Design Method of College English Information Teaching Platform Based on LAN Technology

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Abstract: With the rapid development of the times and the continuous progress of society, this is an era in which science and technology are widely used in our daily production and life. Everything around us is undergoing great changes. In this era of rapid development, if everything wants to keep up with the pace of the times, it must constantly change its development mode, so as to better adapt to the development requirements of the new era. In order to cope with the impact of the times, the design method of College English information teaching platform also needs to be innovated, so as to meet the new needs of the development of the new era. Therefore, this paper puts forward the method of Establishing College English information teaching platform based on LAN technology, which can better realize the modern teaching of College English. This platform can basically meet the needs of College English Majors for autonomous learning of English knowledge, and can better stimulate students' interest in learning. Through long-term research, it is found that the design method of College English information teaching platform based on LAN technology can successfully help college English teachers improve the teaching efficiency of College English.

Keywords: Science and Technology, LAN Technology, College English, Information Teaching Platform

1. Introduction

With the continuous development of modern information technology [1-3], computer network technology, software technology and multimedia technology are more and more widely used in various teaching activities. Teaching resource management system, network teaching system, electronic classroom system, course recording and broadcasting system, mobile teaching system,
micro course system and various network, information and intelligent teaching service platforms have emerged one after another. The application of these technologies effectively promotes the reform of College English teaching concept, teaching mode and teaching means, and provides support for the effective integration of information technology and subject teaching. Therefore, information teaching will become an important development trend of teaching methods and means in the future.

With the development of information technology with multimedia and network technology as the core, foreign language teaching [4-6] has entered the era of multimedia digital network information. In the process of College English teaching reform, the establishment of network teaching system of students' Autonomous Learning Center Based on campus network is the key work content. This paper mainly focuses on the reform of traditional English teaching practice environment, the reform of traditional English teaching mode, and the exploration of English teaching management system based on LAN [7].

This paper studies the design method of College English information teaching platform [8-10] Based on LAN technology. Under the background of the rapid development of information technology, in order to help college English teachers better teach college English, this paper puts forward the method of Establishing College English information teaching platform based on LAN technology, which can better realize the University Modern English teaching, this college English information teaching platform can basically meet the needs of College English Majors for autonomous learning of English knowledge, and can better stimulate students' interest in learning. Through long-term research, it is found that the design method of College English information teaching platform based on LAN technology can successfully help college English teachers improve the teaching efficiency of College English.

2. Design Method of College English Information Teaching Platform Based on LAN Technology

2.1 LAN Technology

When we design a LAN based computer-aided foreign language teaching model, we can distinguish the cultivation of interpretive language knowledge and language skills, as well as mechanical listening, vocabulary, grammar, reading training and active oral training, so as to provide students with more language learning materials and targeted practice opportunities, and take effective monitoring and evaluation methods. Record the whole learning process and learning effect of students, change the current situation that only pay attention to learning results and ignore the learning process of "one volume determines life". Specifically, according to the syllabus and class hours, the teaching content is divided into each class, and the mechanical exercises (listening, vocabulary, grammar, and reading) are made into courseware. Students can self-study these contents at any time, but they must participate in the online test within the specified time, and record the test results on the computer, based on the students' scores and teachers' targeted teaching plan; the time saved is used for small class teaching, mainly for the training of listening and speaking ability according to the background of teaching materials; The final score of students is composed of three parts: Students' self-study in LAN, examination results, classroom performance and final examination results.

2.2 Design Method of College English Information Teaching Platform
This process uses BP algorithm, also known as BP network algorithm. BP network process fault diagnosis process. Before diagnosis, it is necessary to analyze and master the learning situation of students’ basic knowledge points, and then diagnose the basic knowledge points, and transmit the diagnosis results to the multi-layer network. In the BP algorithm, the minimum mean variance and error back-propagation are used in the learning phase and transmitted to the input layer. In the working phase, the input of the vector is propagated to the output layer by layer.

The partial derivatives of the error function to the neurons in the output layer were calculated:

$$\sigma_o(k) = (d_o(k) - y_o(k))y_o(k)(1 - y_o(k))$$  \hspace{1cm} (1)

The partial derivatives of the error function to the neurons in the hidden layer were calculated:

$$\sigma_h(k) = \left[ \sum_{o=1}^{q} \sigma_o(k)w_{ho} \right]v_h(k)(1 - v_h(k))$$  \hspace{1cm} (2)

Calculate the global error $E$:

$$E = \frac{1}{2m} \sum_{k=1}^{m} \sum_{o=1}^{q} (d_o(k) - y_o(k))^2$$  \hspace{1cm} (3)

3. Experimental Correlation Analysis

3.1 Experimental Background

The new English learning system adopts B / S mode and the database adopts relational database. The most significant feature of B / S mode is that customers can access the system anywhere through the browser. In a simple way, users can access the system in the form of web pages through the browser. This structure is suitable for information query; the interface is friendly and the overall requirement is beautiful; the difficulty of developing software using Java EE technology is moderate, but the maintenance and expansion cost is low; it can achieve good cross platform performance.

3.2 Experimental Design

The implementation of the system uses Java EE technology combined with artificial intelligence language Jess to realize data processing. The specific database is mysql5.5. The new online English learning system needs to achieve great functions. The software development environment used in the system is investigated and counted. The survey results of software environment for system development are shown in Table 1:

| name | describe | edition |
|------|----------|---------|

Table 1. Software environment for system development
4. Discussion

4.1 Analysis of the Current Situation of the Design Method of College English Information Teaching Platform Based on LAN Technology

Teachers should stimulate students' interest in learning English in their usual classroom teaching. The research of educators shows that the key to learning is to improve learners' interest. For students, only what they are interested in will make them have the desire and motivation to learn. Therefore, higher vocational education should abandon the traditional teaching mode. Teachers should fully stimulate students' interest in learning through network learning platform, and enhance students' practical ability of language application by cultivating students' reading, writing and speaking abilities. This paper makes an investigation on the effect of College English information teaching platform based on LAN technology in a university. The survey results are shown in Figure 1:
As shown in Figure 1, the attendance rate of the students in the college has increased significantly after using the College English information teaching platform based on LAN technology, which shows that the platform can successfully stimulate students' interest in learning. The use of information technology campus teaching platform has not only completely changed teachers' teaching methods in the classroom, but also trained students' good autonomous learning habits and guided students to use it. It has changed the original passive teaching into active teaching. Through the use of campus teaching platform, students have also changed their learning methods, which have strengthened their interest in learning English; it improves the attendance rate of English class, strengthens the love of English class, and improves the comprehensive ability of English learning. From passive listening in class to active learning before, during and after class, and from what the teacher told me, the mode of College English teaching reform practice course has been changed.

The teaching results show that the use of network teaching platform can promote the positive development of teaching, improve students' autonomous learning ability, and promote teachers' analysis and thinking of their own teaching. The specific performance is that teachers' teaching is easier, students' interest in learning is stronger, and their academic performance is constantly improving. This paper investigates the passing rate of CET-4 and CET-6 after the students use the LAN based College English information teaching platform, the survey results are shown in Figure 2:
As shown in Figure 2, with the application of College English information teaching platform based on LAN technology in College English teaching, the passing rate of CET-4 and CET-6 has been continuously improved. This shows that the application of network teaching platform can significantly change the English teaching mode and improve the teaching quality. Students can also learn autonomously through the network autonomous learning platform, which is conducive to improving students' Comprehensive English ability, especially oral and listening abilities. However, because the platform is still in its infancy and needs continuous improvement, the purpose of teaching students in accordance with their aptitude has not been fully reflected. In the future, differentiated teaching methods will be further increased.

4.2 Suggestions on the Development of the Design Method of College English Information Teaching Platform Based on LAN Technology

College graduates' English is an important part of the undergraduate course teaching system in China. The reform of English Teaching for college graduates is one of the important ways to further cultivate and improve the foreign culture and language literacy of Chinese college students. With the further development of China's economy and society and the urgent need of College Students' cultural exchange with foreign countries, the traditional and modern teaching methods of English Teaching for college graduates cannot meet the requirements of the current social and economic development for personnel training, and the reform of college graduates' English teaching has been put on the agenda. Making full use of modern information technology to promote the reform of curriculum teaching in
China has become the consensus of the whole education circle and the whole society. In recent years, people have carried out in-depth theoretical and practical research on the integration of information technology and College English curriculum, and achieved certain research results.

From the development process and trend of education informatization at home and abroad, through the integration of information technology and various courses, we can promote the comprehensive application of information technology education in education and teaching, And then how to cultivate the information and innovative technology talents needed by the information technology in the 21st century has gradually become the strategic focus and research focus of the educational reform and information construction of all countries in the world. Nowadays, all countries in the world are trying to explore their own ideas and ways of integrating educational information and innovative technology with higher education curriculum informatization, and are taking measures to prepare for the benign and prosperous development and informatization of educational information technology in the field of higher education. Many of these preparatory measures are in terms of hardware and software, theory and policy.

Nowadays, English plays an increasingly important role in international communication. Therefore, we should constantly improve English learning ability and reform English teaching mode to meet the needs of current English learning. The limitations of the traditional teaching mode can no longer meet our needs. The mode of English teaching reform is to use computer technology and network technology to transform the traditional teaching mode into teaching software, network and information learning mode.

The reform of College English network teaching puts forward higher requirements for teachers. Teachers should change their teaching concepts and establish the concept of quality education. The change of teaching mode is not only the change of teaching activities or teaching means, but also the change of teaching concept. Teachers should establish a people-oriented education concept, create a new environment for students' autonomous learning and collaborative learning; teachers need to master modern educational technology. The new teaching mode can give full play to the main role of students, respect the dominant position of students in the learning process, cultivate students' self-awareness, autonomy and creativity, stimulate students' learning motivation and interest, and guide them to the goal of English teaching, so as to achieve the goal of improving students' Comprehensive English application ability. This can gradually improve students' self-monitoring and self-control ability, and provide favorable strategies to help students solve some problems and improve their comprehensive English learning ability.

Students' Autonomous Learning Center is the inevitable trend of the development of College English teaching reform to information technology education. The application of modern advanced teaching methods can improve students' Comprehensive English application ability, especially the training of listening and speaking ability, and improve their comprehensive cultural quality. It meets the requirements of CET-4 and CET-6 reform. Language teaching is a very practical teaching activity, especially in English listening and speaking teaching, students' Autonomous Learning Center will play an increasingly important role. We have reason to think that with the acceleration of College English teaching reform, it is not only possible but also inevitable to use LAN Based Autonomous Learning Center to carry out high-quality College English teaching reform.
5. Conclusions

This paper introduces the design method of College English information teaching platform based on LAN technology. In the past few decades, a large number of science and technology are constantly developing. With the continuous improvement of science and technology level, our production and lifestyle are also changing. Everything is in reform and innovation to meet the new requirements of the new era. In order to meet the new requirements for English Teaching in the new era, this paper proposes the method of establishing an information-based College English teaching platform based on LAN technology, which can better realize the modern teaching of College English. The College English information teaching platform can basically meet the needs of College English Majors for autonomous learning of English knowledge, and can better Stimulate students' interest in learning. Through long-term research, it is found that the design method of College English information teaching platform based on LAN technology can successfully help college English teachers improve the teaching efficiency of College English.

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