



## The Evaluation and Improvement Method of College English Teaching Effect based on CAD Technology

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**Abstract.** Universities need to build a student-centered English teaching environment, and more need to strengthen cooperation between teachers and students. This integrated teaching structure no longer sees teachers as isolated decision makers. Both teachers and students should be part of the teaching team to ensure that the teaching team has strong adaptability. This teaching mode also enables teachers and students to communicate effectively. Teachers should not only become the main body of teaching in their work, but also require to promote cooperation among students in the teaching process. Teachers need to use CAD technology to cultivate students' English communication ability in cooperation. China's education sector actively advocates the reform of English teaching for college students. The purpose of this work is to solve the problem of low language application ability of students. This work is also used to alleviate the serious shortage of English education resources caused by the expansion of university enrollment. Therefore, this paper proposes a new English teaching mode based on CAD technology. This paper further proposes the implementation scheme of this teaching mode. In this paper, computer CAD technology is used as an auxiliary tool for teaching. CAD technology is also an integral part of English course teaching. The technology is also a key step in the effective implementation of the new model and the smooth progress of the reform. This paper will start with typical English teaching cases in colleges and universities, and deeply analyze the application method of computer CAD technology in the new mode of English teaching. This paper further explores and analyzes the characteristics of computer-aided teaching. This paper argues that computer CAD technology, as an auxiliary tool, cannot achieve the purpose of reforming the English teaching system. The computer network should be fully integrated with the English course teaching, so as to achieve the goal of English teaching reform.

**Keywords:** CAD technology; college English; teaching effect evaluation; computer technology.

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## 1 INTRODUCTION

In recent years, the Ministry of Education has begun to actively plan reform measures for the college English teaching system. The purpose of this reform is to solve the shortcomings of China's English teaching, which is time-consuming and slow to achieve results. Sun and Wang [1] believed that the purpose of the reform is to alleviate the serious shortage of English education resources caused by the expansion of university enrollment. To this end, the Ministry of Education has formulated and promulgated the "College English Course Teaching Requirements (Trial)" plan on the basis of fully listening to the opinions of experts from all walks of life. The plan hopes to solve the above-mentioned two major problems in English teaching through systematic reform. The "Plan" is a programmatic document that guides the task of teaching reform. The core part of this document is the English multimedia teaching mode that combines computer and classroom. At the same time, the English education community needs to implement this new teaching mode. Education experts regard computer CAD technology as an auxiliary tool for teaching. At the same time, Beatriz [2] believed that the English teaching experts regard CAD technology as an indispensable and organic part of English course teaching. Seraj et al. [3] believed that this technology is very important for the effective implementation of English teaching mode and the smooth progress of teaching reform. This paper starts with the typical English teaching actual cases in colleges and universities, and constructs the evaluation method of computer CAD technology on the effect of college English teaching. Based on this, this paper further analyzes the characteristics of computer CAD-assisted teaching, and on this basis, puts forward some suggestions for the application of computer CAD technology in English curriculum reform.

In recent years, the new English teaching model has been piloted in 180 institutions of higher learning specified by the Ministry of Education. Subsequently, Doiz and Lasagabaster [4] believed that the pilot colleges and universities continued to shrink, from 60 pilot colleges to 31 pilot colleges. At the same time, Makram et al. [5] believed that the Ministry of Education has also begun piloting new English teaching models in other non-pilot colleges and universities. This paper further analyzes the teaching environment of many domestic colleges and universities, and contacts with different levels of teaching staff in colleges and universities. The researchers have contacted many teachers and observed English teaching activities in a considerable number of schools. Ward [6] believed that these universities include some pilot units of the British reform of the Ministry of Education. The teaching form of these colleges and universities is similar to the traditional classroom teaching mode using blackboard and chalk as teaching tools. In terms of teaching equipment, Hande et al. [7] believed that this teaching mode only has more CD-ROMs and computers. The nature of the teaching mode has not changed, and this teaching mode is a more traditional one. This model is a teacher-centered computer-aided teaching method. Teachers use the CD-ROM to explain the content of the text, and the computer only plays a role in assisting teaching. Classroom teaching is still a situation in which teachers teach on stage and students listen to lectures off stage. The content of the CD-ROM is exactly the same as the content of the paper textbook.

Therefore, it is not meaningful for students to carry out deep learning after class. It is very difficult for colleges and universities to make students develop their learning potential and further highlight the initiative of students' autonomous learning. Some college teachers will teach students English listening and speaking courses. However, the course is actually a listening class using computer technology to play the recording. Students' conversation and listening content are basically limited to textbooks. Due to the issues such as content and limited student vocabulary, Campbell et al. [8] believed that the student groups are not very interested in oral discussions. This teaching mode is difficult to reflect the ability of students to learn independently.

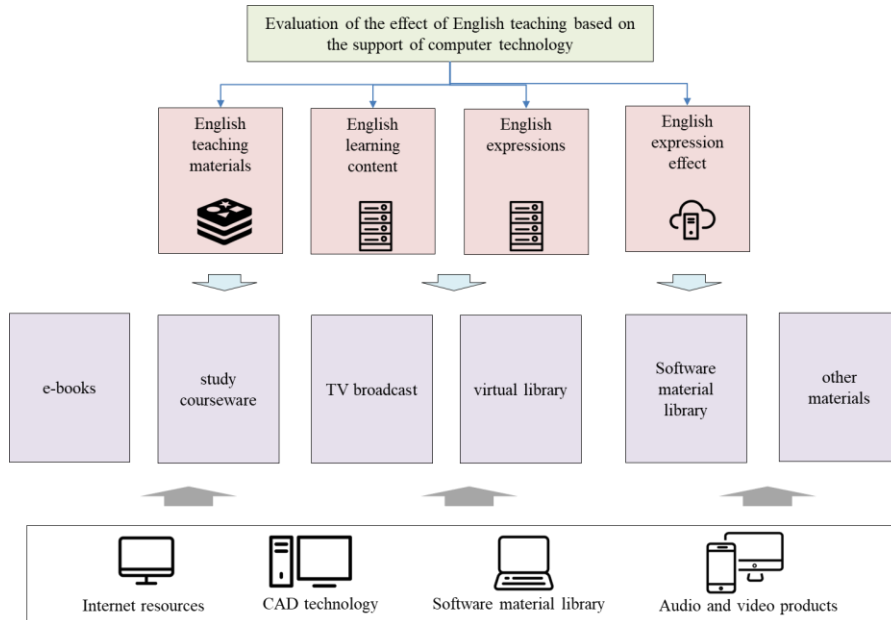
The method of computer-aided teaching is to undertake part of the content of English teaching through computer CAD technology. The object of computer aid is teaching staff, and the function

of computer CAD must be fully exerted through the operation of teaching staff. The auxiliary function of the computer is mainly reflected in the related exercise software. However, Bianco [9] believed that these exercises and practice software are not suitable for the learning of new knowledge, but are only used to strengthen the existing knowledge system. Therefore, the computer CAD technology has a good effect on the students' English course learning. With the development of educational models, people began to question the value of traditional English teaching models. There are many types of computer-aided teaching modes. Brian [10] believed that the CAD-aided teaching modes are mainly used in English teaching from the 1980s to the mid and late 1990s. This teaching mode is mainly used for the demonstration and explanation of English courseware. This mode expresses the content of English courseware through graphics, animation, simulation and other means. In the application of this mode in English teaching, English course teaching is the main form. Computers are used as auxiliary tools in English teaching, and their purpose is to help teachers improve the efficiency of English teaching. Computer CAD teaching tool is a demonstration tool to assist teachers.

### **1.1 The Development Status of English Teaching Courses based on CAD Technology**

Most of the content of CAD teaching comes from textbooks, and the student group is the object of knowledge output. The current teaching mode does not change the teaching content and teaching structure, and the teaching mode is mainly teacher-centered. It can be seen that if colleges and universities regard computers only as auxiliary tools for teaching, it will be difficult to achieve the expected English teaching reform goals. This model can only alleviate the shortage of teaching resources caused by the expansion of school enrollment. This model is difficult to solve the problem of low English application ability of students. First of all, the computer-aided teaching system has not taken computer CAD technology as an important part of English course teaching. Computer CAD technology is an important part of English teaching reform. The traditional English teaching mode is difficult to effectively use network resources, so that a large number of teaching materials can be shared. Based on this, it is difficult for colleges and universities to make full use of various teaching resources.

Generally speaking, the level of English learning has a lot to do with the learning environment. At the same time, the language learning environment also plays a very important role in English teaching. Existing research generally believes that the English learning level of Chinese students is not as good as that of foreign students, especially the communication skills of students, such as listening, speaking, reading, writing, etc., are far behind that of foreigners. The reason is that English is basically a second language for students in these countries. From the comparative analysis of English teaching achievements in my country, the current research results show the following phenomena. First, schools need to provide an English language learning environment as much as possible. These countries and regions that use English as a second language use English in a wide range. English language learning work involves various fields of society, such as business, education, politics, culture, social and other fields. The learner can fully contact and use the language in the real language environment. The language environment of English learners is mainly in the classroom. For example, English teaching work in Chinese universities focuses on addressing the environmental issues of language learning. Universities cannot rely solely on computer-aided teaching tools to teach English. Computer CAD technology is difficult to use in college English teaching. Computer-aided technology weakens the function and function of the computer itself, and it is difficult to fundamentally build an ideal English learning environment. College English teaching experts can make full use of contemporary information technology. Teachers build a simulated language learning environment on the computer network. Such an environment is beneficial for students to learn English in a virtual language environment and improve their ability to use language. Therefore, colleges and universities need to fully integrate CAD information technology and English course teaching. The Evaluation Method of College Students' English Teaching Based on CAD Technology is shown in Figure 1.



**Figure 1:** The Evaluation Method of College Students' English Teaching Based on CAD Technology.

## 1.2 The Impact of CAD Technology on College English Learning Environment

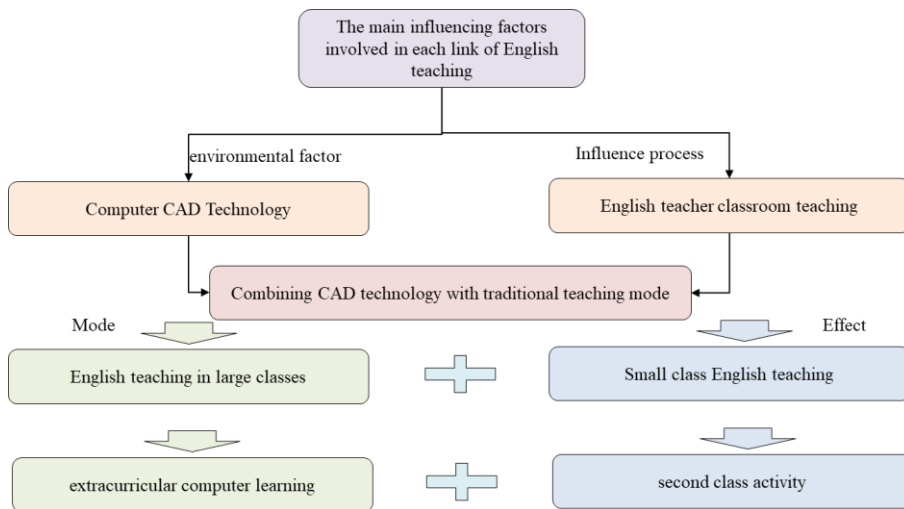
Overall, an ideal English learning environment is very important for language learning. However, Chinese universities usually systematically study English as a second language. This learning mode is based on the use of computer networks as the core to achieve college English education. Build an ideal English learning environment for students through modern information technology. This English learning environment has a great impact on students. With the continuous development of computer technology, the role of the computer has gone far beyond the general auxiliary functions. Computer technology has been fully integrated into people's daily social life. In many fields, people and computers have become a whole and cannot be separated from each other. For example, in business, finance, banking, management and other industries, the application of computer CAD technology is very extensive. In the field of English learning, computer CAD technology is also considered as an application mode of a human-organ system. From the perspective of computer practice, English learners and computer technology have been cross-integrated. In the human-computer society, the English teaching system has built a relatively mature human-computer interaction relationship. Early mainframe computers were mainly used in the field of English teaching.

In the environment at that time, computer hardware was relatively expensive, and multiple students needed to share a computer device. Students realize the economy and convenience of computer resource utilization through hardware resource sharing. Student groups and computers have formed a many-to-one correspondence. When the computer CAD technology appeared, the price of the computer is no longer expensive. At present, each student can use a computer alone. There is also a corresponding relationship between teachers and computers. Since the emergence of computer intelligent network technology, many students can conduct CAD operations online at the same time. Students share many computer hardware, software, and information resources. The Application Thought of Computer Aided Technology in the Teaching of Costume Culture.

## 2 THE APPLICATION DIRECTION OF CAD TECHNOLOGY IN THE REFORM OF COLLEGE ENGLISH

### 2.1 CAD Technology is Conducive to Improving the English Teaching Environment

Computer resources have become popular. With this development, student groups will be able to have multiple computers in the future. Student groups can use computer CAD technology to achieve English learning work. Students through the wireless Internet, anyone can get the learning content they need from anywhere. Every student can learn English knowledge as needed, and truly use computer resources to jointly create an ideal English learning environment. At present, the information technology with computer network as the core is widely used in our English teaching reform. However, the auxiliary status of computer resources has not changed. Therefore, colleges and universities should fundamentally change the inherent concept. Educational institutions need to fully realize the important role of computers in English learning and give full play to them. The combination development framework of computer CAD technology and English teaching system is shown in Figure 2.



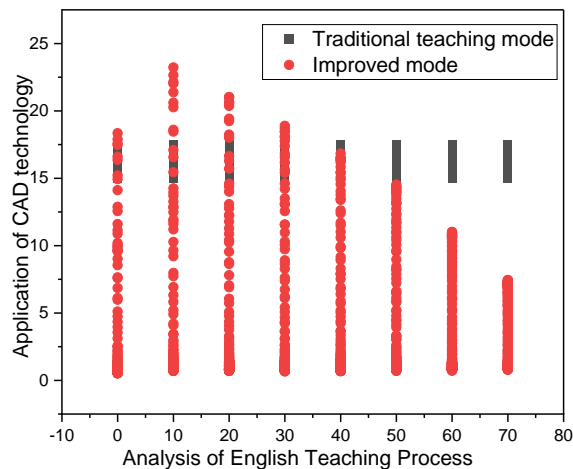
**Figure 2:** The combination development framework of computer CAD technology and English teaching system.

In general, the goal of college English teaching reform is to alleviate the shortage of English educational resources. At the same time, the application of computer CAD technology needs to solve the current problems of English teaching and truly improve the language application ability of the student group. However, the positioning of computers as an auxiliary teaching tool in the current teaching environment is problematic. There are two main reasons: First, the computer in an auxiliary position cannot help students learn English knowledge, and it is difficult to provide an ideal learning environment for the student group. Second, the computer in the auxiliary position cannot help students to make wider use of teaching resources, so that English teaching resources can be shared more widely. Therefore, colleges and universities need to integrate information technology with computer network as the core and English courses.

### 2.2 CAD Technology Helps to Improve the Quality of English Teaching

The integration of computer CAD technology and English courses is a new development direction. This method is fundamentally different from computer-aided teaching. The most prominent

function of the computer-aided teaching method is the auxiliary teaching function. This function can assist teachers to improve the teaching effect. But this method has limitations, mainly in the specific means and methods of teaching. After the computer CAD technology is integrated with the English curriculum, the computer becomes an integral part of the entire curriculum system. Computer CAD technology is no longer an auxiliary tool for English teaching. Therefore, computer CAD technology and English course teaching have realized the functional integration as a whole, which has essentially improved the quality and efficiency of English teaching. This efficiency improvement is mainly reflected in the following aspects. First of all, computer CAD technology is actually based on classrooms and textbooks. Textbook teaching is the only source for students to acquire English knowledge. The relationship between teachers, textbooks, and students is relatively simple. Teachers teach knowledge in the classroom, teachers explain problems and impart knowledge to students through textbooks. Textbooks are only a medium of communication between teachers and students. Student groups learn from textbooks through teacher analysis and interpretation. Teachers lead the whole process of teaching, while students are completely passive. Students become objects to be instilled with knowledge. Teachers use computer CAD as an auxiliary tool for teaching, which can better improve the learning effect of English courses. The analysis of the reform effect of English teaching mode on the new technology platform is shown in Figure 3.

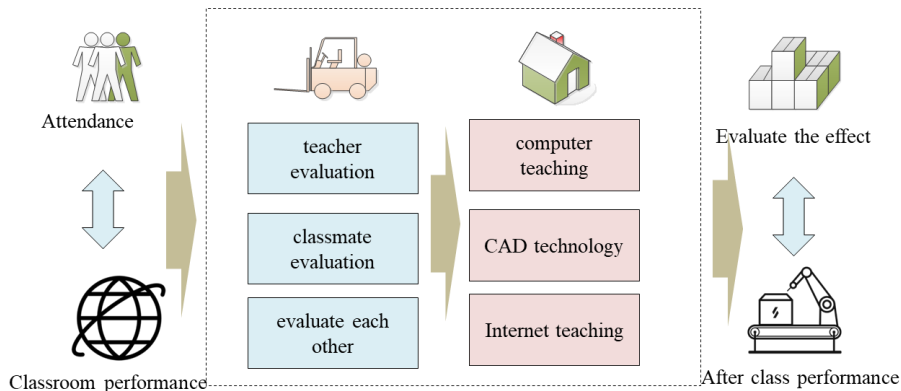


**Figure 3:** The analysis of the reform effect of English teaching mode on the new technology platform.

### 2.3 CAD Technology Helps to Break the Limitations of Traditional English Teaching

Teachers use computer CAD technology to demonstrate or explain the content of the English course to the student group. Computer-aided teaching technology only enhances the effect and means of teaching. On the other hand, the traditional teaching form combining classroom and textbooks is still the main source of students' acquisition of knowledge. However, computer network and curriculum integration technology can change this situation as much as possible. Considering that the teaching framework has undergone fundamental changes, college teachers need to make full use of computer CAD technology to carry out teaching research work. For different teaching elements, there is an interactive relationship among college teachers, students, computers and teaching content. There is interaction, interdependence and mutual transformation among these groups. In the framework of the integration of computer and English courses, the role of teachers has undergone fundamental changes. The group of teachers is no longer the

center of classroom teaching, and students change from passive recipients of knowledge to active builders of knowledge. The range of students' knowledge sources is gradually expanded. It can be seen that in the whole process of students' English learning, the knowledge that students can come into contact with has far exceeded the scope of textbooks. There are many avenues through which student groups can engage in meaningful, active knowledge building. The application effect of CAD technology in the reform of college English teaching mode is shown in Figure 4.



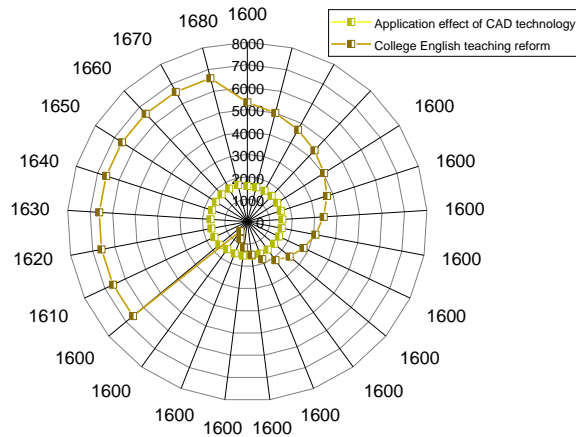
**Figure 4:** The application effect of CAD technology in the reform of college English teaching mode.

### 3 THE APPLICATION MODE OF CAD TECHNOLOGY IN COLLEGE ENGLISH TEACHING

#### 3.1 CAD Technology to Build an Ideal English Teaching Environment

The integration of computer network and English curriculum is conducive to creating an ideal teaching environment and learning mode. This ideal creation environment benefits from the rapid development of computer CAD technology, and also creates an excellent environment for students to learn English. The ideal English teaching environment is closely linked with the development of computer technology. In particular, the three major technologies of artificial intelligence, digitization, and networking make it possible to create this ideal environment. Artificial intelligence technology makes the functions of computers more intelligent. Intelligent processing methods can also make computer CAD technology suitable for various occasions. CAD technology can assume the role of teaching subject in English teaching. The computer has the ability of anthropomorphic thinking, and the intelligent computer teaching system can realize the humanized computer teaching. Computer CAD technology can also realize human-computer automation interaction. Based on computer CAD technology, schools can guarantee the rationality of the teaching process and complete relatively complicated English teaching tasks. The application mode of CAD technology in college English education is shown in Figure 5.

In addition, because the computer functions gradually show the trend of intelligent development, the English teaching system also needs to be optimized and improved. This working mode mainly includes two aspects. One is the personalized development of teaching content. The school uses artificial intelligence technology to provide English tutoring for students. According to the different personality characteristics and needs of students, the school provides teaching content and other information technology service support. The second is the virtual development of the teaching environment. Artificial intelligence technology can make teaching scenarios highly virtual.



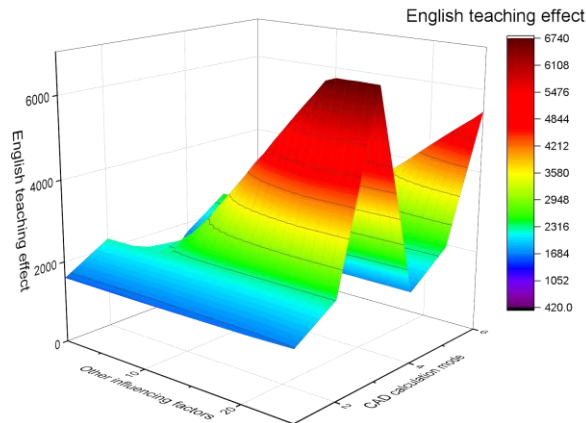
**Figure 5:** The application mode of CAD technology in college English education.

This means that teaching activities can be largely freed from the constraints of physical space and time. English teaching activities are completely beyond the scope of computer-aided teaching functions. The third is the relative automation of teaching management. Computer CAD technology can support the automatic development of teaching management. These tasks include English teaching test evaluation, learning problem diagnosis, learning task assignment and many other aspects. Artificial intelligence technology has laid the core foundation for creating an ideal teaching environment. Digital technology mainly refers to computer-based information digital technology. Digitization has made the basic equipment of educational technology systems easier to use, reliable, and standardized. More importantly, the development of digital technology has made the storage of computer information larger. The speed of computer information transmission has become faster, and the information will be very stable in the process of transmission.

### 3.2 CAD Technology Builds a Systematic English Teaching Structure

The English teaching environment constructed by modern information technology has the characteristics of situation. In the process of information transmission, traditional media such as books and blackboards are replaced by information carriers such as sound, video, and pictures. These new information carriers are more visualized and personalized. The changes in the English teaching environment are closely related to the development of digital technology. Digital innovation has made the existing English teaching environment more reasonable and perfect. In addition, network technology also makes English teaching more convenient. The main advantages of networking are reflected in various aspects, such as wide coverage, extensive sharing of resources, and transcendence of time and space limitations. The multidirectional interaction of information resources facilitates cooperation between teachers and students. Network technology has made the interaction and autonomy of the learning process a reality. With the rapid development of network technology, people have gradually changed the traditional learning concepts and methods, and no longer regard the classroom as the only learning environment. The development of network technology has expanded the scope of traditional classroom teaching. Classes will follow the learning progress of the student body at any time. The Internet has become an ideal environment and place for people to learn foreign languages. The comparison of CAD technology and traditional teaching methods is shown in Figure 6.





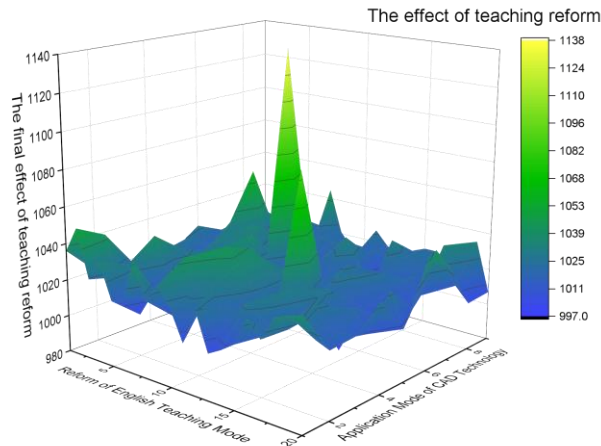
**Figure 6:** The comparison of CAD technology and traditional teaching methods.

### 3.3 CAD Technology can Improve the Curriculum System of College English Teaching

Schools need to build an ideal English teaching environment. From the perspective of English communication theory, CAD technology can construct a student-centered learning environment. The student-centered learning environment mainly includes the following three aspects. First, schools need to build a student-centered English learning system. Schools need to emphasize the help of CAD technology in English teaching. English teaching is not simply imitation and mechanical memory. The content of English teaching has become the result of students' self-renewal and information conversion. Computer technology has also become the main supporting means for students to actively process and process information. Secondly, the student-centered English teaching model emphasizes that the student group should strive to master the cognitive and comprehension ability of knowledge in the unknown field. Student groups need to work hard to understand the differences that exist between what is currently known and what is unknown. This difference will cause cognitive dissonance among students, and this difference will also make it difficult for the student group to understand the direction of change in English teaching. Finally, student-centered learning emphasizes collaborative learning and individual understanding. This learning model enables the continuous refinement of an individual's knowledge system. Student groups use computer CAD technology to test their learning effects. Students also need to take a closer look at the level of understanding of others. This English learning mode provides a good knowledge innovation environment for students' individual evaluation and cognitive understanding. The final effect of English teaching reform based on CAD technology is shown in Figure 7.

## 4 CONCLUSION

The integration of computer network and English curriculum can construct an ideal teaching environment. This combination of forms can fundamentally change the existing English teaching structure system. The traditional teacher-centered English teaching system has also undergone great changes. The traditional teacher-led English teaching mode is mainly reflected in the English teaching method. In this teaching structure, English teachers should change the core role of teaching in the traditional sense. The application of computer CAD technology can provide a new concept innovation for English teaching. Teacher groups need to use computer CAD technology to acquire new knowledge and new skills.



**Figure 7:** The final effect of English teaching reform based on CAD technology.

As we all know, English teaching in our country is generally carried out in traditional classrooms. In such an environment, the English teacher lectures on the stage, and the students listen or take notes off the stage. The content of classroom activities includes question answering, key point practice, examination and testing and other links. These English teaching contents will be integrated into the English teaching system as an organic part.

English teachers basically have no experience to learn from. In the new college English teaching structure, teachers let students use the computer network to build a new knowledge system. The group of students can first experience the whole process of this learning activity. This kind of experiential activity not only helps teachers understand the advantages of computers. At the same time, this experience allows students to avoid problems and setbacks as much as possible in their learning activities. Moreover, this English teaching system also helps teachers to carry out design work with clear goals and reasonable structure. Secondly, teachers need to use the knowledge system they know to carry out English teaching work. Students further their knowledge of English and computer functions. Schools also need to further design, manage and maintain student-centered learning environments. When teachers have a teaching experience that integrates computers and courses, they can use the advantages of computers to carry out their work. Teachers need to design and create an integrated English curriculum learning environment based on students' learning characteristics. Teachers play the role of designers, and teachers carefully consider and arrange every aspect of the curriculum to help students develop meaningful English learning. Students focus their learning efforts on the learning methods of English courses. In the current English teaching structure, students need to change their roles. Students need to regard themselves as active learning individuals and change the image of traditional passive knowledge learners. Students need to be more active and active in their learning activities. First, students will be more actively involved in English learning activities. In the specific teaching link, students no longer always take notes while listening to lectures, and they no longer always answer textbook questions in a limited way. Students need to devote themselves to English learning activities in the English teaching system.

Under the current environment, the main purpose of college English teaching reform is to improve students' English application ability. The school's teaching reform is to alleviate the problem of the shortage of English education resources. In response to this situation, the Ministry of Education proposed a new English teaching model. In view of the current teaching situation, most colleges and universities still lack understanding of the new English teaching mode. This teaching mode is still a teacher-centered computer-aided teaching method. This method of

teaching reform is difficult to truly achieve the goal of English teaching reform. It is difficult for educational institutions to use computers as an auxiliary teaching tool to meet the requirements of English teaching reform. In order to effectively carry out the reform of English teaching, teaching institutions need to fully integrate CAD technology and English courses. The integrated English teaching course will break the limitations of classroom teaching, and can use CAD technology to build an ideal English teaching environment. This teaching mode can fundamentally change the existing teaching structure. Only in this way can the reform of college English teaching be possible to solve the students' language application ability. Alleviate the serious shortage of English educational resources.

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