Internet-assisted English Teaching in Higher Vocational Education

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Abstract. The rapid development of information technology has brought opportunities and challenges to English teaching. Online teaching has become a trend in language teaching, and it is also the core of the ongoing reform of English teaching. It not only changes the traditional English classroom thinking and teaching methods, but also changes the students’ learning environment and learning methods. At present, many experts and scholars at home and abroad have conducted research on the teaching activities of English network. Researchers have also put in a lot of effort and research to study how to use online platforms to help teach English. This article focuses on the study of multimedia-assisted English teaching in higher vocational education based on the Internet. First, it uses the literature research method to explain the problems in multimedia-assisted English teaching in higher vocational education, then puts forward some relevant suggestions for improvement, and finally uses the questionnaire method to analyze the multimedia status quo of English teaching in higher vocational colleges was conducted. The results of the survey showed that the multimedia construction in schools is still good at this stage. Among them, computer equipment accounts for the most, reaching about 39%, and then the slide projector, accounting for about 32%. Regarding whether multimedia teaching can replace traditional teaching, 55% of teachers think that it can be partially replaced, and 31% of teachers think that the two should be combined.

Keywords: Multimedia Teaching, Vocational English, Teaching Research, Multimedia Assistance

1. Introductions

Under the influence of the rapid development of modern educational technology, coupled with the continuous deepening of applied linguistics research, computers and networks have begun to enter the field of education on a large scale, and the traditional classroom teaching concepts and the main teachers' bodies have undergone tremendous changes[1-2]. Many local universities have begun to use multimedia to help teach English [3-4]. "At present, vocational colleges formed by the merger of secondary vocational schools or vocational schools are continuously expanding their enrollment scale, and the government has invested a lot of money to build teaching materials [5-6]. As an important part of higher education, it has been fully supported by people. The strong development of higher
vocational education will play an important role in promoting the sound development of higher education in our country [7-8]. The rapid development of higher vocational education has brought huge challenges to teaching, such as English. It is the core of English teaching in higher vocational colleges. In the process of teaching, it is necessary to continuously reform and innovate, but also to focus on cultivating students' English application ability [9-10].

There are many related studies in the research of Internet-based multimedia-assisted English teaching in higher vocational education. For example, some researchers analyzed the factors that affect English teaching with the help of computers and came to the following conclusions: (1) Insufficient English learning resources, insufficient equipment, and low computer English proficiency. Teaching environment, lack of educational resources, teaching A variety of intermediary and networked English learning methods for higher learning [11]; (2) The quality of student information is low; (3) Students have limited computer skills; (4) Teachers have limited theoretical and professional skills. (5) Lack of differentiated learning Mode, assessment and teaching mode [12].

This article focuses on the study of multimedia-assisted English teaching in higher vocational education based on the Internet. Firstly, the literature research method is used to explain the problems in multimedia-assisted English teaching in higher vocational education, and then some relevant suggestions for improvement are put forward. Finally, the questionnaire method is used to analyze the multimedia assistant investigation of the current situation of English teaching in higher vocational education.

2. Research on Multimedia-Assisted English Teaching in Higher Vocational Education

2.1. Problems of Multimedia-Assisted English Teaching in Higher Vocational Colleges

(1) Students have poor self-learning ability, and their information quality needs to be improved
According to the relevant research data, students' subjective initiative in learning English is not enough. Although students spend a lot of time online, the proportion of online learning and English content is very small, and not much time is spent on learning English every week. Relevant research data shows that although students search for information on Google, Baidu and other websites, their ability to analyze information still needs to be improved. Many students say that they do not know how to analyze and use a large amount of information and download a large amount of resources according to their own needs, nor do they know how to make better use of the Internet for learning.

(2) Teachers' information literacy and information technology ability are low
According to some relevant data in the interview, many teachers reported that they do not have the theoretical knowledge of multimedia-assisted teaching, and there are some shortcomings in creating software and specific functions. Teachers usually cannot play a leading role in the implementation of multimedia English teaching, which affects the cultivation of students' quality, independent learning ability and innovative ability. Many teachers have limited software production capacity. They only use advanced multimedia and network equipment to replace books, blackboards and chalk. There is no difference between the reading courses provided for students and e-books, and it is impossible to optimize the combination of teaching assistants.

(3) The teacher's teaching model and method are inappropriate
Determining the classroom teaching model plays a very important role in teaching results. We must first consider reforming the teaching model. According to the data in some databases, when using MCALL for English teaching, 80% are operated by teachers, and the pictures are displayed on the big screen. Today, this method is the most common method used by many college and university English teachers. Throughout the class, the teachers are sitting in front of the computer console. Most of the time, their eyes are on the computer or projector. What students see is the language knowledge
displayed on the blackboard of the projector. Although we also use multimedia English teaching help, it has not changed. The original "personal irrigation" has been changed to "mechanical irrigation". The old teaching model has not really changed. Through this teaching method, students are in a very passive position, there are few bilateral activities in the classroom, and there are few opportunities for students to participate in exercises. The teacher kept talking on the podium, the students were drowsy, and the teaching effect was unsatisfactory.

2.2. Suggestions and Countermeasures of Multimedia-Assisted English Teaching in Higher Vocational Education

(1) Strengthen the cultivation of students' information literacy
The information literacy of students emphasized in this article refers to basic knowledge and the ability of students to acquire, analyze, process and use information when faced with a large amount of information. In the process of cultivating students' information literacy, try not to use traditional teacher's rigid teaching methods, but to create a good learning environment and atmosphere for the cultivation of information literacy in teaching. Teachers guide students to solve creative problems on their own, thereby increasing the utilization rate of information technology and information. In this way, students can learn the corresponding knowledge in a relaxed and happy atmosphere, and can better practice. For example, when an English teacher talks about the Olympics, he or she can arrange for students to contact the team online to collect knowledge or stories about the Olympics, and quickly dictate them in English. This not only increases students' interest in the content of the course, but also exercises their ability to acquire, analyze and process information.

(2) Strengthen teachers' information technology ability
In the field of English, with the help of multimedia, teachers' computer skills directly affect the effectiveness of English teaching. For training in this area, some experts submitted their own suggestions, divided into four parts: "Training knowledge and design skills, computer knowledge and operating skills, CAI application and software development skills, and remote networking knowledge and skills." At present, most vocational colleges, including undergraduate universities, pay little attention to information technology training for English teachers. The training skills of modern English teaching technology are usually relatively low, so basic modern learning technology training is required, and then improvements can be made to improve the type. "Education content can start from the following aspects: the basic knowledge and skills of multimedia computers, the basic principles and methods of foreign language teaching with the help of multimedia, the use of multimedia software writing tools and development platforms, and computer application model teaching." In addition, the improvement of computer skills depends only on teachers' self-teaching, but its depth and effect are not enough. Schools must provide teachers with specific training and learning opportunities on a regular basis. It can be organized by the school. Computer teachers can provide on-the-job training for English teachers, or they can send off-campus teachers to receive more professional and rigorous training so that English teachers can learn theories and skills from information technology. Only by improving the level of teachers themselves can they better teach and influence students in terms of information technology.

(3) Improve English teaching mode
Although the use of multimedia for English teaching has irreplaceable advantages, it still cannot completely replace the traditional English teaching model. In traditional English classrooms, teachers can communicate with students verbally through questions or other classroom interactions, and can give different instructions based on students' answers. In this way, students can not only improve oral English, imitate and answer questions, but also correct their pronunciation, grammar and other problems according to the teacher's personal guidance. These advantages cannot be achieved through
human-computer interaction. Then, according to the current situation and conditions of multimedia English teaching in Zhengzhou, the most ideal mode should be an effective combination of multimedia teaching support and traditional teaching methods. The two teaching methods complement each other. The combination of multimedia teaching and traditional teaching is in line with the actual situation of software and software in higher vocational colleges. Teachers in each school can decide which teaching method is the main teaching method and which teaching method can be completed according to the different conditions that students adapt to. This not only can better complete the transition to the network teaching model, but also can achieve good teaching results.

2.3. Multimedia-Assisted Related Algorithms

(1) Image acquisition algorithm of computer multimedia teaching system
Assuming that the capacity of the face sample is n and the size of each sample is D=MxN, then the matrix of the face sample x=(x1 x2 ⋯⋯ x_n). Where φ represents the face sample image of the first person, according to formula (1), find the average in the sample image, and then calculate the difference between each face sample and the average face sample image, using the difference between the face sample image and the average face sample di(3), construct the covariance matrix according to formula (2).

\[ \phi = \frac{1}{n} (x_1 + x_2 + \cdots + x_n) \]  
\[ C = \frac{1}{200} \sum_{i=1}^{200} d_i d_i^T = AA^T \]  
\[ d_i = x_i - \phi \]

3. Internet-Based Multimedia-Assisted English Teaching Survey in Higher Vocational Colleges

3.1. Purpose of the Investigation
The questionnaire survey method is used to investigate the current situation of Internet-based multimedia-assisted English teaching in higher vocational colleges. It mainly investigates the current situation of school multimedia construction and teachers’ views on multimedia-assisted teaching. Through the analysis of the results, it provides some information for multimedia-assisted teaching.

3.2. Questionnaire Survey

(1) Number of questionnaires
According to the minimum sample size formula in statistics, this article sets the confidence level of the questionnaire to 80%, and the allowable error does not exceed 8%. Calculate the minimum sample size as

\[ n_0 = \left( \frac{t_a}{2\Delta p} \right)^2 = \left( \frac{1.645}{2 \times 0.075} \right)^2 = 120 \]  

(2) Questionnaire design
Before conducting the survey and the design of the postgraduate questionnaire, we have consulted a lot of relevant information about the questionnaire survey and other related aspects, and made a sufficient theoretical basis and preparation for the postgraduate questionnaire design of this thesis. In the first draft of the questionnaire, we successively solicited the opinions and suggestions of the experts, and after revision and sorting, we once again suggested to the experts.

(3) Source of questionnaire
The questionnaire survey is mainly a survey of Internet-based multimedia-assisted English teaching in higher vocational colleges. In order to be universal and representative, three relatively representative higher vocational colleges of different sizes in this city were randomly selected and recorded. For A
school, B school, and C school, for the authenticity of the questionnaire, the questionnaire will be collected after 3 days. According to the calculation formula of the survey recovery rate: this time the recovery rate is 90%.

In order to ensure the reliability and stability of the returned questionnaires, the variance of the questionnaire results must first be calculated, and then the reliability of the returned questionnaires shall be tested by the method of "half-half reliability" test. Use the following formula to calculate the reliability coefficient of the questionnaire, and halve it to get the correlation coefficient of the questionnaire, which is $r = 0.879$. According to the basic theories and methods of modern scientific research in my country, when the reliability of a test is above 0.80, it can be determined as a highly reliable test. The test results confirmed: the reliability of the data in this questionnaire.

$$r = 1 - \frac{S^2(1-r_1)}{S_n^2}$$  \hspace{1cm} (5)

### 3.3 Data Processing

(1) Enter the questionnaire data into the EXCEL software, and establish a data table about the construction of multimedia-assisted teaching in schools and teachers' views on multimedia-assisted teaching. In order to obtain the real questionnaire data, the data must also be tested. In EXCEL, the Grubbs method is used to eliminate abnormal data.

(2) Import the processed data in EXCEL into SPSS software, and use SPSS software to analyze the data.

### 4. Analysis of Survey Results

#### 4.1. Construction of Multimedia-Assisted Teaching in Schools

A questionnaire survey is used to investigate the construction of multimedia equipment in schools, from which it can be concluded that the school attaches importance to multimedia assisted teaching. The results of the survey are shown in Table 1:

| Multi-media equipment | A school | B school | C school |
|-----------------------|---------|---------|---------|
| computer              | 39%     | 37%     | 36%     |
| slide projector       | 34%     | 32%     | 35%     |
| projector             | 27%     | 31%     | 29%     |
| No multimedia         | 0       | 0       | 0       |

**Table 1.** The construction of multimedia-assisted teaching

![Image of a bar chart showing the percentage of multimedia equipment in A school, B school, and C school.

*Figure 1.* The construction of multimedia-assisted teaching

It can be seen from Figure 2 that the multimedia construction of the school is still good at this stage.
Among them, computer equipment accounts for the most, reaching about 39%, and then the slide projector, accounting for about 32%.

4.2. Teachers' Views on Multimedia-Assisted Teaching

The questionnaire survey method is used to investigate classrooms’ views on multimedia-assisted teaching, mainly on whether multimedia can replace traditional teaching. The survey results are shown in Table 2:

| View                  | A school | B school | C school |
|-----------------------|----------|----------|----------|
| Completely replace    | 0        | 0        | 0        |
| Partial replacement   | 58%      | 55%      | 57%      |
| Can't replace         | 11%      | 13%      | 12%      |
| Combine the two       | 31%      | 32%      | 31%      |

**Figure 2. Teachers' Views on Multimedia-assisted Teaching**

It can be seen from Figure 2 that as to whether multimedia teaching can replace traditional teaching, 55% of teachers think that it can be partially replaced, and 31% of teachers think that the two should be combined.

5. Conclusions

Under the influence of the rapid development of computer technology, the influence of computers in teaching, especially in English teaching, is increasing, and it has shown its powerful advantages. But we must be sure that no matter how advanced multimedia technology is and how it promotes English teaching, it is only a teaching aid. If you want to be truly successful in the English classroom, you must play a full role in the leadership of teachers and the subjectivity of students. Through efforts, the use of multimedia for English teaching will surely promote the steady development of English teaching in higher vocational colleges towards a better and higher direction.

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