

Analysis on College English Reform and Teaching Mode based on Smart Classroom and Multimedia Assisted Instruction

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Abstract

Multimedia computer assisted instruction has the characteristics as large information capacity, high efficiency, wide application area and so on. In this paper, the author analyzes the college English reform and teaching mode based on smart classroom and computer multimedia education. Nowadays, the network multimedia teaching technology plays a more and more important role in promoting quality education. Compared with the traditional English teaching mode, the multimedia English teaching model has the following advantages as arouse the enthusiasm, improve the study interest, highlight the culture of the English language and realize the personalized teaching. Survey results show that 68% students support multimedia English teaching model, at the same time, 52.3% of the students believe that the multimedia network can improve the level of English autonomous learning. On this basis, we put forward relevant policy recommendations.

Keywords: *Computer assisted instruction, Smart classroom, Multimedia education, English teaching, Autonomous learning*

1. Introduction

With the arrival of twenty-first Century, continued expansion of China's colleges and universities, the contradiction between college English teachers' lack of outstanding. Increasing the number of students is the inevitable trend of China's social and economic development in a certain historical period, but also the inevitable trend of popularization of higher education, but our teachers may not at the same speed of unlimited growth [1]. In this case, the traditional teaching methods and teaching methods cannot meet the needs of the new era of college English teaching, in order to fundamentally reverse the passive situation, we must make full use of multimedia computer technology and network communication technology, change the traditional teaching mode [2-3]. College English teaching mode reform, content involves curriculum, teaching content, teaching methods, teaching methods, English proficiency test, etc.. Among them, we emphasize the use of multimedia technology and teaching equipment, to promote the transformation and updating of teaching mode.

Computer assisted instruction (CAI) is a kind of advanced teaching method, which is based on the computer model and integrated with the network and communication technology to integrate various information carriers [4]. It is vivid, intuitive, lively and vivid, large information capacity, new knowledge structure, wide application, high efficiency, outstanding effect. The application of this technique in college English teaching, breaking the traditional teachers and books, the plane blackboard teaching mode, which is the organic combination of traditional media and modern media, the overall optimization effect of multimedia teaching, to construct a three-dimensional teaching model [5-6]. The use of multimedia computer assisted instruction is a new trend in the development of English teaching in University, it pays attention to guide the

students with the network multimedia teaching system to language learning and application, through the organic combination of teaching content, teaching process and computer aided, in order to get the best learning effect.

2. Multimedia and Multimedia Teaching

2.1. Multimedia technology

Multimedia refers to the media in the modern sense, the traditional multimedia instead refers to the use of tape recorders, projectors, video recorders and other equipment to achieve the general understanding of a variety of integrated media [7]. A simple composite multimedia technology not all kinds of information media, it is a fusion of text, graphics, images, animation and sound and other types of information on multiple levels, and comprehensive treatment and control by the computer, can support the completion of a series of interactive information technology [8-9]. Multimedia teaching in China in 80s has begun to appear, but at that time is the use of a variety of electronic media such as slide, projection, video recording, and comprehensive use of classroom teaching, which is the traditional multimedia. This teaching technology also called multimedia combination teaching or audio-visual teaching. Since 90s, with the rapid development and popularization of computer technology, multimedia computer has been gradually replaced by the comprehensive use of various teaching media in the past. Therefore, we usually say that the multimedia teaching is the use of multimedia computers and the use of pre produced multimedia teaching software to carry out the teaching activities.



Figure 1. Multimedia technology

In the process of multimedia computer assisted instruction, according to the characteristics of the teaching target and the teaching object, the teaching design, the use of multimedia computer, integrated processing and control symbols, language, text, sound, graphics, images and other media information, the multimedia elements according to the teaching requirements, combined and displayed on the screen at the same time according to the need or projection, coupled with sound, man-machine interactive operation between user and computer and complete the teaching or training process [10-11]. The proper use of CAI teachers in the teaching process, can break through the limitations of time and space, overcome symbols is too abstract and monotonous shortcomings, transfer vivid teaching information to students, expand their horizons and share perceptual knowledge, effectively arouse the students' senses involved in learning activity, enhance emotional experience, stimulate students' interest in learning, improve

they heard that reading and writing skills, and to improve the efficiency and quality of the classroom.

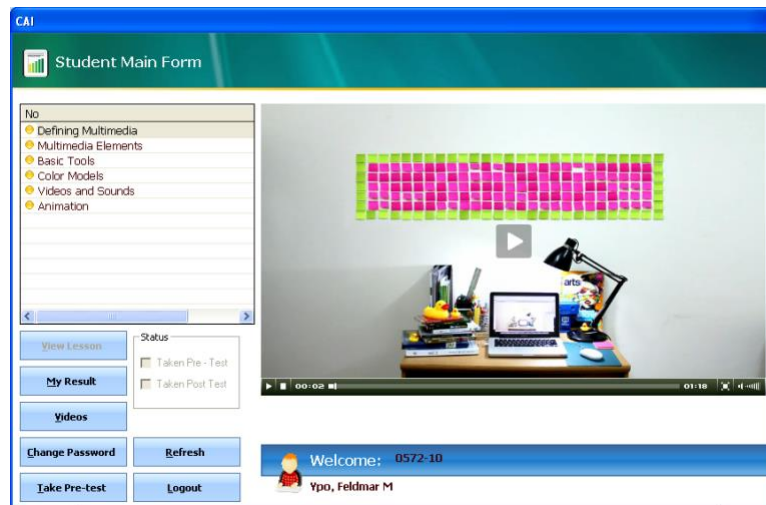


Figure 2. Computer assisted instruction

2.2. Multimedia English Teaching

The teaching practice in essence is the bridge of communication activities, teachers and students in special education in the context of self exploration activities. In the implementation of education modernization, network multimedia teaching technology plays a more and more important role in promoting quality education and improving the quality of education and teaching. Compared with the traditional English teaching mode, multimedia English teaching mode has the following characteristics:

- **Multimedia Assisted English teaching to arouse students' enthusiasm:** Multimedia teaching can give full play to the human visual, auditory potential, set graphics, text, sound and image as a whole, the form of lively and innovative. In multimedia text, graphics, images, animation can be used for students' vision, commentary, background music and realistic effect can stimulate the auditory, and allow multimedia interactive operation, so that the learning effect is more significant. In addition, multimedia animation, images can be varied to make a variety of wonderful effects, to promote the sense and imagination to cooperate with each other, resulting in a creative effect. English teaching can make use of this unique advantage, the students learning in this environment, to enable them to gain the traditional auditory input at the same time, but also through the visual information input a lot, strengthen the effect of auditory input, how to better memory of knowledge and skills, learning efficiency is improved. And, through the platform of multimedia network classroom, synchronic learning was broken, the teaching resources are shared to the largest extent, teaching methods and experience of many excellent teachers can be the maximum range and the maximum extent that students benefit. Through the creation of situations, collaborative learning, and promote students to think actively, explore the development of Lenovo thinking, so that students in the learning process to become the main body of information processing and the active construction of knowledge. The multimedia visible rich content, from the aspects of listening speaking reading and writing gives students autonomy the opportunity to greatly improve the students' enthusiasm for learning English, College English learning is no longer a tedious process, and ultimately contribute to the cultivation of students' autonomous learning ability.

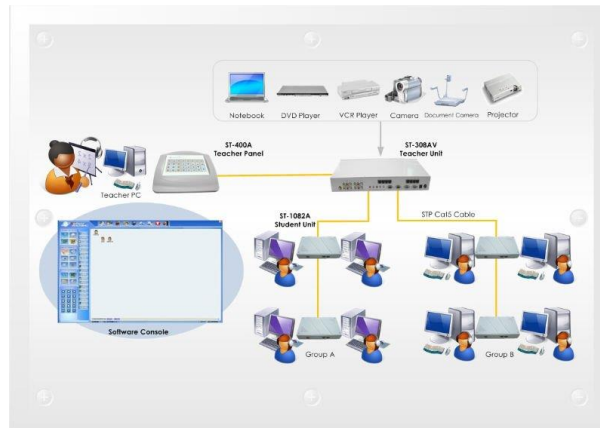


Figure 3. Multimedia network classroom

- **Multimedia stimulates students' interest in learning:** The computer multimedia simulation, the abstract image illustrations provide perceptual materials in various forms, different functions to the students, the students into a relaxed and pleasant learning environment, enable students to actively participate in the teaching process, active classroom atmosphere, stimulate students' interest in learning English, passively learning. At the same time, the interaction of the multimedia system, can form a multidimensional information space with students as the center, the students in this process will feel real, interesting image, knowledge, to stimulate students' interest in learning. Learning interest is a kind of tendency which is shown by the students on the basis of their own learning. It plays an important role in the study of students. Provide multimedia teaching software in a large, rich, specific, vivid and intuitive image and video information, will enable students to better establish a solid foundation of perceptual knowledge, to mobilize students' learning initiative, active student thinking, help students grasp the skills and intelligence development.



Figure 4. Computer multimedia English learning

- **Highlight the cultural nature of English language:** The special multimedia teaching of College English teaching methods and teaching mode can make students as much as possible in the real language environment, English naturally accept the influence of contact, the Anglo American countries wind, human history and culture, make the language and knowledge learning organically, which makes English language culture teaching can guarantee. Schema theory focuses on the role of schema as a cognitive framework in understanding and communication, which enables information to be stored in an orderly manner, providing a basis for

prediction. In a sense, schema is the background knowledge, and the cultural factor is the important aspect of the background knowledge. Multimedia assisted instruction can shorten the student's understanding of space, increase the classroom capacity, and thus improve the effectiveness of classroom teaching. In addition, the multimedia teaching is the image, audio, graphics and text with the organic combination of the implementation of computer hardware and software, coupled with the full use of online resources, can make students as much as possible in the real language environment, to further strengthen the students' competence of applying English language, is conducive to building a cognitive schema.

- **Personalized teaching:** In the teaching process, we can use the multimedia teaching system and construct the new teaching mode. Under the environment of new mode of Multimedia English graded teaching is based on individualized, improve the teaching effect of the principle, according to the students' English level and accept English knowledge potential, students are divided into different layers, determine the different training objectives, establish different teaching objectives, teaching plans, teaching programs, using multimedia technology as teaching methods for teaching fully reflect the level of activity, in teaching, counseling, training, testing and evaluation, *etc.* Different starting point for students to provide different levels of learning, so that each student can be more accurate to find their own positioning. The use of multimedia computer is expected to gradually improve students hands-on ability, so that students have creativity, so as to achieve the purpose of personalized learning.

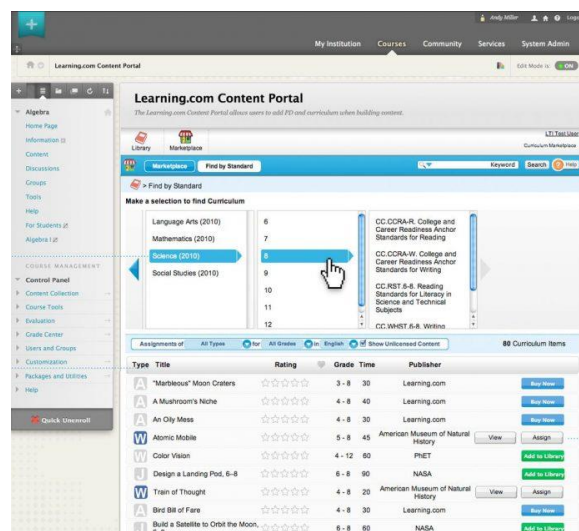


Figure 5. Online Individualized teaching

3. English Autonomous Learning in Multimedia Network Environment

3.1. Theoretical basis of autonomous learning in English

English multimedia teaching can provide students with vivid language learning and communication environment, fully mobilize students' vision, hearing and touch sense, improve students' interest in language learning, enthusiasm and initiative, it could enable students to construct individualized autonomous learning mode achieved. The construction of learner centered autonomous learning mode has a rich theoretical basis, which includes:

- 1) **Constructivist learning theory:** Constructivism believes that learning is a process of knowledge acquisition, knowledge is not taught by teachers, but learners in certain contexts that the social and cultural background, with the help of others, the use of necessary learning materials, through the construction of meaning of an. How much knowledge is acquired depends on the ability of learners to construct the meaning of knowledge based on their own experience, but not on the ability of learners to memorize and recite the content of teachers' teaching. This learning theory emphasizes student-centered, active construction transformation requires students not only by external stimulation of the recipient and the inculcation of knowledge as the main object of information processing and knowledge, and requires teachers to change from knowledge, students for students to construct meaning active help facilitators. It can be seen that the position and function of teachers and students have changed greatly compared with the traditional teaching in the constructivist learning environment.
- 2) **Student centered theory:** The "student-centered" teaching principles of communicative language teaching method, it reflects the students as the main body of the teaching idea, promote students to participate in teaching content, trying to make their input the main teaching materials, and become the center of the learning process. The learner centered curriculum depends on the joint efforts of teachers and learners, so that learners actively participate in the decision of teaching content and teaching methods.
- 3) **Autonomous Learning theory:** Autonomous learning is the ability of students' self is responsible for the management of language learning, is able to determine their own learning goals, determine the content and study progress, choosing learning methods and skills, monitor the acquisition process and self assessment learning effect. Learner autonomy means that learners are responsible for all decisions of the learning process and are responsible for the implementation of these decisions. Autonomy has different degree, can be in the classroom and classroom activities in the formation of different teaching environment need to use different methods to promote learners to develop their autonomy. If the goal, task, process, and evaluation of learning is entirely determined by the student, it is a complete autonomy. If teachers participate in different degrees, that is, under the guidance of teachers learning autonomy.
- 4) **Experience mode teaching:** Curriculum design and classroom teaching is changing from the mode of communication (Model Transmission) to the experience mode (Model Experiential). Communication model that the language of classroom teaching is the language facts, rules, value and so on to a receptor, that is, learners. Experience the model that the function of language teaching is to create conditions for the learners to make them possible to create their own knowledge and development skills



Figure 6. Experiential English Teaching

3.2. Multimedia English autonomous Learning

Foreign language learning is not a teacher, but by the learners of English learning motivation and learning objectives according to their different needs, and actively create, have independently decided to study contents, their learning methods and learning process. Autonomous Learning in English is a kind of learning process, which is a kind of conscious planning, monitoring, implementation and testing. The psychological premise of English autonomous learning is that learners are responsible for their own learning, as individuals consciously or unconsciously use their different learning methods and habits will have to learn English knowledge and new language learning together. As a kind of ability, independent learning is the development of cognition and self, through a variety of ways, through long-term study and practice, the ability of English autonomous learning is no exception.

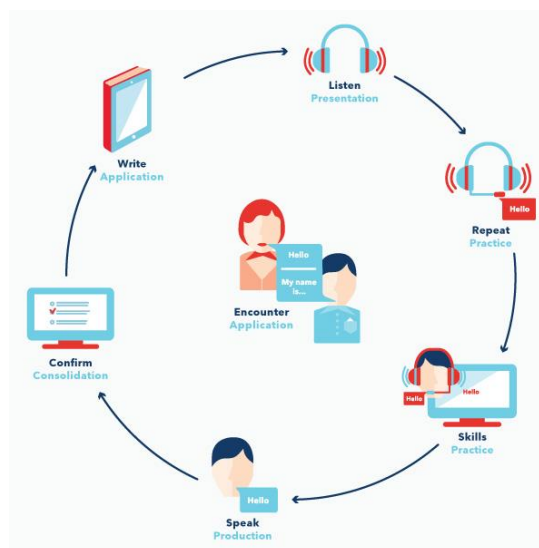


Figure 7. Multimedia English learning mode

In order to cultivate students' autonomous learning ability, English teaching should be the most important way to cultivate students' autonomous learning ability. Multimedia teaching environment has created the conditions for the realization of English Autonomous learning:

- ***It is beneficial to improve students' learning efficiency:*** The most prominent feature of the multimedia is illustrated, changed in the past a single text or isolated and static graphics transfer situation, to use the students' senses of learning as the starting point, to stimulate students' systemic reactions in intuitive, interesting and appealing scenarios through the view of the shape, arguing its color, listen to his voice, remember, the meaning of its meaning, its sound to the overall environment of learning English, this can improve the efficiency of information dissemination, help students understand the emphasis and difficulty in learning, make up the shortcomings of traditional teaching in time and space etc, more help to gain and maintain knowledge, in order to achieve the best teaching effect.
- ***Conducive to stimulate students' interest in learning:*** The Internet provides valuable information inexhaustible for language teaching, learners can according to their own needs, at any time to extract a variety of useful information. In addition, the use of digital can store large amounts of audio and video information compression technology, can provide a lot of content rich video material and life simulation scenarios for students, make students have more opportunities to contact with authentic English, which is beneficial for students to understand and accept language. Furthermore, the multimedia teaching text, pictures, sound, video, images and other media together, such as the key words in the text provide explanation, language points, and the text of the idioms and cultural background have a detailed explanation and examples in English, sound and images, so that the students' learning in color, sound and image such as the environment of various media, make the classroom teaching process is full of vigour. This audio-visual combination of teaching methods to make students learning interest, learning enthusiasm and always willing to participate in the teaching process.
- ***Interactivity and personalization:*** The biggest advantage of the multimedia teaching system is that it can provide an interactive learning environment. All is decided by the teachers of foreign language teaching in the traditional process, teaching content, teaching strategies, teaching methods, teaching steps and students do the exercises are teachers arranged beforehand, students can only passively participate in this process, has instilled in the state. In the multimedia interactive learning environment, students can follow their own learning basis, learning interest to choose their own learning content, can choose their own level of their love and practice teaching mode, students in this interactive learning environment from passive to active participation, so as to improve the learning and self-confidence initiative.
- ***Feedback at any time and accurate evaluation:*** In the multimedia teaching environment, the computer can analyze the reaction of the students with artificial intelligence, feedback, accurate evaluation, and strengthen the students' learning behavior. Students can always find their own mistakes, so as to correct errors in the memory, and avoid repeated in the future practice. By means of information technology, the examination form can also realize automatic extraction, automatic test paper and automatic scoring, from the paper and pen test and spend a lot of manpower and time marking the way. At the same time, the computer also retained each student for each exercise or test records available for teachers and students of my regular or irregular inspection and analysis in a certain stage of knowledge and problems, in order to facilitate teachers to improve teaching methods, strengthen the training of students.

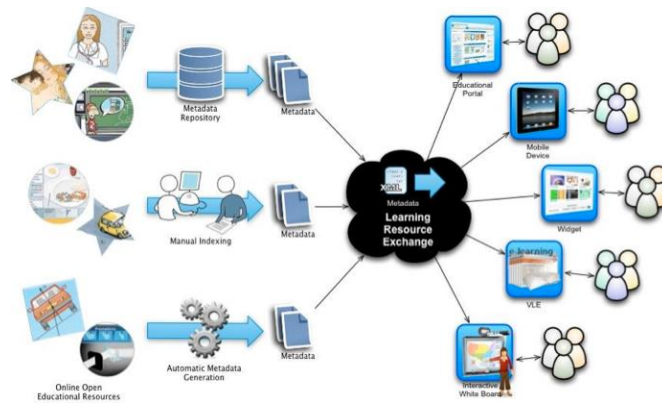


Figure 8. Rich resources of network learning English

4. The Teaching Experiment of English Learning Ability

4.1. Research design

The object of this study is 600 students in the first year and the second year of Southwest Petroleum University, questionnaire includes autonomous learning concept, multimedia network learning environment, using Likert 5 scale, 1 = strongly opposed, 2= opposition, 3= neither agree nor disagree, 4= agree, 5= strongly agree. In order to avoid the classification of the students to answer the sort of induction, the questionnaire items were randomly sorted. Using SPSS17.0 to test the scale and internal consistency of the items. Analysis of the total item analysis showed that the correlation coefficient of each item and its dimension reached significant level ($P < 0.05$), and the Rho value was greater than 0.30. The test results show that the internal consistency, the investigation of the learning adaptability Questionnaire total reliability $\alpha = 0.724$; each subscale reliability value of Alpha in more than 0.6, shows that the scale has good reliability, meet the statistical requirements.

4.2. Autonomous Learning Concept

In the concept of autonomous learning, the average item items are generally higher (see Table 1), and the majority of students support the English Autonomous Learning in the multimedia network environment. At the same time, 52.3% of the students believe that the network can improve the level of autonomous learning English. While the traditional teaching mode, only 17.2% of the students support. Although in a considerable part of the students to the neutral point of view the problem whether to support the traditional teaching mode, but most of the students (68%) to support the teaching mode of autonomous learning in the multimedia network environment, believe that multimedia autonomous learning under the network environment can improve the English level, English teaching mode of traditional tend to show dissatisfaction. The new teaching model makes the students become the center of English learning, improve their learning enthusiasm, and promote the development of students' English learning and network skills. Students like the Internet to learn English, you can listen to also watch video, a variety of forms, we are more interested in. The use of network learning, a relatively large degree of freedom, students can choose according to their own time and materials, can better play the subjective initiative.

Table 1. Autonomous Learning Concept

| Item | Strongly oppose | Opposition | neutral | Agree | Strongly agree |
|--|-----------------|------------|---------|-------|----------------|
| Support the traditional English Classroom Teaching | 13.5 | 34.2 | 31.3 | 15.4 | 2.6 |
| Support multimedia English autonomous learning | 3.2 | 15.9 | 24.1 | 54.8 | 7.0 |
| The combination of multimedia and traditional classroom teaching | 1.4 | 8.3 | 11.5 | 51.3 | 22.5 |
| Network autonomous learning will improve the level of English | 3.2 | 8.7 | 22.1 | 60.6 | 1.4 |

4.3. Multimedia network teaching

Learning environment is a dynamic combination of learning resources and the interpersonal relationship, the multimedia network English learning environment should at least have complete teaching environment, smooth information transmission network, rich teaching resources and good humanistic environment. Multimedia network teaching environment for teaching equipment and science and technology requirements are very high. Table 2 shows the students' satisfaction with the multimedia network teaching environment. In this survey 73.4% of the students think they have restricted Internet internet. Talking about the multimedia network evaluation mechanism, although nearly half of the students (48.5%) thought and effective assessment mechanism can improve learning, but there are still 37.6% of the students hold a neutral point of view, 12.6% of the students think that the evaluation mechanism does not improve learning. Accordingly, only 35.4% of the students who were surveyed in the answer to the question of whether the multimedia network system was scientific, believed to be science, and 40.1% of the students held a neutral attitude. The results of the data show that the students are not satisfied with the multimedia network teaching environment. Although, some students in the interview mentioned multimedia network system is scientific, learning mode design is also very humane, and the multimedia network evaluation mechanism can supervise and urge to learn. However, Some students still don't like network autonomous learning there are two reasons: first, in addition to classroom free internet access, other time on the Internet to pay; two is the Internet speed is too slow. Information transmission network is not smooth to waste valuable time students, students can easily free Internet, to a large extent reduce their own passion for learning, therefore, some students give up learning online.

Table 2. Multimedia network teaching

| Item | Strongly oppose | Opposition | neutral | Agree | Strongly agree |
|---|-----------------|------------|---------|-------|----------------|
| Multimedia network test system is very scientific | 2.5 | 14.6 | 39.4 | 35.5 | 1.0 |
| Interface navigation is very clear | 14.6 | 25.3 | 10.2 | 18.7 | 6.1 |
| Evaluation mechanism can promote learning | 5.2 | 10.6 | 37.4 | 42.3 | 3.5 |
| Effective supervision mechanism | 2.4 | 25.6 | 47.2 | 13.5 | 2.3 |

5. Conclusions

Autonomous Learning of College English in the multimedia network environment is an effective way to deepen the reform of College English teaching and to complete the transformation of teaching mode. It is the key to the reform of College English teaching to improve learners' ability to adapt to the new learning style and improve their autonomous learning ability. This study makes a preliminary analysis of the current situation of College Students' English Autonomous Learning in the multimedia network environment. In view of the current situation of learning adaptability, teachers should guide correctly, correct the problems existing in students' learning motivation, strategy and role consciousness, and strengthen the students' self efficacy. The school should establish and perfect the content rich, easy English network learning platform, moderate hierarchical level, increase hardware investment and create a good learning environment, to improve the students' Autonomous English learning adaptability, improve the students' English level.

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