students are the active constructors of the meaning of knowledge. It updates the traditional vocabulary teaching concept in China that teachers are the center of vocabulary teaching and emphasizes learners' subjective consciousness and the ability of self-construction. This thesis mainly quotes the viewpoints of "Schema" and "Context" in Constructivism, and proposes two modes of vocabulary teaching, one is the word parameter contextualized meaning construction module, that is because every word has their meaning in a specific context, as Verschuereen said, "without linguistic context, a word would be just a fragment without any meaning" (Verschuereen 1999). Generally speaking, the meaning of word in context is no longer the dictionary meaning, but the dynamic context meaning which needs to be constructed on the basis of the interaction between subject and object. The other is the embodiment-activation schematic construction module, this model is based on the reflection schema and cognitive structure theory proposed by constructivist psychology (Hui Ying 2010), this mode can activate the knowledge and experience stored in the brain, and effectively guide students to organize a complete vocabulary network in vocabulary learning.

A. *The Word Parameter Contextualized Meaning Construction Module*

This model mainly relies on the information provided by the context, context refers to "situation or context that helps people understand" (Oxford Advanced Learner's Dictionary), including "situational context" and "linguistic context" which restricts the generation of semantics. In real case analysis, the parameters in the context provide a reference for learners to determine the meaning of each word.

1. The parameters in the context

Zeng Li sha (2011) put forward the theory of context parameter, it said that "context" or "pre and post article" can be specifically expanded into a number of identifiable, qualitatively generalized "parameters" which restrict the process of specific discourse understanding, interpretation and generation of discourse unit. These parameter factors are shown in the table below.

THE TABLE OF CONTEXT PARAMETERS

Parameter factors	Definitions	Examples
Generic-specific Parameter	Generic concept can derive the specific concept.	for instance, such as, including, etc.
Explanation Parameter	It is used to explain unknown word.	is, or, that is, namely, referring to, defined as, a dash, etc.
Anaphora /Cataphora Parameter	It has the same coreference as a word in the preceding or following text.	These, that, the former, the latter, etc.
Synonymic Parameter	The parameter factor in the context that has the same meaning as a unknown word.	that is, namely, viz, put it simply, etc.
Antonymic Parameter	It has the opposite meaning to the unknown word	But, while, whereas, etc
Logic-relation Parameter	Word that used to express logic-relation, such as, whole-part relationship, etc.	Consequently, in part, generally, put it more specifically, etc.

Of course, these parameter factors are not all. The table lists only some conventional parameters. “Yang guizhang and Zeng Lisha (2014) believed that context parameters were divided into two categories: conventional and unconventional: the former includes subject, subject tendency, time, location, event, scale, generic-specific, causal parameters, etc., the latter refers to a collection of diachronic social and cultural context parameters or parameters with random characteristic constructed by cognitive relevance.”Setting contextual parameters not only reflects the potential connections between textual meanings and the constraints of various illocutionary knowledge, and also reflects the mental representation of the operation of the discourse coherence mechanism, making it empirical. In vocabulary teaching, contextual parameter factors can often fill in the lack of information, and play a great indicative role in the vocabulary learning.

2. Case Analysis of Vocabulary Teaching

In a real teaching case, the word parameter contextualized meaning construction module provides teachers and students with a framework for teaching and learning. Under the guidance of a wide range of contextual parameters, students can accurately identify unrecognized vocabularies and complete the process of vocabulary acquisition. The following is a specific case analysis,

Example one: As they moved westward, they faced many adversities, such as scarce food, extreme weather and loneliness. (“New Vision I”, Unit 2)

Gracia (2009) thought that the meaning of a text depends on the context, so it can be regarded as a relational concept. In this case, *adversities* as the new word of this sentence, the semantic construction of the word depends on the parameter factor of the following context, that is “such as” which is called generic parameter, at the same time, other three concepts “scarce food, extreme weather and loneliness” belongs to the specific parameters or concepts, these negative lists just confirm what the previous “adversities” means, and thus, learners are able to construct the accurate meaning of the generic parameter’s concept, that is “some difficult and tricky things”. In addition, *moved westward* is “the westward movement” in the American history, according to this historical background, it is not difficult to determine that the meaning of this sentence, that is “when they move westward, they are encountering difficulties such as, food shortage, bad weather and loneliness.”Therefore, the existence of generic-specific parameter here plays a huge role in constructing the meaning of unknown word.

However, the traditional context is single, so complex problems cannot be solved in single context. The parameters are the multi-dimensional map and they have restrictive relations with each other, such as macro-micro propositions, whole-part, concept and morpheme, relationship feature map and other cognitive mechanisms. Learners need to distinguish the meaning of word from complex parameter relationships, the specific analysis is in the following example.

Example two: Writers have constantly imagined worlds where people lived to extraordinary ages while holding on to their youthful looks and vigor by means, mostly foul. In the real world too, people are tempter to try all kinds of disgusting things, from bathing in tubs of warm mud to receiving injections of monkey glands, all in the hope of foiling the negative effects of aging. (“New Vision I”, Unit 1)

There are a lot of parameter factors in the paragraph and these factors are connected and intertwined with each other, when students distinguish unknown vocabularies, they may not find the equivalent parameter factors, which may lead to parameter displacement or even the ambiguity of word. Therefore, finding the right parameter factor is very important. Let’s analyze this paragraph.

Here, *foul* is a new word in this paragraph. Learners need to construct the meaning of this word by qualitative analysis of the context parameter factors in this paragraph, *holding on to and foiling* is the objective parameter, *means* is the measure parameter; *disgusting* is synonymous parameter, and the semantic prosody constructed by disgusting and negative is the same, therefore, we can infer *foul* is bad. In fact, the recognition of contextual parameters requires teachers to help students make relevant judgments between the concept or proposition of contextual changes (independent variables) and functional contextual parameters (dependent variables),. In this case, the teacher needs to guide the students to make three steps. The first step is to find the unknown words and clarify the structure of the sentence; the second step is to find the parameter factors, such as the purpose parameter “*in the hope of and holding on to*”, the synonymous parameter “*negative and disgusting*”; the third step is to find the equivalent item of the parameter

and determine the final meaning of the unknown word.

This vocabulary teaching mode makes full use of contextual parameter factors. Students can make full use of objective factors in the context, which is an important step in vocabulary construction. In addition, students should also more or less relying on the self-cognition level in the process of vocabulary learning, this involves another vocabulary teaching mode in this thesis, that is "the embodiment-activation schematic construction module".

B. The Embodiment-activation Schematic Construction Module

This vocabulary teaching model originated from the hypothesis of "schema" in cognitive psychology. The hypothesis was originally proposed by Kant. "He believed that there are pure concepts in the human brain, and schemas connect concepts and objects of perception". (Kant 2000). Schematic theory has continuously formed the schema theory of modern cognitive psychology in its later development and schema theory mainly used to explain the psychological process of storing and extracting information. Since then, more and more scholars have used schema theory as a tool for teaching and cognitive research.

The embodiment-activation schematic construction module is designed based on schema theory, This model fully takes into account human cognitive ability, emphasizes the dynamic interaction between object resources and the learning subject, and makes up for the traditional vocabulary teaching's neglect of the brain integration ability. It is a bold attempt in the teaching process.

1. The design of schematic construction module

The design of this model consists of three steps. The first step is that the teacher creates a real situation and requires students to act the role in the situation, to experience and feel, in this process, students' multiple senses are fully mobilized. In the second step, when students are immersed in a real situation, their brains are in an extremely active state, and the previously forgotten knowledge is gradually reactivated, under the collision of new and old knowledge, new cognition and understanding are produced. The third step is the construction of the schema. When the learner's brain has too much knowledge, the brain will automatically sort out and internalize it. In this process, the knowledge will be organized into a temporal or spatial network and formed in the brain, schema construction is the last and most critical step of this model and it further proved the effectiveness of this model. Therefore, in the process of semantic construction of vocabulary, learners can use schema methods to learn and master vocabulary in language contexts, expanding vocabulary and use vocabulary for practical purposes and communication activities. Then, how students and teachers do in a real vocabulary teaching case, the following is a specific analysis.

2. Case Analysis of Vocabulary Teaching

In teaching practice, the embodiment-activation schematic construction module takes into account the learner's real experience, cognitive ability and dynamic knowledge construction ability, providing teachers and students with a framework for teaching and learning. It provides an effective program for English vocabulary teaching, under the guidance of that mode, students can complete the process of vocabulary acquisition. The following is a specific case analysis.

Example one: He (the officer) said the pair's methods suggested they might be the same men who had committed a number of robberies in the area over the past few months. He asked me to come to the station and look through mug shots. ("New Vision I", Unit 1,5b)

The subject described in this case is robbery, which said a story that the author may have met someone who once robbed himself. When teaching the "contextualized" vocabulary, such as *robbery*, teachers can use the embodiment-activation schematic construction module, the concept of "robbery" will activate the diagrams or knowledge framework in the brain, such as, robber, pistol, wallet, valuables, threat, robbed, alarm and so on, teachers can show pictures to them or ask students to act and play relevant videos so that students can learn vocabulary on the basis of experience and cognition. In the subsequent text reading, students can find and fill in new slots, thereby constructing a more complex and experienced "robbing" situation, storing these vocabularies in memory as a knowledge node. Compared with traditional vocabulary teaching, the embodiment-activation schematic construction module is characterized by the experience (contextualization), constructability (relevance) and systematization (stability) of the vocabulary. Below is a schematic analysis of robbery.

(robbery schema)=robbers(single robber/pair/gang/armed robber/offender)--a crime tools (gun/pistol/knife)--robbery of money or sex (wallet/valuables/sex)--a verbal threats (threaten/bark/snap)--intimidation of action (dig the gun into the head/temple)--searching or plundering money (searching/grabbing)-- the person who is robbed (the robbed/victim)--an action (hands up or extended/lie on the stomach)--and psychological activities--(frightened/ask god for mercy)--an alarm(call 911/report the details/operator/uniformed /officer/police car).

In the pictorial teaching mode, students can acquire knowledge quickly and intuitively. Therefore, both the various multimedia and corpus specific resources can provide convenient and effective help for the construction and reconstruction of various lexical knowledge schemata.

Example two: I climbed the ladder, heard my dive announced, and commenced the moves that would thrust me into the air. (Para.2) Pushing off the diving boarding with my legs, I lifted my arms and shoulders back, and knew immediately I would be close to the board and might hit my hands. (New Vision, Unit 5b)

In this case teaching, the difficulty in this sentence is the word *moves*, which is the plural form of the noun and includes two or more actions. The appropriate contextual meaning needs to be enriched and constructed in the current

context. Teachers not only need to use pictures and videos to introduce students to the background knowledge of diving, but also need to ask a student to imitate the diving action of a springboard: climb the ladder, walk to the end of the springboard, wait for the jump instruction, the jump action including pedal accumulating, arm standing backward, pedaling on springboard, at the end, jumping into the air. So the following schema memory network is formed.

(moves) = (standing on the end of the diving board -- posed --lifting the arms -- pushing off the board --thrusting into the air).This schema strengthens vocabulary memory. But it can be regarded as a sub-schema of springboard diving, teachers and students can further construct a complete diagram, thereby expanding the students' knowledge system and background knowledge.

Experience-constructivist teaching model points out that the decoding of linguistic signs is a series of cognitive processes with inherently relevant contextual parameterized operations (Huang lepin & Wang junchao, 2015).This innovative model of combining teacher's top-down explanations with students' bottom-up construction, combining static deconstruction with dynamic construction in context, and constructing open modules together with teacher-student interaction, not only provides theoretical basis for vocabulary teaching, but also It helps to improve students' ability to guess word and create new word. It has great potential for development in vocabulary teaching.

IV. THE CONCLUSION

Through the analysis of the above teaching cases, it is not difficult to draw such a conclusion that the word parameter contextualized meaning construction module and the embodiment-activation schematic construction module are feasible in actual teaching cases. On the one hand, this model makes teachers and students notice the existence of parameter factors. In the construction of vocabulary semantics, learners can rely on multiple parameter factors to distinguish unknown word and complete the process of vocabulary learning. On the other hand, the establishment of schemas connects the same category with related word in English. When students see a word, they can think of a series of characters, which not only enlarges the vocabulary, but also makes it difficult to forget. This teaching mode can make the teaching and learning of English vocabulary not monotonous and arduous. In addition to using schemas to construct semantic maps of vocabulary, teachers can also instruct students to use this strategy for English listening, oral teaching, etc. It has a wide range of use. In actual vocabulary teaching, students will improve their English reading ability due to the expansion of English vocabulary. Therefore, scientific learning strategies can expand English vocabulary when learning and memorizing English vocabulary. Thus, through deep understanding of the meaning connections between vocabularies, students can improve the ability of memorizing vocabularies. This kind of learning strategy of semantic representation is worth popularizing in daily foreign language teaching.

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