Application of Scaffolding Theory (Scaffolding Theory) in Higher Vocational English Teaching

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Abstract: The basic requirement of higher vocational English course teaching is that vocational students have certain listening, speaking, reading, writing and translation abilities after completing an English class. Among them, English writing is an important indicator to measure students' comprehensive English ability. From a practical point of view, the English writing level of vocational students is not optimistic, so there is an urgent need to improve the effectiveness of English writing teaching. This article focuses on the application of scaffolding theory (scaffolding theory) in higher vocational English teaching, understanding the scaffolding theory on the basis of literature, and then conducting experiments on the application of scaffolding theory (scaffolding theory) in higher vocational English teaching. According to the results of the experiment, 46% of the students found that after a semester of writing training, their writing level has been greatly improved, which is completely different from what they had done before. This shows the advantages of this teaching method compared with the traditional method.

1. Inductions

Whether teaching English or learning English, the level of composition still faces many problems [1-2]. According to the data of our country's National Senior High School English Test Committee, the average score of composition for college entrance examination questions has always been low in recent years. This also shows that the English writing level of domestic high school students does not meet the requirements. However, it also illustrates the shortcomings of writing teaching [3-4]. Although it is relatively easy to apply writing teaching methods and strategies in high school English writing teaching through the research methods and practices mastered by students, it is easy for teachers to ignore the ideological connotation and process of students' writing in the process of writing assessment and feedback, and neglect the training of students' English writing thinking [5-6]. Especially for high school students, there are often many problems such as insufficient vocabulary, weak oral foundation, distortion of sentence structure,

weak discourse logic and so on. Therefore, optimizing composition teaching, systematic composition training, and selecting appropriate composition training methods to improve students' writing ability are problems that education urgently needs to solve [7-8].

The scaffolding fully integrates student-centered topics and knowledge points, and improves student writing activities by planning student writing assignments and organizing various activities. The main responsibility of the teacher is to consciously train the students' self-evaluation ability. In the process of scaffolding teaching, teachers must also pay attention to the effective and reasonable use of scaffolding, and remove the scaffolding consciously and dynamically[9]. Some scholars also believe that in terms of specific activities, teaching support can include demonstration, explanation, error correction, vocabulary reminder, task simplification, interpretation, feedback and so on. According to the teaching method of scaffolding, it is divided into example scaffolding, problem scaffolding, sentence scaffolding, guiding scaffolding and graphic scaffolding. Second, from the perspective of teaching methods, scaffolding can be divided into media scaffolding, task scaffolding, and material scaffolding that provides educational support with illustrations, cases, and video materials. In educational activities, scaffolding can also be divided into emotional scaffolding, knowledge scaffolding, network scaffolding, strategic scaffolding and information scaffolding [10]. In summary, there are many research results on the scaffold theory, but less research on its application effects.

This article studies the application of scaffolding theory (scaffolding theory) in English teaching in higher vocational colleges. It analyzes the scaffolding theory and the teaching process of scaffolding on the basis of literature data. The application carries out experimental design, and draws relevant conclusions through the experimental results.

2. Scaffold Theory Research

2.1 Scaffolding Theory

The scaffolding education theory believes that the learning process of students is a process of renewing their cognitive structure through continuous self-construction. Under the guidance of this theory, teacher education focuses on "teaching, assistance, and nurturing", and student learning focuses on "active, active, and conscious" [11]. Therefore, student learning activities are regarded as a positive process for cultivating students to absorb and adapt to new knowledge and skills, and to improve their learning level and skills under the guidance and support of teachers.

When using scaffolding in educational activities, teachers will plan tasks and activities beyond the children's current level and provide scaffolding to help them. This teaching allows students to understand the knowledge they are interested in simple and easy to understand, and allows students to gradually transition from the simplest level of knowledge to the most difficult level of knowledge, so that they can independently complete the understanding of difficult knowledge points. At the same time, different levels of support also take into account the "recent development zones" of different students [12].

2.2 Scaffolding Teaching Process

(1) Construction of scaffolding

Teachers build suitable scaffolding around the current learning content in the recent student development area to help students complete tasks that they cannot complete and allow students to create a new knowledge framework. But teachers should note that what needs to be built is a

"proper" scaffolding. That is, the scaffold provided by the teacher must properly connect the students' existing knowledge with the knowledge they have learned, and cannot exceed or fall below the student's nearest development zone. In the process of students learning new knowledge and new concepts, teachers need to play an active role in promoting at the right time and in the right way. Teachers always have to walk in front of students and encourage them to reach higher levels of existing skills. Teachers also need to teach students how to learn instead of giving them all the information and knowledge.

(2) Enter the state

The constructivist view of learning believes that learning is not a simple influx of students from the outside world. Teachers no longer impart knowledge and experience, but stimulate the knowledge and experience in the students' minds, and encourage students to reorganize and reform the original knowledge and experience. This requires teachers to create a realistic and ideal learning situation for students and guide students to explore topics. Teachers can submit information materials related to topics and educational content instead of giving students answers directly. This is because students' learning is dynamic, and the recent development areas are also dynamic. Students can be guided to increase gradually by asking questions. Scaffolding also needs to be adjusted in a timely and effective manner. Once students complete the task independently and establish a cognitive framework, the old scaffolding should be phased out to give students more space to build.

(3) Independent investigation

Autonomous exploration means that teachers establish a foothold, guide students into the situation, and then students explore a new concept on their own. In the process of exploration, teachers provide timely promotion and support to help students get to the next level. The scaffolding is more or less withdrawn during the giving process, allowing students to explore and learn independently.Constructivism emphasizes student-centered, students can choose the way to solve problems and express their opinions, opinions and understanding. Teachers should give students plenty of time, encourage them to study independently, and allow them to make mistakes. However, students should not be blindly dependent on teachers. Instead, students should be encouraged to analyze and learn errors, and encourage them to create and discover. In the process of independent inquiry, the enthusiasm, initiative and creativity of students are fully mobilized, and the ability of students to complete tasks independently is enhanced.

(4) Collaborative learning

Collaboration occurs throughout the learning process. Collaboration plays an important role in the collection and analysis of learning materials, the formulation and testing of hypotheses, the evaluation of learning outcomes, and the final construction of learning significance. Collaborative learning means that students participate in group discussions and collaborative learning. Students can freely combine these two groups, and can complete the tasks of the entire class in the form of a group. Teachers can also designate learning partners to allow students to have a deeper level of communication. Through free combination, students can group according to their normal interests and hobbies. In the process of communication and discussion, each student will learn something from classmates and get different degrees of improvement. Collaborative learning allows teachers to gradually withdraw from scaffolding and support and listen to students' conversations and interactions without excessive intervention or guidance. Teachers can provide appropriate guidance only when students actively seek help. Through collaborative learning, students will have a more complete and in-depth understanding of the concepts of the current knowledge based on the results of group learning, and their understanding of various concepts related to it will gradually become

clearer.

(5) Impact assessment

The evaluation of learning outcomes includes the students' personal self-evaluation and the research team's evaluation of individual learning. The student's personal self-assessment is very important. Through self-assessment, students recognize their own shortcomings and pay attention to them in future research for progress.

3. The Application Experiment of Scaffolding Theory (Scaffolding Theory) in Higher Vocational English Teaching

3.1 Classroom Teaching Process

(1) Build scaffolding (4 minutes)

First, create a scaffold to understand students' interests. Teachers use PPT to show students many common social network letters, and ask the following questions: "What kind of letter did you receive?" "Did you receive or write a thank you letter?" Then, "Where are these two letters? Under the circumstances? When? Give me two thank-you letters, "I need to write a thank-you letter?" "Thank you letter that stimulates students' interest in learning. Next, let them summarize when they should write a thank you letter in English. Students use their initial knowledge to think, and gradually turn to new learning content (English thank you letter). Next, let them summarize when they should write a thank you letter in English. , The teacher will introduce to students the five criteria for evaluating a good article: vocabulary, grammar, chapter layout, content processing and stylistic format. Pay attention to these five aspects when studying thank you letters, and remind students to write an article throughout the learning process decent thank you letter.

(2) Create a learning situation (5 minutes)

After setting up the scaffold of learning interest, the teacher will guide students to learn the subject of the thank-you letter through two activities. Activity 1: Summarize students' responses to "When should I write a thank-you letter in English?" Show the results to students. Activity 2: Brainstorming activities. Encourage students to take a few minutes to read the thank-you letter in the text, use English to say keywords, phrases, sentence design, and the form of the thank-you letter, and pay attention to the differences in the words used in the text. After students read the thank-you letter, they said some related words to express their gratitude. The teacher summarized and extended the usefulness of "thank you".

(3) Be good at enlightenment and guidance, start independent adventure (20 minutes)

When students enter the subject of the thank-you letter, they have a certain understanding of the thank-you letter and enter the most important part of the writing framework study with interest. The teacher assigns a writing task (write a thank-you letter to the parents to thank the parents for their kindness), and the students explore independently and write the first draft of the thank-you letter. Use three questions to encourage students to write their first draft through PPT. What are the requirements for this thank you letter (exam questions)? How is this thank you letter chapter organized? What is the best word or sentence to make up this? In this process, the teacher pays attention to the scaffolding intervention, and the teacher can complete the draft frame, temporarily ignoring issues such as grammar and spelling. Some students need the help of the teacher. At this time, the teacher needs to pay attention to the use of the support arm to remind students that inspiration is an important point.

(4) Collaborative learning and group collaboration (12 minutes)

After writing the first draft of the thank-you letter, the students will review, modify and complete

the thank-you letter in collaboration. In this session, the teacher guided the nine groups initially assigned to collaborative learning and group discussions. Under the guidance of each team leader, discuss the first draft of the team members, including vocabulary, grammar, text layout (coherence, attention to the coherence and consistency between sentences and paragraphs), content processing, and style. Each evaluated member recorded the team member's modification comments, reviewed and improved the thank-you letter. If a student encounters an unsolvable problem, the teacher will provide help and solve the problem together with the student, and encourage the student to write a special thank you letter based on sharing the results of the group thinking.

(5) Multiple comments (4 minutes)

Using a variety of evaluation methods, students actively participate in task evaluation, which fully reflects the situation of students as learning objects, can be passively changed to active, improve classroom participation, and stimulate students' interest in learning English writing. The evaluation includes three main aspects. The first paragraph mainly uses the silent reading of students' homework to check the main points, word count, structure, etc, for evaluation. Compare the personal self-assessment form again to evaluate and make certain changes. In the second stage of group evaluation, group members evaluate the composition of each student in the group, and finally the teacher invites individual group leaders to summarize common problems in the group and propose remedial measures.

3.2 Experimental Design

Control class: In the control class, the students are still assigned the writing task in the form of homework as before, and the students take time out of class to complete. After the writing is completed, the class representative collects the articles and passes them to the teacher. The teacher uses a red pen to mark the students' mistakes in the text and sends them back to the students. Then the comments are grouped in class.

Experimental class: Divide the 45 students in the experimental class into 5 groups, with 9 students in each group. When organizing groups, teachers carefully consider students' personalities, basic English and special interests, and follow the theory of scaffolding education to provide students with the necessary guidance throughout the learning process. According to different writing topics and topic requirements, teachers can provide different writing skills support, provide corresponding evaluation and psychological guidance, and carry out appropriate activities. With the help of these rich and interesting educational activities, make good use of the fields of recent development, guide students to successfully complete written tasks, and promote students' overall development and continuous progress.

3.3 Questionnaire Survey of Experimental Class

After the experiment, this article conducted the following questionnaire survey on the students in the experimental class. This time 45 questionnaires were distributed and 45 were recovered. The validity of the questionnaire is 100%.

3.4 Data Processing

Although K-Means is the most concise grouping algorithm, the ideas it implies are rare. Grouping belongs to unsupervised learning. Regression, Naive Bayes, SVM, etc, they all have a label of category y. This means that the sample classification will be given to the sample, and the

sampled sample is not data y, but only x attributes. Therefore, the hypothetical sample can describe a cluster of stars in the universe as a point (x, y, z) in three-dimensional space. The purpose of classification is to find a potential type y for each sample x, and can infer x samples from a type y. Therefore, if it is assumed that the above stars are to be classified, the result will be a group, and if the points of the group are closer to each other, the distance between them is also relatively small.

For each example i, calculate the class it belongs to.

$$c^{(i)} = \arg\min \left\| x^{(i)} - \mu_k \right\|^2 \tag{1}$$

For each class j, recalculate the centroid of the class:

$$v_j = \frac{\sum_{i=1}^{m} 1\{c^{(i)} = j\} x^{(i)}}{\sum_{i=1}^{m} 1\{c^{(i)} = j\}} \tag{2}$$

K is the number of clusters given in advance, 1 represents the class with the closest distance among the k classes of sample i, and the value of 2 is one of 1 to k. Centroid 3 represents our guess about the center point of samples belonging to the same class.

4. Analysis of Experimental Results

4.1 Comparison of the Results between the Facing Class and the Experimental Class

Organize a unified English writing test for experimental students. Regarding the quality of the test, the school will choose an experienced teacher to prepare the test questions one month in advance to ensure the quality of writing, and make corrections online to ensure the reliability of the scoring results. The writing standards are in line with the college entrance examination standards, and the grading teacher should negotiate with others to ensure the validity of the grading results. Table 1 shows the results of the writing test.

Table 1: Comparison of the results of the control class and the experimental class

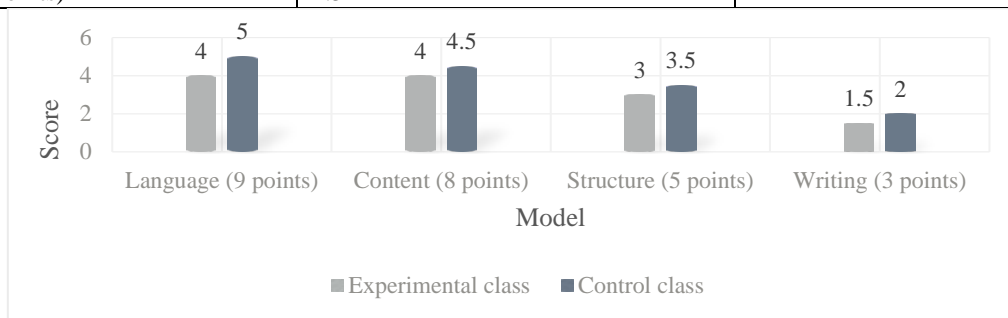|	Experimental class	Control class
Language (9 points)	4	5
Content (8 points)	4	4.5
Structure (5 points)	3	3.5
Writing (3 points)	1.5	2

Figure 1: Comparison of the results of the control class and the experimental class

It can be seen from Figure 1 that after a period of training, the overall average score of the experimental class composition has improved. In addition, you can also see that the scores of each module of the composition are increasing. The scores of the students in the control group did not improve significantly. Through scaffolding training, the experimental classroom has created a strong writing atmosphere, and the number of high scorers has gradually increased. However, the control class is basically the same, that is, the good is still good, but the bad is still bad.

4.2 The Influence of Scaffolding Theory as a Guide on Writing Teaching

Aiming at the research that scaffold-guided writing teaching can improve your writing level to a certain extent, this article designs how you think writing teaching guided by scaffolding theory can improve your writing level to a certain extent? This question, the results are shown in Table 2:

Table 2: The Influence of Scaffolding Theory on Writing Teaching

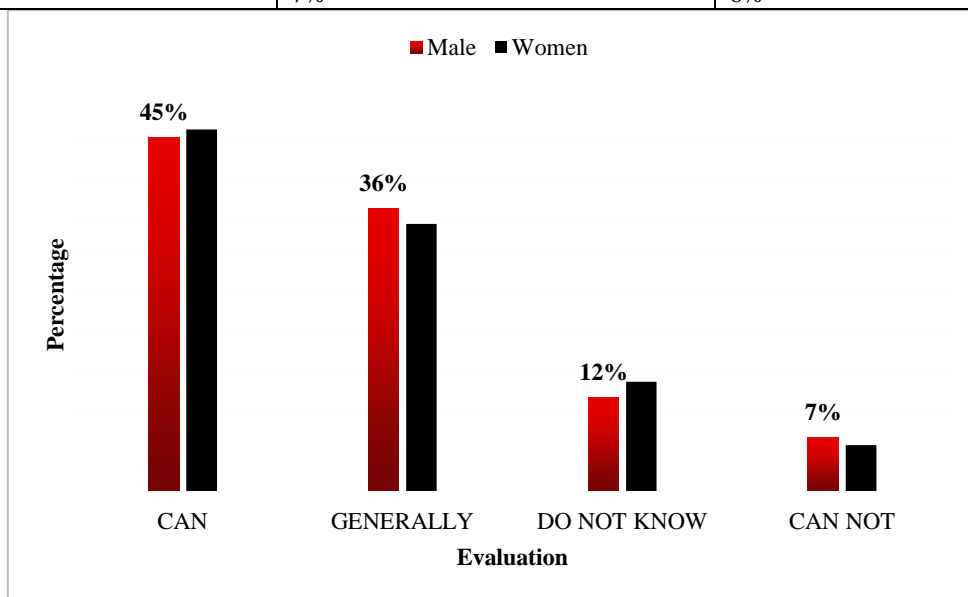|	Male	Women
Can	45%	46%
generally	36%	34%
do not know	12%	14%
Can not	7%	6%

Figure 2: The Influence of Scaffolding Theory on Writing Teaching

It can be seen from Figure 2 that 46% of students found that after six months of writing training, their writing skills have improved significantly. This proves the advantages of this teaching method over traditional methods.

5. Conclusions

This article focuses on the application of scaffolding theory (scaffolding theory) in higher vocational English teaching. After understanding the relevant theories, the experiment designs the application of scaffolding theory (scaffolding theory) in higher vocational English teaching, and

passes the experimental results. It can be concluded that after a period of training, the total average score of the composition of the experimental class has increased. Upon closer inspection, it is found that the scores of each module of the composition have increased, while the composition scores of the students in the control class have not improved significantly.

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