



## Research on the optimization of modern educational technology under multimedia network environment in English teaching

Jingwei Shu

*Department of International Studies, University of Science and Technology Liaoning, Anshan, China*

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### ABSTRACT

*With the continuous progress of human science, modern education is entering a stage of rapid development. With the advanced technology of modern education, the impact of the concept of multimedia network teaching is widely recognized. The author has studied the use of the modern educational technology. Deepening understanding and optimizing the use of multimedia in class are proposed in the paper. Timely and appropriate utilization of modern educational technology under multimedia network environment is helpful and beneficial to the improvement of English teaching.*

**Keywords:** modern educational technology; multimedia network; optimization; English teaching

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### INTRODUCTION

At present, the network resources have gradually permeated in the English education and English teaching under network environment is becoming more and more distinct, which made a breakthrough on the space and time in teaching and learning. The technical conditions of interchange feedback and real-time interaction can be realized with the application of modern educational technology and multimedia network in teaching.

Under the guidance of the Ministry of Education in China, many universities has been deepening English teaching reform in full swing and also have made gratifying achievements. English teaching has evolved from the traditional class of blackboard and chalk into the modern flavor of network teaching. [1] A big shift from static to dynamic brings vividness and real-time exchange into full play. As a result, it is of great significance and value to apply and optimize modern educational technology under multimedia network environment in English teaching.

Modern education based on network technology is evolving from a backward pattern of learning and teaching to students' autonomous learning. Traditional education follows the paradigm in which learners read a passage from textbooks, listen to teachers' presentations, read again, take notes and then finish a test. The pattern is less efficient, expensive and has not integrated the potential that modern educational technology based on network technology can offer when it comes to the increase in students' learning interest and ability. The existing modern educational technology can explain complex subjects by using multimedia presentations. The author has tested and developed a multimedia approach to explaining complex notions in English teaching, which shows a promising future in English learning and teaching.

The author analyzed the current situation of the utilization of modern educational technology in the first place, provided the theoretical bases for the application in the second place, elaborated on the teaching practice of the optimization network-based multimedia and shared the insights in doing so in the paper.

## 2. The characteristics of multimedia network teaching

A. Resource sharing. All kinds of Media information processing and function of human-computer interaction are available by means of modern educational technology. What's more, the online multimedia information resource sharing represents the up-to-date and inevitable trend of the application of multimedia network to teaching environment. [2]

B. Interactive teaching. The two-way network information transmission renders interactive teaching possible. The publisher and the receiver of the network information can be the same identity. In the process of teaching practice, students receive the teaching information from and send their feedbacks back to the teachers through the network. Therefore, real-time messages can be exchanged between teachers and students and teaching practice can be promoted.

C. Personalized learning. It is up to students to choose when and where to study and how much they are going to get by making use of network technology. At the same time, the result of the network resources sharing makes the learning not only individualized but also flexible.[3] The students' learning enthusiasm and creativity can be mobilized to the fullest extent.

D. Timeliness assessing. The extent to which individuals receive necessary and timely assessment is one dimension of the process of network teaching. Timeliness can be viewed as the interaction between results of learning and teachers' review, both of which are expected to influence the effectiveness of learning process. [4] It is known to us all that implications of timeliness assessments for teaching and learning behavior are of great importance.

## 3. The application of multimedia network teaching

A. Definition and roles of multi-media in the aspect of English teaching. "Multimedia is defined as presenting information through multiple processes including but not confined to text, audio, animation, graphics, and video and so on." [5] As far as English teaching is concerned, multimedia includes computers, videos, projectors, recorders, and VCD teaching software in accordance with the requirements of different classes to carry out relevant teaching flexibly.

Some people keep a wrong perspective in mind, considering multimedia as computers. Everything is done by a computer totally with blackboard and chalk left out no matter whether dealing with subject, questions, texts, vocabularies and sentences or not. [6] Although it has some special advantages, multimedia is only a type of media in the whole teaching process. Its aim is to optimize and help teaching. In fact, network technology can provide lots of functions including multimedia classroom, E-reading room, data information, PowerPoint making, educational website, E-chatting room and distance education and so on in education. The functions of network technology in modern education are shown in Figure 1.

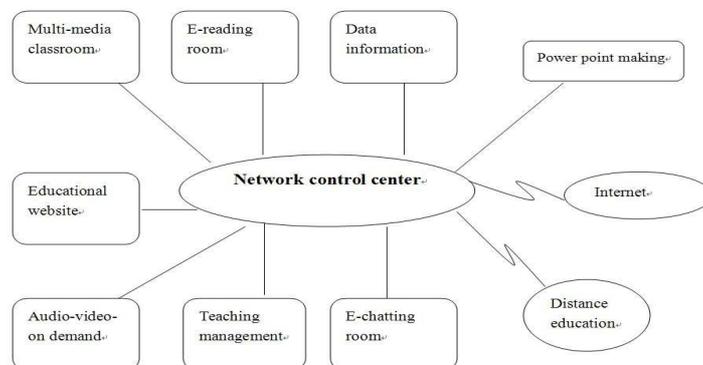


Figure 1. The functions of network technology.

B. Contrast between traditional and multimedia network teaching. Traditional English teaching places strong emphasis on teachers' instruction. Consciously or unconsciously, a great many teachers dominate the whole class. As a result, the entertaining and scientific nature of textbooks is submerged and the enthusiasm and initiative of students are obliterated. At the same time, students have been trapped in a state of so-called "malnutrition" as a result of the lack in visual and audio materials [7].

Modern education technology has brought a glimmer of hope to the fact mentioned above. Multimedia is precisely a combination of graphics, visual arts, image processing, music, psychology, pedagogy, artificial intelligence, informatics and electronic technology. [8] They will mobilize students' auditory and visual processing functions in full swing. Students' interest can be stimulated and memorial efficiency can be improved. Applying multimedia technology in English teaching will provide a vivid scene and a concrete image with speaking, listening, reading, and writing which are arranged simultaneously in response to realize the goal of optimizing the learning process of these skills. With information being shared, efficiency of English teaching is guaranteed. So there is no doubt that modern educational technology under network environment will play a significant role in learning and teaching as well.

C. Constructivism in English teaching and learning. Constructivism is an art of learning founded on the precondition that people cultivate their own understanding about the world they live in by looking back to their own experiences. People can generate their own "mental models" and "rules", which they employ to make sense of what they have experience. [9] Learning, therefore, is just the process of adapting the mental models to absorb new experiences.

Constructivism, a further evolution of behaviorism and cognitive theory, offers great theoretical bases for application of network-based multimedia teaching. Constructivism is an opinion of learning based on the thought that knowledge is not something that can be just provided by the teacher in the front of the classroom to receivers at the desks. Rather, knowledge is built by learners through a vigorous, mental process of development, whereas learners are the constructors and creators of knowledge and meaning. [10] In the process of multimedia teaching and learning, the learners are the focus of an interactive class and the teacher promotes a process of learning which allows the learners to predict, hypothesize, manipulate, raise questions, objects, investigate, research, and invent. [11] The interaction between teachers and students through modern educational technology under network environment are shown in Figure 1.

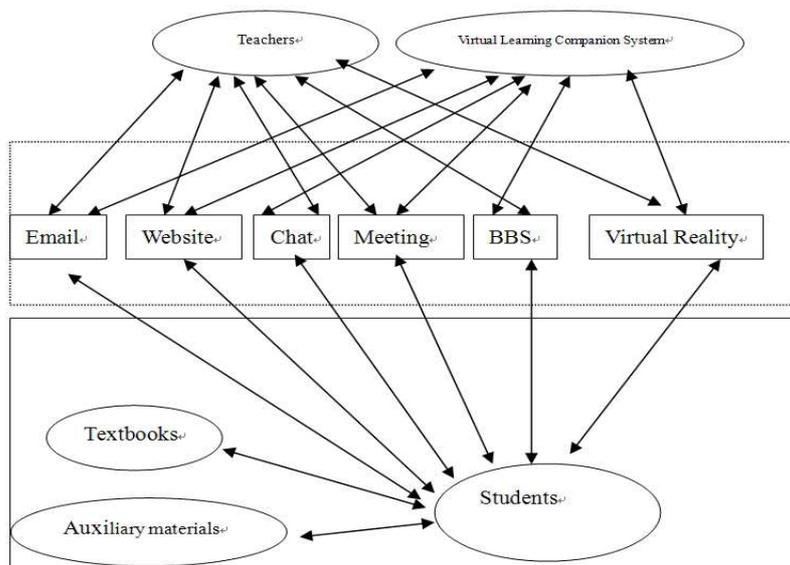


Figure 2. The process of English learning under network environment.

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### CONCLUSION

The good use of the network-based multimedia teaching method is a beneficial way to optimize the learning and teaching process. While dealing classes, we can make full use of the learning and teaching approach of the network technology in order to improve the quality. However, we should bear in mind that it can't be abused. We have to choose the audio-visual teaching program multimedia in a rational way in accordance with the contents of the text to reach the goal that we can achieve the aim of optimizing learning and teaching process. [12] As a result, the paper aims to realize the significance and necessity of application of multimedia in English teaching while properly dealing with the teacher-media-student bond.

In accordance with the basic requirements and principles of English teaching, a multimedia-based English class must try to follow the steps as follows according to the syllabus: (1) The purpose and title of the lesson should be made clear. (2) The conversation between students and teachers should be stimulated. (3) The content should be summarized. (4) The explanation and discussion should be carried out. (5) The practice and evaluation should be made clear. (6) The tasks should be assigned. Following such a process, most problems that might appear in a multimedia-based class would be avoided. [13]

All in all, with the help of modern education technology, the multi-level originality and nature of learning and teaching are completely guaranteed. When it comes to the processes of training students' basic language skills, a great number of teaching methods are easy to find. [14] Therefore, some disadvantages of traditional English teaching could be conquered. The goal of deepening the impression, strengthening memory, arousing interest, promoting students' individual learning and so on will be definitely realized with the help of it.

This paper is a tentative study of modern educational technology applied in English teaching, which is just a starting point far away from perfect. Yet it is sincerely wished that this tentative study could be of some value for educators and researchers in the field of modern educational technology. Further study should pay more attention on the empirical studies in practice. More and more helpful and feasible theories should be put forward.

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