

# **Construction and Analysis of Foreign Language Learning Model Based on Classroom Network Environment**

Cuiyan Lan

School of Foreign Languages, Xinhua College of Sun Yat-sen University, Guangzhou 523133, China

**Abstract.** The problems in the traditional college English classroom teaching have become increasingly prominent. The development of network technology has solved these problems to some extent. However, there are still many problems in the combination of traditional college English classroom teaching and online teaching platform. By analysis and comparing the characteristics of the existing network teaching platform, it is found that most of the existing platforms are mainly based on “resource provision and summative test evaluation”, lacking supervision and feedback on the teaching and learning process. In response to this problem, this study proposes a “triangular model” of college English teaching in the network environment. By combining the traditional classroom teaching, network teaching platform and network formative evaluation platform, the quality of college English teaching is improved and analysis. The model's operational model provides a practical application case.

**Keywords:** classroom network environment; foreign language; learning model; construction and analysis.

## **1. Introduction**

With the development of network information technology, the open courses of world-famous schools have been put on the Internet, and online learning resources through the Internet are at your fingertips. It has been suggested that learning can be achieved entirely through the Internet without the need for traditional face-to-face instruction. However, the construction of multimedia language labs and network resource pools has not shaken the important position of traditional college English classrooms. The existence of traditional teaching has its objective inevitability. First of all, not all the technical conditions of colleges and universities can meet the learning needs of students, such as limited language room and insufficient seats [1]. Secondly, students with poor English foundation are more accustomed to the “test-taking” mode of teachers in middle school, and their self-learning ability is weak. It is difficult to adapt to the personalized learning mode in the information environment; finally, traditional teaching has its own unique advantages, face-to-face interaction between teachers and students is conducive to students' knowledge construction in the real environment. Therefore, traditional teaching has its unique advantages compared with pure online teaching, and it has its objective necessity [2].

Taking the current college English teaching status and evaluation model of Baoji University of Arts and Sciences as the blueprint, combined with the teaching attempt to build the students' usual efforts into the evaluation category, and then motivate students to learn enthusiasm. Baoji University of Arts and Sciences sets the general requirements according to the requirements of college English teaching and the actual teaching objectives of the school, and at the same time creates conditions to enable those students with higher English proficiency and higher ability to achieve higher or higher requirements. Since the 2006 reform, I have used the New Vision College English “Reading and Writing Course”, “Listening and Speaking Course” and the second edition series of textbooks and installed the New Vision Network Teaching Management Platform on the campus network. However, the teaching evaluation still uses the pre-teaching model, which is obviously lagging behind: the final written test is mainly supplemented by the usual grades and oral exams. The student's online learning record is not included in the assessment [3]. The usual results are based on the completion of the usual homework and the observations in the teacher's classroom. Students who are impressed by teachers usually have high grades, while those who do not have impressions or impressions are low. Such scoring standards are subjective and unfaithful, and it is difficult to achieve a fair degree of fairness,

objectivity and fairness. Therefore, when constructing a new learning evaluation model, the teachers' classroom observation should be specific, and the standard should be unique. All daily practical learning activities of students should be included in the assessment scope, and the quality of their completion and quality should be recorded in real time, and then the scores should be quantified and weighted and calculated as the comprehensive results at the end of the period. Observation standards are jointly developed by teachers and students (see Figure 1). On the one hand, let the students do the masters of their own evaluation, and at the same time make all students clear the evaluation criteria and effectively guide their daily learning activities [4].



Figure 1. Foreign language learning model

## 2. Methodology

Learning English through the Internet has become a very important and important way for future English learning. Applying the network to English teaching is also an inevitable trend in the future world English learning. In recent years, a large number of researchers have studied how to use the network to support college English teaching [5], explored a variety of information technology integration under the college English teaching model, developed a variety of online teaching platforms for college English teaching, optimized the learning environment, the course capacity has been expanded. Making full use of network resources and enriching teaching content has become a hot topic at the moment The internet resources such as the specialized teaching websites, remote interactive teaching and virtual classroom teaching have been gradually and widely applied in the field of education nowadays. “Traditional College English Classroom Teaching + Network Teaching Platform featuring ‘Resource Provision, Summary Assessment and Testing’ has become a form of college English teaching integrated with information technology and traditional classroom teaching. Among them, the network teaching platform is mainly used to provide summative assessments such as expanding resources, implementing tests, and teaching management. This form of teaching does not completely abandon traditional classroom teaching and does not fully absorb the full openness of online teaching. Instead, it absorbs the advantages of both, and exerts the auxiliary role of network technology in traditional teaching, promoting each other and developing together [6].

Collaborative learning in the network environment refers to a cooperative learning model in the form of small groups, with the network as a tool, in order to complete the learning tasks and achieve the common learning goals. Cooperative learning in the network environment can eliminate time and space restrictions, provide convenience for learners, provide sufficient critical thinking time for structured online discussions, and elaborate processing of opinions, which is conducive to analysis, reasoning, evaluation, reflection, The cultivation of knowledge innovation and the deep understanding of the discussion issues, the form of participation is more democratic, even those students who are not well-informed, it is easy to mobilize their enthusiasm for participation. At the same time, cooperative learning in the network environment also has good openness, wide-area and interactivity. Learning is not limited by time and space and can enter virtual classroom anytime and anywhere. The communication between teachers and students and students is carried out through information technology. Students can browse, download and upload materials on the Internet to

improve the depth and breadth of students' knowledge. In online collaborative learning, team members can use language and text to improve language comprehensibility to promote mutual learning and common progress among members. When group members discuss topics online, they use different expressions to express their meanings. By using recordings, the listeners can repeatedly hear the information. This kind of repetitiveness is a necessary condition for language learning from short-term understanding to long-term acquisition. Members can get the opportunity to repeat the exercises through video and recording [7].

The classroom always focuses on three aspects: morphological evidence, student inquiry activities, and experience in group activities. Based on these three aspects, students come to guess, classify, explain, and correct. The three course objectives are always centered around inquiry activities, in which students generate knowledge and skills, implicit emotions and attitudes, and apply scientific methods. Combining his understanding of scientific inquiry and its teaching, the teacher achieves the course objectives through the teaching practice of the triangular model. The teacher achieves three course objectives simultaneously in the inquiry teaching, as shown in Figure 2.

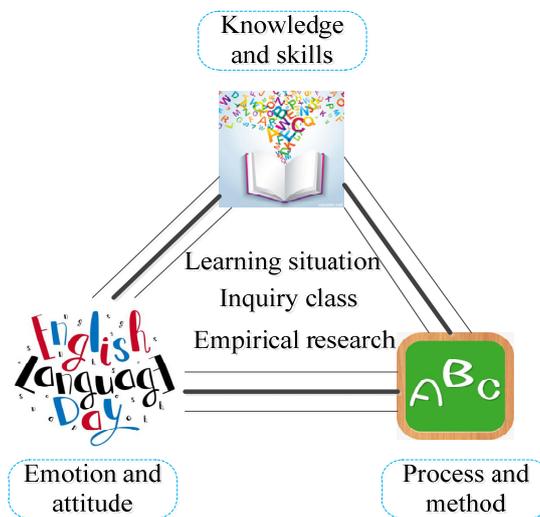


Figure 2. The "triangular teaching" model of college English teaching

### 3. Results and Discussion

#### 3.1 Situational Cognition and Situational Teaching

In this study, we will learn from the idea of constructing a personalized learning environment in the network environment and construct a personalized foreign language learning environment for the learner's individual characteristics and needs in the foreign language classroom. Personalized learning in a network environment can adjust and update the learning environment through network artificial intelligence systems and intelligent instructors. In the classroom environment, through the adjustment and support of teachers, using computers, multimedia, and network resources, the design is suitable for different individuals or the learning situation of the group (see Table 1). This learning situation is supported by the original learner model library, multimedia presentation resources, learning activity programs, etc., and strives to take into account both equality and difference in the classroom [8].

Table 1. Evaluation index system of foreign language learning based on classroom network environment

First level index	Two level index	assessment element
Learning attitude	Autonomous Learning in the classroom network environment	Learning plan, learning notes, learning tools and so on
Academic record	Complete the learning task according to the teacher's curriculum plan	Listen to audio, ask questions, watch videos and so on

### 3.2 Constructivism and Situational Cognition Theory

Located above the pattern map is the learner's personality traits system. The individualized characteristics of the learner's learning motivation, self-regulation ability and learning style have an important impact on the learning under the network environment. It embodies the individual differences of the learners. The impact on the learning process, they will affect the learner's selective attention to information, the way of processing coding, the way and strategy of information storage and extraction, and then have an important impact on cognitive processing activities. Learning motivation system involves the motivation of students' learning activities, which determines the consciousness, enthusiasm, inclination and selectivity of individual activities. The level and intensity of the power level determine the quality, level and effectiveness of individual information processing. Learning motivation is not a single structure, but a system of multiple elements, including psychological components such as needs, motivations, attitudes, interests, and hobbies. The self-regulation system is mainly composed of three elements: metacognitive knowledge, metacognitive experience and metacognitive monitoring. It plays a role in all aspects of the learner's internal cognitive processing activities through planning, evaluation, control and adjustment. The strength of metacognitive ability directly affects the planning, purpose, flexibility and effectiveness of individual information processing activities. While the learning dynamics system and the self-regulation system play a role in regulating and controlling the individual's cognitive processing, the two systems are also connected and interact with each other. Learning style refers to the relatively stable processing methods and tendencies exhibited by individuals in the learning context, including sensory channel preferences, cognitive styles, social environment preferences (see Figure 3). It can be clearly seen from Figure 3 that the range of the abscissa of these variables is 40~180, and the range of the ordinate is generally 80~220. Although the scatter plots of these variables are randomly distributed, they are still symmetrically distributed in solid red lines in the figure. Moreover, these variables are concentrated in the middle area, and the distribution at both ends is sparse. Where cognitive style involves the way learners are biased and used to process information, close relationship with online learning [9].

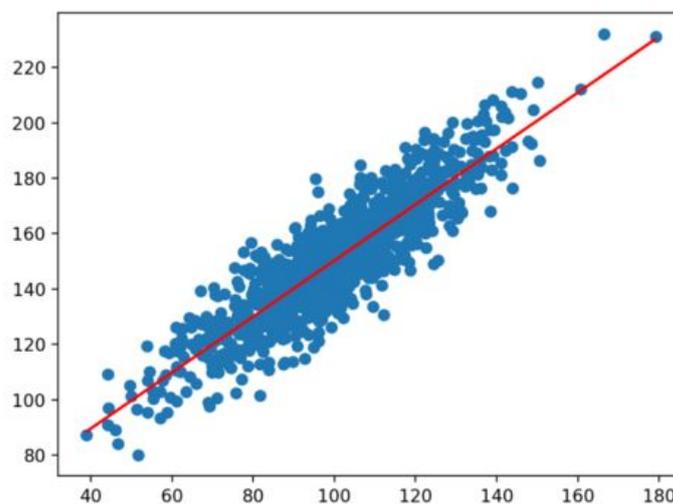


Figure 3. Scatter plot of related variables

Education should include all the people equally, regardless of nationality or class. Successful education should satisfy the needs of most people's lives and pursuits. However, the subjects of teaching are different individuals. Due to different factors such as knowledge background and learning style, students often show different learning interests and adopt different learning methods in the same course. Therefore, an efficient learning system should treat each student as a single individual. The basic requirement of a personalized learning environment is to be able to provide multiple learning paths for the same knowledge point. In this way, it can make it a lifelong and

universal education. Personalized learning is our response to the opportunities and challenges of the future. The goal is to enable all children and young people to make significant progress in school and to grow the talent they need to make great strides in their future lives [10].

### 3.3 Teaching Evaluation Theory

It is good for overcoming students' loneliness and improving students' self-confidence and interpersonal skills. In the network environment, cooperative learning uses the network to communicate with each other. Although students can communicate in the form of video, text, and audio, they still lack the directness and emotional richness of face-to-face communication. At the same time, cooperative learning in the classroom environment is difficult and convenient to find information, resulting in a lack of depth and breadth of communication between students. Therefore, only combining the two learning environments can overcome the above deficiencies. Students can use the network to conduct collaborative learning, find information, and make the issues discussed in depth and breadth. Then, in the classroom environment, collaborative learning and face-to-face communication will be conducted according to the prepared content. Students support and encourage each other, their interpersonal relationships can be well developed, and the strangeness between students disappears naturally, and then they can express their opinions on the issue with confidence [11].

Building an English classroom ecology in a sustainable network environment. The focus of the English multimedia classroom ecology is to develop students' future-oriented sustainability. Therefore, in the classroom teaching, the teacher should strengthen the students' sense of competition, stimulate their interest in English and the motivation of learning, so that they will continue to produce a sense of accomplishment in English learning. After a sense of accomplishment, they will stimulate their curiosity, so they will continue to rise. Improve students' English learning ability and achieve better teaching results. At the same time, in the face of students with different personalities, teachers should also fully respect the differences and teach students in accordance with their aptitude. With the formation of classroom ecological, students' self-learning awareness will continue to increase, language quality will continue to improve (see Figure 4), and foreign language education will lead to a solid path of sustainable development [12].

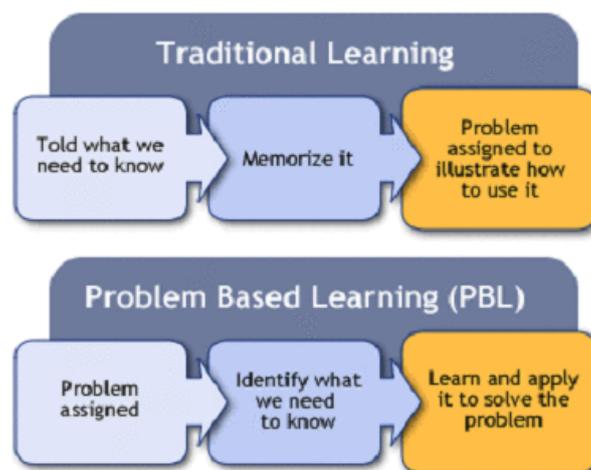


Figure 4. Traditional learning and PBL learning

### 3.4 Test Results and Analysis

Foreign language learning is not only a process of individual cognitive construction, it is also a process of social construction, which is determined by the characteristics of language learning. Foreign language learners need to be committed to the interaction of language and improve the knowledge structure in language negotiation. Therefore, communication and cooperative learning in foreign language learning can produce more effective learning. Cooperative learning enables each student to get more support, more communication and participation, and a large number of language

output opportunities, and more opportunities for timely feedback and correction. Therefore, effective foreign language learning should be social in nature. The cognitive structure of individuals is gradually formed and perfected in interaction with society. The microscopic and macroscopic learning environment and the internal cognitive construction of individual self. The interaction between the two can effectively promote the cognitive construction of the individual and enable the healthy development of the individual's cognitive structure [13].

With the support of learning theory, as a language subject, foreign language learning also needs learning strategies and methods that are consistent with the characteristics of language learning mechanisms. Situational teaching consistent with the learning task context in the basic theory of learning environment is the best choice for constructing foreign language personalized learning in the classroom. The theoretical basis of situational teaching methods comes from cognitive psychology and sociolinguistics. Constructivism in cognitive psychology believes that learning comes from experience. This kind of experience must be practiced in a certain real situation to gain true knowledge; sociolinguistics pays attention to the topic and occasion of language. As mentioned earlier, situational cognition theory is the development of constructivist learning theory. We can see from the clues of activism, constructivism, constructivism and situational cognition generated on this basis: situational cognition theory, which combines cognition and constructivism, and then integrates into more social and humanistic Factors have evolved into current situational cognitive theory and situational teaching methods. Under the concept of situation, teaching practice requires real learning tasks to match the real conditions, and puts forward higher requirements for creating a rich teaching environment, so as to provide more and wider for discovery, exploration, design, practice and construction. Situational opportunities. Some experts believe that the theory of situational learning is integrated from the perspective of psychology and anthropology. From the perspective of psychology, situational learning theory shifts school learning from obtaining metaphor to participating metaphor. The opportunity of contextualization is also the opportunity for learners to participate in dialogue and interaction in context; from an anthropological perspective, by emphasizing society and the overall participation, to enrich the content of situational learning. Social participation is to socialize the situation and make up for the shortcomings of abstracting and separating the knowledge from the life situation. The following is the enlightenment from the participatory and social aspects to analysis the contextual cognitive learning theory of foreign language personalized learning and learning environment design.

#### **4. Conclusion**

In college English teaching, traditional classroom teaching, online teaching platform and network evaluation platform are all indispensable. After college English teaching has experienced the development of “traditional classroom teaching” and “traditional classroom teaching + network teaching platform”, many problems still exist. The "triangular teaching" model of college English teaching under the network environment discussed in this study starts from the perspective of evaluation, and adds the "network formation evaluation platform" in the current dual mode, which constitutes the most stable triangular structure. However, how the real application effect needs to be tested in practice, and in the continuous practice and reflection, the three elements complement each other and promote each other, thus improving college English teaching.

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