

Teaching Model of College English Using a Computer Network

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Abstract—Motivation for reform and development for teaching of college English is strengthened by the increasing popularity of computers and global network technology. This paper analyzes the relationship between computer network teaching and the improvement of students' autonomous learning ability, and the advantage of computer network teaching in actual teaching based on reviewing the theoretical basis and several learning models for autonomous learning done in the spirit of College English Curriculum Requirements issued in 2008. The promotion of a new teaching model for the improvement of students' autonomous learning ability has been verified by the research and survey on teaching model of college English under the environment of computer network in Xi-dian University.

Index Terms—Teaching model; Curriculum standard; Computer network; English education

I. INTRODUCTION

Currently, with the rapid development of science and technology, especially with the increasing popularity of computers and information network technology, our English teaching model and teaching methods have changed drastically. Modern foreign language learning is no longer the simple model of the teacher dominating the class and that “cramming” teaching method has been unable to effectively impart in students the ability or desire to take initiative in their own learning. Therefore, how to develop the talents required by modernization in a new era by using the modern teaching means and the advantages of integrating computer and network technology has become an important topic for each college English teacher [1]. We must keep up with the pace of the era of development by integrating computer technology and information network technology into foreign language teaching, and explore a kind of teaching model of college English that adapts to the new situation.

Reform of the teaching model is the core of college English reform. We should properly change from a teacher-centered model to a student-centered model in a timely manner, and realize learning model of using the network, including the characteristics of individuation and autonomy [2]. Teaching using a computer network makes us gradually evolve from the traditional way of lecturing in classes to the independent learning model based on combining computers and classes, which is helpful for the development of students' self-study ability and individualized learning. Because of the popularity of computers and network technology, the students' learning is not limited to class time any longer. They can learn, practice, coach and test with a computer, which helps to develop and build the habit of a student's autonomous learning [3].

In order to conform to the new development situation of higher education, the Ministry of Education of the People's Republic of China issued College English Curriculum Requirements in January 2004, which is taken as the main basis of English teaching of non-English major undergraduates in every college and university and provides a solid theoretical guide for deepening teaching reform, improving teaching quality of college English and meeting the demand of the state and society for the cultivation of talent [4]. College English Curriculum Requirements points out that “each college and university should take full advantage of multimedia and network technology and adopt new teaching model to improve original single classroom teaching model dominated by teacher teaching, and new teaching model should take modern information technology, especially network technology as the support, so that the English teaching develops toward the direction of individual and autonomous learning without limit of time and place”. It also points out that “an important symbol for successful teaching mode reform is the formation of students' individualized learning method and the development of students' autonomous learning ability”, and computer network teaching provides conditions and establishes the foundation for students' autonomous learning [5].

II. THEORETICAL BASIS AND LEARNING MODEL FOR AUTONOMOUS LEARNING

“Autonomous learning” means that the learner can learn effectively on their own with less dependence on help from others, which activates the three aspects of cognition, motivation and behavior. Specifically, the teacher allows flexibility with regard to time and location to allow the students to actively construct their own cognitive structure in the process of teaching, and the teacher organizes the students to perceive the teaching environment, collect information, process information, positively explore and actively construct by designing scenarios so as to attain the purpose of constructing meaning for learned knowledge.

“Constructivism” is a support for modern educational theory of autonomic learning. Constructivism considers that knowledge is not taught by the teacher, but the learner obtains the knowledge in a certain scenario, with the background of social culture, and with help in the process of learning to obtain knowledge (including others' help) and with necessary data and by the way of constructing meaning. The theory presents a new interpretation of learning and teaching, and remarkably emphasizes the dynamics of knowledge, richness and difference of knowledge and experience of each learner, and initiative constructivism involves social interactivity and learning [6].

III. LEARNERS CONSTRUCTED ACTIVITY-CENTERED LEARNING MODEL

A. Problem-based learning

Problem-based learning, referred to as PBL, is a learning model attracting wide attention in recent years, and originated in medical education in the 1950s. Currently, this method is adopted in more and more fields, including business school, college of education, as well as architecture, law and engineering, etc. [7]. The purpose of PBL is to make the student construct a broad and flexible knowledge foundation and develop effective problem solving skills. Furthermore, the ability of autonomous learning and lifelong learning must be cultivated so as to become an effective cooperater and develop internal motivation for learning by guiding the learner to solve both complex and practical problem.

B. Anchored situational teaching

The cognition and technology research group in Vanderbilt University in the United States proposed anchored situational teaching, which is closely related to the idea of situational teaching [8]. It tries to solve the problem of inert knowledge (meaning that the knowledge can be remembered only by deliberately recalling, and not be activated to be used automatically when solving a relevant problem) and realize flexible migrated application of knowledge. This kind of teaching is mainly aimed at the learning of mathematics and the teacher places (anchored in) the emphasis on teaching in a big scenario to guide the student to find a problem, form a problem and solve it with various data in a scenario and make the learner apply problem-solving skills of mathematics or other subjects to the practical problems of actual life [9].

C. Collaborative learning

Collaborative learning, also known as cooperative learning, is attaining the purpose of shared learning through collaboration. The group size of learners shall be no larger than 4-6 people, so that each participant can take part in a clear collective task, and the learners can learn without direct and immediate management of the teacher. The adaptation of collaborative learning can promote the learning of knowledge skills in a particular discipline and be beneficial to develop collaborative ability and not be limited by any particular field of study as a kind of organizational mode in learning [10].

D. Interactive teaching

Interactive teaching was first proposed by Palincsar, and then it was further researched and developed. It is a teaching model to train students' reading strategy based on scaffolding instruction thought. It considers the mutual support and promotion among learners in the learning process, and plays a key role in this teaching [11]. In the beginning of interactive teaching, the teacher leads the teaching, and he gradually more specifically demonstrates the use of various comprehension strategies. As the teaching continues, the teacher will gradually guide the learners to use these strategies, and with the increasing of the level of the learners, the teacher will gradually increase the requirement until the learners can use these strategies independently. Interactive teaching is mainly used in language teaching.

IV. ADVANTAGES OF TEACHING MODEL OF COLLEGE ENGLISH USING A COMPUTER NETWORK

English is a discipline with strong partiality, and the most prominent feature of its teaching activities is interactivity. But how to raise students' interest in the process of interactive learning has been a problem for many college English teachers who are trying to explore this question. At present, with the introduction of a combination of both a multimedia teaching model of college English based on a computer network and a traditional classroom, this problem is readily solved. Because this teaching model can meet the requirement of students' autonomous learning and self-motivated learning rather than passively receiving information, it significantly motivates students' learning enthusiasm and breaks through the temporal limits of traditional teaching. It includes the alternation of sound and image, abundant and elegant text and graphics and flexible and diverse forms, which creates an effective and vivid environment, making the communication between teachers and students displayed on multiple layers and constructs an organic platform for the attaububg interaction, coordination and autonomy of teaching and learning of English [12].

The effect of teaching English in a classroom setting has been changed by multimedia teaching. English classroom teaching, especially teaching of intensive reading, makes students feel boried with high difficulty and large amounts of information, with the use of traditional chalk and blackboard-type teaching for the purpose of the development of reading ability [13]. At present, because of the introduction of multimedia, large amounts of information can be easily displayed to students in vividly and varied forms, and the voiced background information, picture, song, filmstrip that are related to the article can be used alternatively, which can attract students' attention and mobilize their learning enthusiasm, creativity and autonomy. This makes the process of classroom teaching a journey of independent exploration, perception, discussion, collaboration and construction of the students under the conscious guidance of the teachers so as to greatly improve students' learning efficiency. [14].

A beneficial platform is provided by the multimedia teaching based on a computer network and classroom for the students' autonomous learning after class, which can help improve students' autonomous learning and promote communication between teachers and students. For example, in Xidian University, the college English curriculum teaching is always set as four class hours per week, and the teacher can meet with the students only twice a week, leaving little opportunity for teacher-student communication[15]. In recent years, with increasing investment of the school inot infrastructure, the new campus with thoughtful planning and advanced equipment was built, which provides solid material basis for ensuring and further improving teaching quality of undergraduate college courses. But while teachers are busy rushing to the school bus on schedule and other daily needs, they cannot assist the students and answer their problems because of living in the old campus located in the city, which causes that the time of the communication between teachers and students almost nonexistent. At present, the communication between teachers and students is unobstructed through the computer and network, and is no longer limited by time and space any longer. The teachers can assign homework to the students, supervise the condition and progress of

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students' autonomous learning and answer questions, test and give feedback results, etc. in real time through computer teaching and learning platform. The students can select additional contents that sparks their interest for learning in their spare time, and ask the teacher for advice about encountered problems timely through an online

virtual classroom, and also submit assignments, papers and discuss learning experience with classmates through network. In a word, the teaching and learning of college English has entered a new stage by integrating the computer and network technology.

TABLE I.
COLLEGE ENGLISH TEACHERS' COMPUTER LEVEL

Project	Choose the answer	Number	Percent (%)
If have a computer	Already have	78	75
	Intend to buy as soon as possible	15	15
	Take a look at again	23	23
	Don't plan to buy	1	1
Do you think of their computer level	Poor	5	2
	General	3	3
	Good	22	22
	Very good	21	21
Your computer is obtained through what channels	Did not take part in	14	15
	The title test	10	9
	Computer grade examination (level 1)	2	2
	The computer rank examination (level 2)	5	5
	Other	64	60
	Learn at school	78	79
	On-the-job training	21	21
	Self-study	16	15
	Day release	3	4
	Another way	9	10
Do you have to improve their computer level	Very urgent	1	1
	Urgent	48	40
	It doesn't matter	20	18
	No need	17	14
How are you going to improve the level of their own computer	Self-study	20	20
	On-the-job training	28	28
	Block release	3	3
	Other	11	10

TABLE II.
COLLEGE ENGLISH TEACHERS' UNDERSTANDING OF COMPUTER ASSISTED FOREIGN LANGUAGE TEACHING

Project	Choose the answer	Number	Percent(%)
What do you think the role of computer aided in foreign language teaching	It is very important	32	32
	The more important	60	61
	Is not important	7	7
	Counterproductive	0	0
Do you think computer assisted foreign language teaching	Very simple	2	2
	Simple	13	14
	Difficult	25	24
	Too difficult	2	2
Do you think what are the main factors influencing the computer assisted foreign language teaching	Lack the necessary hardware	48	47
	The lack of the necessary software	69	70
	The lack of corresponding teaching methods	48	47
	Their computer level is not enough	40	38
	Other	8	8

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TABLE III.
THE PRACTICE OF COLLEGE ENGLISH TEACHERS USE COMPUTER ASSISTED FOREIGN LANGUAGE TEACHING

Project	Choose the answer	Number	Percent (%)
You use computer assisted foreign language teaching	Don't use	45	46
	Occasionally use	34	33
	Often use	12	18
	Always use	0	0
Led using computer-aided language teaching attitude to you	Strong support	12	11
	Support	22	21
	Let things slide	14	15
	Against	2	3
Students using computer-aided language teaching attitude to you	Very welcome	5	5
	Welcome	27	29
	It doesn't matter	14	12
	Against	3	3
Your school computer auxiliary equipment of foreign language teaching	No	0	0
	Multimedia classroom	37	38
	Language laboratory (room)	30	30
	Campus network	10	10
	The Internet	8	8
	Other	1	2
You use what way to assist in the foreign language teaching	Multimedia classroom	36	39
	Language laboratory (room)	20	23
	Network (campus network or the Internet)	9	10
	Other	1	2
The use of computer aided software including what kind of foreign language teaching	A dictionary or an encyclopedia	20	20
	English songs or movies	32	32
	Teaching material's companion	31	32
	Exam tutoring	10	12

The model and method of English teaching has changed and evolved in recent years. Modern foreign language learning is no longer the simple model of the teacher mastering the class, and the “cramming” teaching method has been unable to effectively give initiative to students. Therefore, how to develop the talents required by modernization construction in the new era by using the modern teaching means by combining computer and network technology has become an important topic for each college English teacher (Chen, 2014). We must keep up with the pace of the era of development, and try to integrate computer technology and information network technology into foreign language teaching, and explore a kind of teaching model of college English that adapts to the current situation.

Reform of the teaching model is the core of college English reform. We should properly change from a teacher-centered model to a student-centered model in a timely manner, and realize the learning model of the network, individuation and autonomy [12]. Teaching with a computer network transforms the traditional way of lecturing in class to the independent learning model based on a combination of a computer and class gradually, which is helpful for the development of students' self-study ability and individualized learning. Because of the popularity of computer and network technology, the students' learning is no longer limited to the classroom, they can learn, prac-

tice, coach and test with computer, which helps to develop and build the habit of students' autonomous learning

A. Application of teaching model of college English under the environment of computer network

The new challenge to college English teachers and its teaching methods is presented because of the proposing of the new curriculum requirements. The traditional teaching methods have been unable to meet the requirement and the challenge. The Ministry of Education has decided to make experiments of computer network assisted teaching in some colleges and universities by focusing on teaching, especially the teaching idea of “students-centered” teaching of college English.

The idea of “one-to-one” teaching has been realized by the teaching model of a computer network. The students can enjoy listening to the teacher explain and freely communicate with this teacher as a computer [13]. Specially enhancing the training of listening and speaking ability and reading ability, so that the students can effectively make oral and written communication of information while strengthening students' basic knowledge, improving students' English integrated applied abilities and autonomous learning ability according to new curriculum requirements and combined with practical situation of the students.

To know whether the teaching of college English can achieve the purposes of developing students' autonomous learning and improving students' English integrated applied abilities, this author conducted a survey of more than 700 students through the form of questionnaire for two continuous terms from 2005 to 2006, and the questionnaire involves the satisfaction of the students for teaching form and its content under multimedia and network; the satisfaction of the students for network teaching system and multimedia courseware; and the satisfaction of the students for teaching effect of college English using a computer network [14]. This author distributed the survey five times for the same set of questionnaire: the second month after the beginning of new term, half of a term, a term, one and a half of terms and the end of two terms. The statistics of the survey result is shown in Table 1~3.

B. Requirements to realize teaching model of college English using a computer network

The teaching model of college English using a computer network is an opening teaching model, which presents a new challenge for college English teachers, that is the problem of self-role definition of the teachers in the new teaching environment, while at the same time bringing many benefits. In traditional teaching, the role of the teacher as the owner of professional information no longer exists. The role of the teacher will be changed from the person who teaches English knowledge to the person who teaches the learning method of English, from emphasis on observing the teachers to monitor students' learning, which completes the change from "teacher-centered" to "student-centered" focus, so as to make the teacher's role change from a provider of information to a conductor who can effectively give the students instructions to correctly obtain the method and skill of learning.

In the new situation, some teachers will inevitably feel insecure and think that full version of self-instructional materials from background knowledge, detailed notes to the text, answer key and strategy that can be found in an online classroom by students for the content that he taught in class makes his job irrelevant. It may be said that everything needed is readily available, And therefore, the teachers may worry that the students already know everything, and the students will not listen attentively and take active

part in class any longer. In fact, this is the challenge and opportunity brought by the teaching reform and driving force for the proper change of the role of teachers, as shown in Figure 1. Full advantage should be taken of this opportunity and we should properly enhance and perfect network teaching resources and enrich teaching in class with abundant and detailed extra information. After all, the personal charisma of the teacher is of great potential, and the teaching method of the teachers is more flexible and diverse than the network model, so we should have confidence to meet the challenges and practice in learning progress and further study and develop in practice, trying to edit and reorganize collected material with more basic software, and properly process and use it in class teaching and integrate it in own recreation. In this way it will be with the teacher's own teaching characteristics, and can reflect their own teaching ideas, while being capable of making basic computer operation and making teaching activities by using the auxiliary materials, such as existing multimedia courseware, so these new contents and methods can become an important tool in class for motivating students' enthusiasm and interest and improving teaching effect.

English is a discipline with strong partialness, and interactivity is a prominent feature of its teaching activities. But how to stimulate students' interest in the process of interactive learning has been an area of exploration for many college English teachers. At present, with the introduction of multimedia teaching model of college English based on a combination of a computer network and the traditional classroom, this problem is readily solved. Because this teaching model can meet the requirements of students' autonomous learning and self-motivated learning rather than passively receiving information, it significantly motivates students' learning enthusiasm and breaks through temporal limits of traditional teaching. This model includes the alternation of sound image, abundant and elegant text and graphics and flexible and diverse forms, which creates a good and vivid environment, making communication between teachers and students displayed on a more abundant layer and constructs an organic platform for the achievement of interaction, coordination and autonomy of teaching and learning of English.

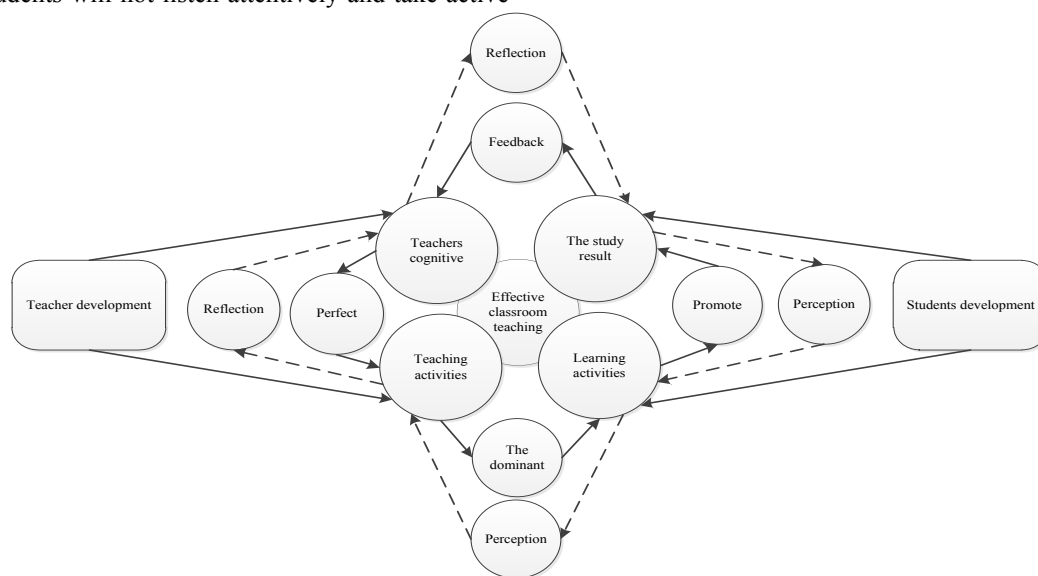


Figure 1. Promote the coordinated development assist with computer between teachers and students of college students' English classroom

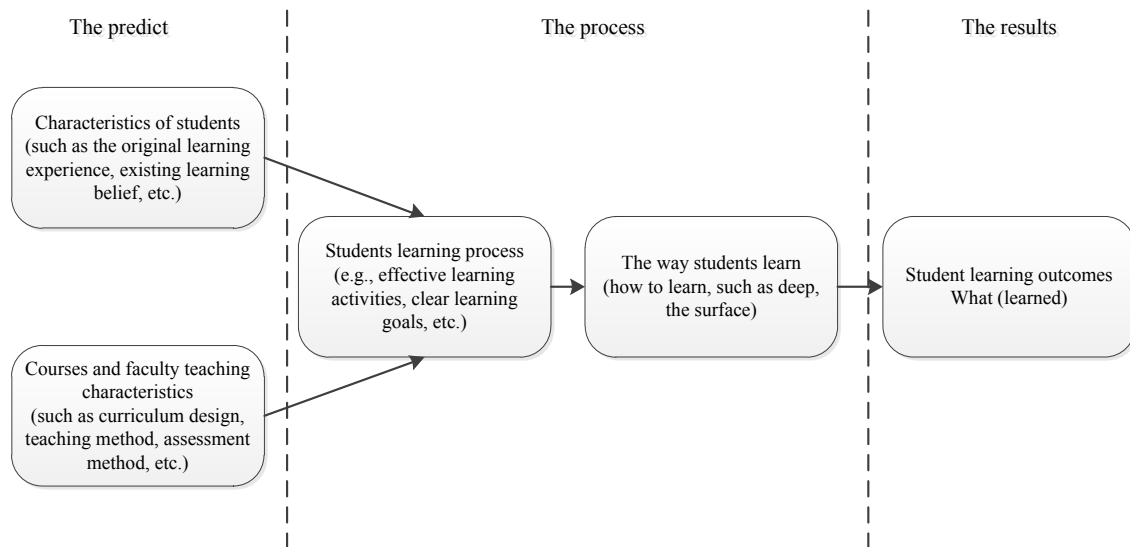


Figure 2. Effective classroom teaching three aspects analysis theoretical mode with computer network

The teaching effect of the English classroom is changed by multimedia teaching. English classroom teaching, especially teaching of intensive reading, makes the students feel bored with a high level of difficulty and large amounts of information, with the use of traditional chalk and blackboard type teaching for the purpose of the development of reading ability, shown as Figure 2. At present, because of the introduction of multimedia, large amounts of information can be easily shown to students in vivid and varied forms, and the voiced background information, picture, song, filmstrip that are related to the article can be used alternatively, which can firmly catch students' attention and fully mobilize their enthusiasm for learning, creativity and autonomy to make classroom teaching process become a journey of independent exploration, perception, discussion, collaboration and construction of the students under the conscious guidance of the teachers so as to greatly improve students' learning efficiency.

V. CONCLUSIONS

The emergence and popularization of computers and Internet, the latest development of modern multimedia technology and the advent and application of various kinds of editing software, as well as domestic and foreign valuable experience gained in multimedia and computer assisted language teaching, all have provided a superior objective environment and convenient conditions for the reform of foreign language teaching, making the teaching and learning of English reading enter into a scientific and modern network environment. This forms a new teaching mode, breaking the traditional teaching mode, achieving "education" and "Entertainment in English" and greatly improves the teaching efficiency.

Computer assisted language teaching is not a new term, which has been in use for quite a long time in language teaching. Computer assisted language teaching, which is based on computer assisted instruction (CAI), began in the 60's in the United States. It is an important method of modern foreign language teaching. It positioned on assisted language learning and was able to make up for the deficiency of traditional teaching methods. The learning environment has been moved from the traditional lecture

room to the multimedia computer classroom, with the interactive language environment and good vision and auditory sense.

While teaching, the teachers should interact with the students for reaching certain teaching objectives. Teaching in class is not perfectly justified nor is the only way of teaching through communication. There is over 300 years of history of the system of classroom teaching. With the formation of a new type of teaching model of multimedia teaching of college English based on a combination of a computer network and classroom, we must change the traditional way of teaching, including interaction between teachers and students and interaction among students. The teaching objective of college English teachers will be future oriented, and the teachers will take full advantage of interactive advantages brought about by computer and network technology. Teachers will not only teach comprehensive language knowledge, but also lead the students to understand communication skills of the use of language and grasp the capacity of the language of autonomous learning according to the needs of the students. Teachers will be devoted to adopt an innovated teaching model so as to propel the reform of college English curriculum teaching in a new period in a new situation.

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