Application of Corpus to the Exploration of Senior High School English Vocabulary Teaching Strategies——Based on the Concept of English Learning Activities

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Abstract: *The New English Curriculum Standard for Senior High School (2017 Edition) advocates the core competence-oriented "concept of English learning activities" which is the main way to achieve the curriculum goals; The Standard also advocates using modern information technology which is one of the approaches to promote students' English learning. As a product of modern information technology, "corpus" has been a new method to English vocabulary teaching. Taking the vocabulary lesson of Unit 4, Book1 of the new textbook of the People's Education Press (2019 Edition) as an example, the paper is based on the concept of English learning activities and uses corpus resources to resolve the problems existing in English vocabulary teaching in senior high school currently. This exploration will guide students to learn vocabulary and improve teaching efficiently.*

Keywords: *The Concept of English Learning Activities, Corpus, Senior High School English, Vocabulary Teaching*

1. Introduction

The New English Curriculum Standard for Senior High School (2017 edition) (hereinafter referring to as "Curriculum Standard") puts forward the concept of English learning activities, which should be used as a normalized classroom teaching method to promote the formation of students' English subject core competences [1]. Nowadays, with the information technology entering classrooms increasingly, the "Curriculum Standard" also clearly points out that teachers should learn to utilize the information technology to provide personalized learning resources in order to improve the efficiency of English learning [2].

While the modern "corpus" that is based on information technology is gradually used widely, including the compilation of dictionaries and textbooks, the design of syllabus, the teaching of vocabulary and grammar, etc. with its characteristics of large capacity, authentic resources, fast retrieval and accuracy [3]. All in all, corpus has become an unprecedented convenient method in language teaching.

This article will discuss how to design an English vocabulary lesson by using corpus based on the concept of English learning activities with the expectation that this will be one of the effective ways to develop students' core competences for English teachers at senior high schools in China when they carry out vocabulary teaching.

2. Problems in English Vocabulary Teaching in China

English is an extremely important subject in the curriculum system and the efficiency of vocabulary learning has a great influence on the efficiency of English learning. Just as Harmer mentioned, "If the grammatical structure is the bones of the language, the vocabulary is the organ, flesh and blood of the language; If you do not use the vocabulary, you will never be able to express any meaning even if you have mastered the grammatical structure" [4]. However, according to the related statistics, 80% Chinese students are confronted with problems in vocabulary learning, including the inability to remember and use [5]. Some specific problems are as following:

Firstly, the teaching methods are boring. That is to say, teachers blindly instill knowledge while students passively accept knowledge. English teachers adopt the traditional teaching mode of teacher-centered, which means teachers present while students just listen during the class and students remember words after class [3]. So on the process of learning students fail to explore the rules of vocabulary on their own. Gradually, their interest in learning will decline and vocabulary learning will be inefficient.

Secondly, the teaching resources are limited. That is, teachers teach vocabulary with English textbooks merely without real and high-quality materials. English teachers at senior high schools usually adopt two types of vocabulary teaching methods. One is to explain the words and phrases in the wordlist one by one and to provide with some example sentences. This type of teaching method covers a large amount of information. The example sentences provided by the teacher are slightly boring, and the vocabulary contexts presented are insufficient for students to master the vocabulary. The other type is to explain some new words appearing in the reading texts. Compared with the former, this kind of teaching method provides certain contexts but the contexts are relatively simple.

Thirdly, the practical application is insufficient due to the lack of vivid and effective contexts. According to the "Curriculum Standard", students should apply vocabulary they have learned flexibly and accurately in certain contexts. However, there is still a phenomenon of emphasizing instilling excessively and neglecting application in the current vocabulary teaching. What's worse, students merely remember vocabulary mechanically in order to deal with English examinations. Under the pressure of mechanical memorization, it is difficult for students to grasp vocabulary indeed and gradually they lose interest in vocabulary learning. Even if students have remembered a certain amount of vocabulary, they just acquire inert knowledge since they haven't applied the vocabulary in real contexts [6].

All in all, there are many problems in vocabulary learning need to be solved urgently. English teachers should update their teaching concepts and teaching methods voluntarily to solve the common problems existing in vocabulary teaching.

3. Solutions to Current English Vocabulary Teaching: Applying "Corpus" Based on the Concept of English Learning Activities

3.1. Benefits of Applying Corpus to Vocabulary Teaching in Senior High Schools

Based on the concept of English learning activities, using corpus to carry out vocabulary teaching is expected to solve the problems existing in current vocabulary teaching because of the advantages of "the concept of English learning activities" and "corpus".

To begin with, according to the "Curriculum Standard", the concept of English learning activities refers to that under the guidance of thematic context and based on students' existing knowledge, students can accumulate their language knowledge, develop their language skills, understand the culture knowledge, develop multiple thinking, judge value orientation and apply learning strategies on the process of analyzing and solving problems. All these are achieved through a series of learning activities which are relevant, practical and integrated, and these learning activities are divided into three levels, including the comprehension activities, the application activities as well as the innovation activities.

To be more specific, only when English teachers design contextual learning activities on three levels can students realize the coordinated development of language, culture and thinking. As for the comprehension activities level, students should obtain the detailed information, understand language connotation and perceive value orientation based on the discourse. At the application activities level, the learned knowledge and skills should be internalized, and then language application ability should be formed. Lastly, as for the innovation activities level, students should use their knowledge and skills they have acquired to creatively solve problems in unfamiliar situations, and then students' abilities will be transformed into competences.

Then, the "corpus" is a batch of oral or written text materials collected under certain principles, and stored in the computer in the form of an electronic version for quantitative investigation and qualitative analysis of the language [7]. With the development of corpora, more and more scholars have begun to pay attention to corpus-based learning. Since corpora can store a lot of real cases of language use, they can provide foreign language learners with sufficient and high-quality learning materials so the corpus is gradually used in the field of foreign language teaching among which vocabulary teaching is an earliest area to which corpus has been applied with the most achievements [8].

Based on the analysis above, English teachers can provide students with rich vocabulary contexts by

using corpus when teaching vocabulary during which students can observe the coexistence of contexts, analyze and summarize vocabulary usage and apply the vocabulary in real situations.

Here are some specific advantages. First of all, students' status can promote and teaching methods can be optimized. Different from the boring traditional teaching methods, students always occupy the dominant position in the learning process guided by the concept of English learning activities. Taking the comprehension activities for example, the teacher presents the contexts of a certain word in the corpus and students can observe, discuss and verify the usage of the word independently or cooperatively. At that time, students will feel that they are doing a kind of exploration, discovery and induction then they can get a sense of achievement.

Furthermore, the teaching resources are abundant, authentic and reliable. Different from the traditional vocabulary teaching model of teachers giving meaningless examples or analyzing example sentences in texts, teachers can show students resources mostly derived from realistic contexts and students can acquire some useful language knowledge from those resources. What students have learned will be conducive to communicating in their daily life, which will be of great help to students' vocabulary learning doubtlessly.

Last but not least, the contexts are truly relevant and practical applications are efficient. Different from the lack of real contexts in traditional vocabulary teaching, English teachers can create real contexts for students on the condition that they adopt the concept of English learning activities. For instance, a large amount of contexts can be presented when teachers providing students with abundant corpus on the level of comprehension activities; On the level of application activities teachers can create real contexts for students to apply the words and expressions they have learned; Teachers still need to create new contexts to further deepen and encourage students to apply what they have learned on the level of innovation activities.

3.2. Procedures of Applying Corpus to Vocabulary Teaching in Senior High Schools

This part will introduce the feasible procedures of introducing corpus into English vocabulary teaching under the guidance of the concept of English learning activities. The specific steps are shown in Figure 1.
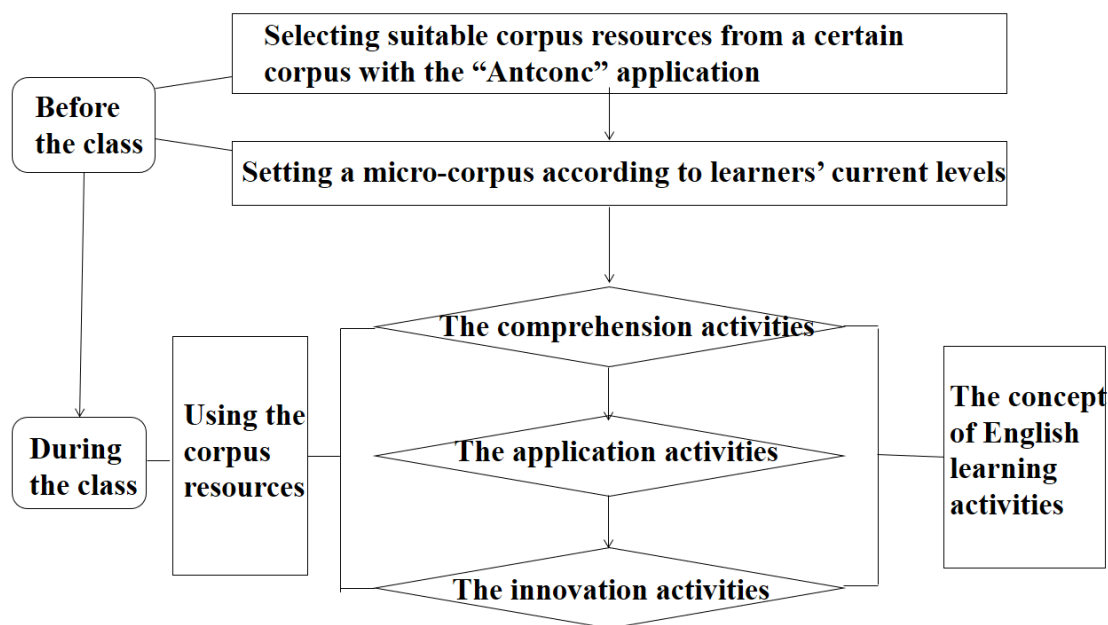

Figure 1 Procedures of Applying Corpus to Vocabulary Teaching in Senior High Schools

When preparing for a lesson, firstly teachers need to select an authoritative corpus from various corpora among which learner corpora can provide comprehensive information about the language development of learners and they can supply a great deal language enlightenment for the language learning of learners and the language teaching of teachers [9]. Therefore, a Chinese learner corpus is used in this paper. That is "Ten-thousand English Compositions of Chinese Learners (the TECCL Corpus)", which is a written corpus developed by Beijing Foreign Studies University. The TECCL Corpus contains

about 10,000 compositions written by students from middle schools and colleges, which are authentic.

Then teachers need to use the "Antconc" application. To start with, teachers type the words (also known as "node words") they are going to teach into the search box and set "Keyword in Context Sort" (according to the actual needs, the following case will set one collocation word on the left and three collocation words on the right). Finally, teachers click "Search" to get all the contexts of those node words in the corpus. Due to the large number of contexts and information, teachers need to reprocess all the contexts they have got from the corpus, which means to select appropriate resources according to learners' current language levels. After that teachers create a "micro-corpus" and make them into courseware so that students can observe during the class.

When having the English class, teachers use the "micro-corpus" they have prepared before the class and practice the concept of English learning activities. Firstly, on the level of comprehension activity, teachers can present the contexts of the target words one by one and guide students to observe, discuss, and then summarize the language laws of those words; Then, on the level of application activity, teachers can present some exercises compiled with the help of corpus resources. Later teachers create a specific communicational context for students to use the vocabulary they have learned; Finally, on the level of innovation activity, teachers guide students to transfer what they have learned to finish a new task by which students' comprehensive language ability will be enhanced ultimately.

4. A Case Study of the Application of Corpus to Vocabulary Teaching in Senior High Schools Based on the Concept of English Learning Activities

Based on the definitions and steps of "the concept of English learning activities" and "corpus" above, the following part will analyze how to use the corpus to carry out the concept of English learning activities in an English vocabulary class with a case.

4.1. Analysis of Teaching Materials and Learners

This vocabulary teaching case is selected from Unit4, Book1 of the new English textbook of the People's Education Press (2019 Edition). The theme of this unit is "Natural Disasters", which highlights the relationship between "Man and Nature". In this case, the teacher will select seven words, namely: disaster, destroy, suffer, shock, aid, supply, deliver. According to the word lists of "Curriculum Standard", these seven words belong to the key words that must be mastered. What's more, these words involve a lot of usage. So students need to comprehend, intake and apply these words creatively through engaging in activities in which a large number of contexts should be provided.

Students of Senior One in China have mastered a certain amount of English vocabulary and have owned the ability to summarize. After having the previous lessons, they have a preliminary understanding to these seven words, but most students are not clear about the specific usage of these words, let alone using these words flexibly. Students have rarely been exposed to "corpus" before, but they can accept new things quickly. Therefore, at this class the teacher will present a text containing these seven words. And then with the help of the micro-corpus that teachers have prepared before the class, students can focus on the knowledge and application of these seven words. Lastly, students can understand, intake and even apply those words creatively.

4.2. Analysis of Teaching Objectives

The teaching objectives of this lesson are as following:

(1) Language competence: by observing all the example sentences in the micro-corpus, all students can understand and summarize the usage of the following words: disaster, destroy, suffer, shock, aid, supply, deliver; Most students can use these words correctly when completing exercises adapted from the corpus and describe the "Flood in Henan" event with the words they have learned.

(2) Learning ability: most students can learn to induce the meanings, usage and structures of some words from corpus resources when learning new words.

(3) Thinking quality: at least half of the students can extract key information of the target words from the contexts.

(4) Cultural awareness: half of the students can realize that "natural disasters are merciless but humans are affectionate", and enhance the awareness that man and nature should live in harmony.

4.3. Teaching Procedures

Step1 Lead-in

Firstly, the teacher shows some pictures after the occurrence of an "earthquake" on the screen and lets students identify which type of natural disasters it is. Based on the what they have learned from the "Tangshan Earthquake" in the reading class, students can easily judge it is the natural disaster of "earthquake".

Step2 Comprehending

At this step the teacher firstly presents a text relating to the topic of the unit and the students can notice the key words to be learned at this class; Then the teacher uses the corpus resources to help students obtain the usage of these key words such as their parts of speech, meanings and collocations; Finally, the teacher instructs students to summarize the usage of these key words.

Firstly, since students have known something about the "Tangshan Earthquake" in the last reading class, the teacher asks them to recall another terrible earthquake disaster occurred in our country after the "Tangshan Earthquake"; Then, the teacher presents a passage about the "Wenchuan Earthquake", and asks students to guess the meaning of the bold words based on the context.

*On May 12th, 2008, a terrible earthquake **disaster** took place in Sichuan Province, China. People there **suffered** great loss in their lives and properties. Many roads, buildings and facilities were **destroyed** by the earthquake. This **disaster** has drawn the attention of the whole world. Many soldiers and volunteers went to **aid** those victims who were in **shock**. **Supplies** and money from all parts of our country and even foreign countries were **delivered** to **aid** the local people. Now everything goes on well and that is a sign of victory.*

Although students can guess the meaning of those bold words from the wordlist, they don't know the specific usage. So the teacher divides the students into several groups and shows the students the micro-corpus resources prepared before the class. Students cooperate to observe and summarize the usage of each node word, such as their parts of speech, word meanings, collocations, etc. They can fill in the forms to organize the information they have got. Finally, the whole class show the usage of all words and each group check whether they have got the correct information or not.

Next, the author will take the word "disaster" as an example to explain how the teacher guides students to use corpus resources to discover and summarize the usage of this word in detail. The rest six words can be summed up by the same way by students.
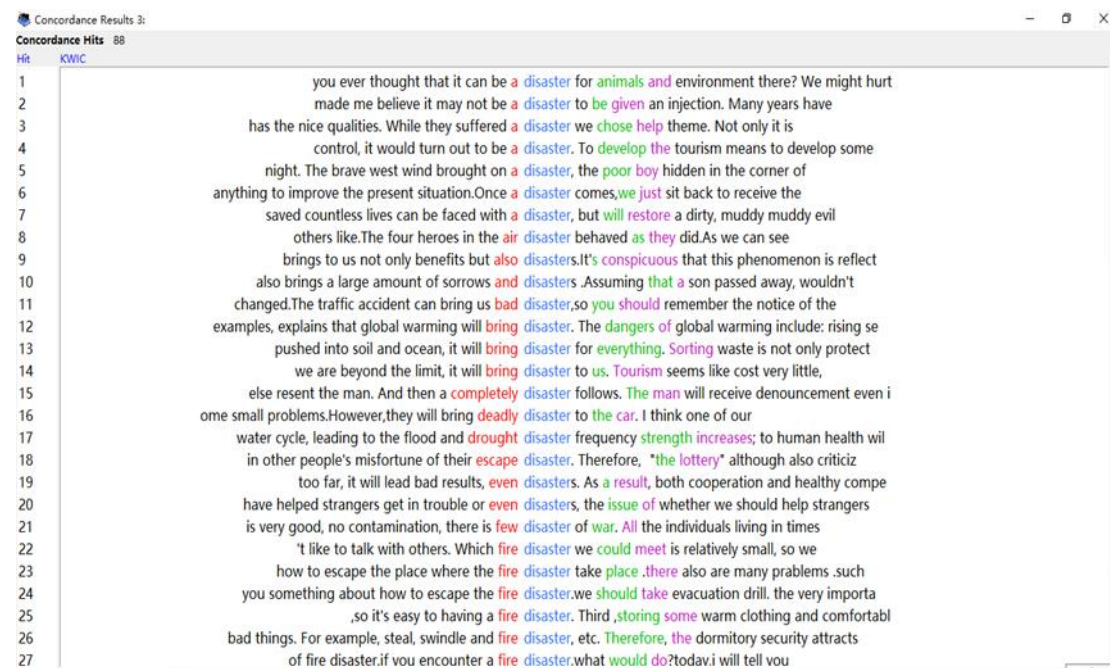

Figure 2 Context sentences of the word "disaster"

Firstly, students can observe the part of speech of the word "disaster" by observing all the sentences showed in Figure2. Students can judge that "disaster" is a countable noun based on the collocation word on the left of the node word "disaster", and its plural form is directly adding an "s" at the end of the word.

Next, students can list all the meanings of the node word "disaster". The teacher presents these 27 sentences from the corpus to students completely. Students read all these sentences and preliminarily judge the meanings of "disaster". That is, "disaster" refers to an unexpected event, such as a very bad accident, a flood or a fire, that kills a lot of people or causes a lot of damage; It also refers to a very bad situation that causes problems and a complete failure.

Then students can list the collocations of the word "disaster". According to the No.11, No.15 and No.16, students can know that there usually a pejorative adjective before the word "disaster", such as "bad" and so on; According to the No.12, No.13, No.14 and No.18, students can know there can be a verb as well before the word "disaster", such as "escape" etc.; According to the No.8, No.17, No.22, No.23, No.24, No.25, No.26 and No.27, students can know that the word "disaster" can also be collocated with a noun, such as "fire disaster" and so forth; According to the No.1, No.3, No.14 and No.16, students can draw the conclusion that there may be a preposition behind the word "disaster", such as "to, for" etc.

Lastly, students work together to organize all the usage of "disaster" they have discovered and fill in the following Table 1.

Table1 Usage of the word "disaster"

Word	Meaning	Collocation
disaster	**Countable noun:** (1) an unexpected event, such as a very bad accident, a flood or a fire, that kills a lot of people or causes a lot of damage; (2) a very bad situation that causes problems (3) a complete failure **Plural form:** disasters	(1) **adj. + disaster:** bad disaster (2) **v. + disaster:** escape /bring disaster (3) **n. + disaster:** fire disaster (4) **disaster + prep.:** disaster to /for…

According to the example above, students summarize the usage of words with the following steps. Firstly, browse all contexts to determine all the parts of speech of node words; Then, list all the word meanings of node words according to all the sentences in corpus; Finally, observe and summarize the collocation words before and behind the node words. Through these learning activities, students can learn the "form", "meaning" and "usage" of the target word.

Step3 Applying

This step focuses on the application of relevant vocabulary based on the usage students have summarized at the last step. Firstly, the teacher provides some exercises derived from corpus resources to help students consolidate what they have learned; Then the teacher creates a context for real language use for students by which students can describe and interpret, analyse and judge, and finally intake and apply the target words.

First of all, the teacher shows a "Cloze" exercise which is derived from the TECCL Corpus as well for students. Students select words according to the meaning of the context and fill in the blanks in their appropriate forms. The exercise is shown in Figure 3.

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disaster, destroy, suffer, shock, aid, deliver

1. a. The global warming will bring ******.
   b. It seems to cause some small problems. However, they will bring deadly ****** to the car.

2. a. The development of food****** service makes it convenient for young people to ask fortakeaway food.
   b. When the seller see you pay money, they may ****** the goods to you according to theinformation you have put into the net of the goods.

3. a. The children in the hospital all****** from serious illnesses. I want to help them.
   b. I will invent something about smoking so people will not ****** the harm of smoking.

4. a. Reading, on the one hand, gives****** to enlarging your horizons; on the other hand, puts youin touch with what the best human minds have thought.
   b. Some person supposes higher degree could ****** us to get more and more opportunities.

5. a. We should ****** some study programs to young people, who can learn some new career skills to help themselves and create much more values for the society.
   b. The government wants to ****** more house for the increasing citizens and keep stable.

6. a. With the increase number of tourists, places of historical interests are badly ****** by them.
   b. That cruel people, not only injure the sharks, but also ****** the food chain.

7. a. The blodd stream of the dead are ******
   b. After being ****** by the natural scenery, they attempted to leave there.

Figure 3 Cloze exercises

Then the teacher plays a news report about the flood occurring in Henan Province, China in July this year. This news reports the cause, severity and rescue measures taken in our country. After watching the short video about the flood disaster, the teacher creates a new context for students: Suppose your friend Frank from England wants to learn something about the flood in Henan, how will you use the words learned in this unit and this lesson to tell Frank about it? Students can work with their partners to finish this task. Finally, students can show their ideas to all the other classmates in the front of the class while the teacher and the rest students give evaluations in time.

Step4 Innovating

According to the "Curriculum Standard", teachers should guide students to combine learning and applying, unite knowledge and action, and finally construct meaning actively. At this step the teacher needs to guide students to make inferring, evaluate critically and give full play to their creativity, aiming to help students transfer what they have learned into real life.

First of all, the teacher asks students to review the natural disasters mentioned above and think about why the Chinese can overcome each disaster in the end. Students will list varieties of factors, such as the strong supports from the government, the various aids from other places and the tireless efforts of the local people, etc.

Later the teacher shows three questions on the screen and students work in their groups to design a poster which can involve the reasons, injury, measures of preventing and reducing flood and so forth. Each group will have the opportunity to show their posters after they have finished their posters. The three questions are as following:

(1) What do you know about "flood disaster"?

(2) If one day we come across a flood, what should we do to protect ourselves?

(3) How can we human beings reduce the occurrence of flood disaster?

Step5 Summarizing & Homework

In the last session of the class the teacher guides students to recall and summarize the steps and methods of learning vocabulary through the corpus.

As for the homework, the teacher asks students to review the key words learned in this class and write down their description on the flood in Henan. Finally, students are asked to surf the Internet to search for more information about "flood" and to improve their posters.

5. Conclusions

The "Curriculum Standard" points out that vocabulary learning is neither remembering words simply, nor using words in isolation, but a comprehensive language learning activity carried out in a specific context [2]. The learning activities at the lesson above are designed close to the theme "natural disasters" of this unit. Students learn new words step by step by participating in activities. Firstly, students comprehend the usage of the key words from rich corpus contexts; Then, students apply what they have learned by finishing vocabulary exercises adapted from the corpus and describing the flood in Henan, China to a foreign friend; Finally, students "transfer" the words they have learned to a new task by which students can use the words creatively.

In short, under the guidance of the concept of English learning activities and corpus, there are three levels of activities, i.e. the comprehension activities, the application activities and the innovation activities in the case of this article by which students can learn new words efficiently. It is beneficial for students to cultivate the English subject core competences. However, this instructional design needs to be adjusted and optimized according to the actual teaching situation and the actual level of students.

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