



Exploration of Individualized Foreign Language Teaching Mode Based on the Integration of Multimedia and Traditional Methods

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Abstract. When we turn our attention to subject teaching, we can't help asking: how practical and widely applied are the things studied by experts to practical teaching? Especially when subject teaching is facing the impact of curriculum reform and digitization, How can researchers help teachers and learners break through the bottleneck of teaching? The author thinks: blindly pursuing the new and seeking the difference can not solve the practical problems in the classroom, which is in line with the actual teaching situation in China. For example, in foreign language teaching in China, there are many ideas to explore reform and innovation, and a lot of energy has been invested in the network, but the effect is very little. In basic education, the classroom is the strongest position. It is unrealistic to try to solve the problems in the classroom completely through network teaching. Therefore, based on the middle school classroom, this paper attempts to explore some ideas and methods of personalized foreign language teaching mode based on the integration of multimedia and traditional teaching to build a personalized learning environment for learners in the classroom, and verify its effectiveness through experiments, so as to seek some enlightenment for improving the teaching efficiency in foreign language classroom, This paper will learn from the idea of building personalized learning scene in the network environment, and build a personalized foreign language learning environment in the foreign language classroom according to the individual characteristics and needs of learners. By building a personalized foreign language learning environment and verifying its effectiveness, we hope to explore a new integration way of teaching design, information technology and foreign language teaching through the application of personalized learning environment.

Keywords: Multimedia teaching · Individualized foreign language teaching · Traditional teaching

1 Introduction

English multimedia teaching is an effective way to cultivate high level foreign language application ability. The theory of Constructivism emphasizes that students are the center, students are the active constructors of knowledge, and teachers are the helpers and promoters [1]. This theory has greatly changed the traditional teaching mode. With the

application of computer technology, it can process and display a variety of language information forms, which provides a great possibility for improving teaching efficiency and realizing scientific foreign language teaching.

Multimedia teaching refers to in the teaching process, according to the characteristics of teaching objectives and teaching objects, through teaching design, reasonable selection and use of modern teaching media, and organic combination with traditional teaching means, to participate in the whole process of teaching, with a variety of media information on students, to form a reasonable teaching process structure, to achieve the optimal teaching effect. In fact, multimedia teaching has existed since ancient times. Teachers have been teaching with the help of text, sound and pictures. But in the 1980s began to use a variety of electronic media, such as slide, projection, recording, video and other comprehensive use and classroom teaching, this teaching technology is also known as multimedia combination teaching or audio-visual teaching, since the 1990s, with the rapid development and popularization of computer technology, multimedia computer has gradually replaced the previous comprehensive use of a variety of teaching media. Therefore, what we usually call multimedia teaching now refers to the process of teaching activities carried out with the help of multimedia computers and pre made multimedia teaching software. It can also be called computer assisted instruction (CAI). Multimedia computer aided instruction refers to the use of multimedia computer, comprehensive processing and control of symbols, language, text, sound, graphics, images and other media information, the various elements of multimedia according to the teaching requirements, organic combination and display through the screen or projector projection, at the same time, according to the need to add sound cooperation, as well as the interaction between users and computers The teaching or training process can be completed by human-computer interaction between teachers and students.

Therefore, multimedia teaching usually refers to computer multimedia teaching, which is a combination of multiple media realized by computer. It has the characteristics of interactivity, integration, controllability and so on. It is only one of a variety of media.

It uses computer technology, network technology, communication technology and scientific and standardized management to integrate, integrate and comprehensively digitize all information resources related to learning, teaching, scientific research, management and life services, so as to form a unified user management, unified resource management and unified authority control. It focuses on that students can access campus network and Internet at any time through WiFi to obtain learning resources conveniently. Teachers can use wireless network to check students' learning situation, complete lesson preparation and carry out scientific research at any time. Its core lies in the implementation of paperless teaching and the extension of campus wireless network.

2 Advantages and Disadvantages of Multimedia Teaching

2.1 Advantages of Multimedia Teaching

1. Media teaching can make the original abstract and boring learning content become vivid and intuitive, and enhance students' interest in learning. Teachers can easily, quickly and fully use modern teaching methods to teach, so that the teaching content is more intuitive, and even can not be limited by time and space. The introduction of new

content can not only save valuable time, increase the amount of information in the classroom, but also activate the classroom atmosphere, and fully mobilize the enthusiasm of students.

2. Multimedia teaching can improve teaching efficiency. 11% of people learn knowledge through hearing and 83% through vision. In addition, psychologists also pointed out that people can remember 10% of what they read, 20% of what they hear, 30% of what they see, 50% of what they see and hear, and 70% of what they say when they talk. This conclusion shows that the memory effect will be better if the visual and auditory are used at the same time. The multimedia teaching method just provides the language environment of “text, sound” and “image”.

3. Multimedia teaching makes individualization possible. To learn what you need at your own convenient time and place. They can learn by themselves according to the teaching requirements, and can use computers to test and evaluate themselves.

2.2 The Shortage of Multimedia Teaching

1. Multimedia teaching puts forward higher requirements for teaching staff, and teachers’ technical level needs to be further improved. As a matter of fact, some teachers lack the proper technical level in the use of multimedia equipment, which affects the effect of multimedia teaching.

2. What multimedia teaching provides is man-machine communication, which is not as good as natural language communication between people. For example, students ask questions in class, but the knowledge and courseware involved are rarely related, which will cause difficulties in explanation.

3. Due to the discontinuity and delay in projection operation, the teacher’s language expression will also be intermittent [2]. At the same time, students focus on the screen and ignore the teacher’s teaching. Sometimes, it is difficult for teachers to organize or adjust the teaching content.

4. Due to the large amount of multimedia information, fast presentation speed and short residence time, students not only can’t keep up, but also have visual effects. Experiments show that if the projection plays for more than 20 min in a class, students are prone to fatigue, leading to the decline of knowledge acceptance ability. The original slope one algorithm uses a linear function $(x) = x + B$ to predict, where parameter X represents the target user’s score of the project, and parameter B represents the average score deviation between the projects. Therefore, in the process of rating prediction and recommendation, we first use formula (1) to calculate the average score deviation matrix evld between the target project and other projects (representing the target project, I represents some other project), and finally use formula (2) to predict the corresponding project score. Prediction (U) represents a project, and u represents a student:

$$Deu_{i,j} = \sum_{u \in S_{ij}} \frac{R_{u,j} - r_{u,j}}{count(S_j, i(x))} \tag{1}$$

$$Perdiction(u)_j = \frac{1}{count(r_j)} \tag{2}$$

3 Give Full Play to the Advantages of Science and Technology, Optimize the Classroom Atmosphere

3.1 Research Process

Psychological research shows that the environment has a profound impact on the efficiency of people's work. High school students are in a critical period of physical and mental development. Teachers should optimize the teaching atmosphere according to their personality characteristics and lay the foundation for students' development. But at present, the efforts of English classroom teachers in China are not proportional to the final results. The effect of improving students' learning enthusiasm is not high, which has a negative impact on the development of the classroom [3]. A good classroom atmosphere requires teachers to consider many things. First of all, the creation of the atmosphere should be in line with the development characteristics of students, based on which to promote a good teaching atmosphere to further enhance the enthusiasm of students to participate in classroom knowledge exploration. In the traditional way of guidance, teachers are mainly oral guidance, but English is a language discipline, many knowledge points need students to recite, teachers monotonous way of guidance is difficult to drive students' learning enthusiasm, affect the normal learning efficiency of students. Secondly, many teachers are influenced by exam oriented education, and the construction of classroom atmosphere is too formalized, focusing on the process of indoctrination of students' knowledge, resulting in poor effect of final guidance, wasting limited time in the classroom and reducing the original teaching efficiency. A good beginning is the key to success. If teachers want to improve the guiding efficiency of classroom atmosphere, they can appropriately use multimedia technology to bring students into a new teaching environment, so as to stimulate their enthusiasm for learning knowledge.

3.2 Relevant Conclusions Drawn

For example, during the teaching of "the Olympic Games", teachers can use rich network resources to find stories about the development of the Olympic movement and tell them to students. Through history, teachers can guide students to have the desire to explore the contents of textbooks, expand their horizons, and help students participate in the learning of knowledge in a better mental state, And in this process, teachers can also let students say their understanding of the Olympic Games, strengthen the interaction between teachers and students, and push the classroom teaching atmosphere to a higher level. In addition, teachers can also play the elegant demeanor of Chinese athletes in the Olympic Games, as a starting point to enhance students' enthusiasm for learning knowledge, encourage students to improve their learning status, and lay a solid foundation for efficient English classroom. Multimedia technology contains rich image materials. Teachers can make rational use of it and change their own guidance methods, which can make students have a fresh feeling of English learning, help them to participate in the process of knowledge learning, and promote the efficiency of students' English learning.

3.3 Improvement Measures

In the process of students answering questions, teachers should adopt a kind tone, and give some encouragement when students answer wrong, so that they can always keep a high enthusiasm for exploring questions, and help students find their thinking defects, improve their English learning methods, and accelerate their development process. In addition, in view of the knowledge points that high school English needs students to memorize, teachers should effectively grasp the classroom teaching methods, turn the black and white text in textbooks into colorful pictures, so that students can have the enthusiasm to explore English knowledge learning, and promote them to participate in the actual knowledge learning in a better state. And then drive students to experience more learning fun in the process of knowledge learning. In addition, teachers should also use multimedia teaching technology to help students review their English knowledge points. First, they should have a detailed understanding of students' mastery of knowledge points by asking questions, and then use the large screen to intuitively show students the internal relationship between knowledge points, so as to help students build a more complete knowledge model in their mind. Then teachers should strengthen the interaction between teachers and students, and pay attention to students' personal learning situation in time.

4 Simulation Analysis for Advantages and Disadvantages of Traditional Teaching

Traditional teaching means that teachers impart knowledge to students by means of language, blackboard writing, wall charts and models. The traditional teaching method has three centers: Teacher centered, classroom centered and Book centered. In the traditional teaching mode, the teaching process consists of three basic elements: teachers, students and teaching content.

(1) The advantages of traditional teaching methods an excellent teacher can often express the teaching content with vivid language and graceful body language in class, so as to achieve good teaching effect [4]. Different teachers will explain the same teaching content in different ways and means. Traditional teaching is convenient for communication between teachers and students. Teachers pay great attention to coordinating the relationship between lecture speed, students' emotion and blackboard admonition. Lecture content and admonition degree will be adjusted according to students' reaction [5].

(2) The disadvantages of traditional teaching methods, teachers often take up a lot of time to give lectures and write on the blackboard. In recent years, with the expansion of college enrollment, large classes are more common. As a result, students can't see what is written on the blackboard when they listen to what teachers teach. In the face of hundreds of students, teachers also feel powerless, even out of control in the classroom. Media alone, it is difficult to stimulate students' interest in learning, it is difficult to produce a variety of sensory stimulation of students, it is difficult to stimulate students' learning, it can be seen that single multimedia teaching or traditional teaching can not meet the needs of modern teaching. Therefore, in the process of teaching, only by organically combining traditional teaching and multimedia teaching, learning from each other's strong points

and choosing diversified teaching methods according to different teaching contents, can better teaching effect be achieved [6, 7].

In the process of teaching, teachers should develop a good teaching attitude, fully display their good temperament and constantly improve their own quality, which is also very necessary.

From Fig. 1, we can see that the advantages and disadvantages are relatively uniform, but from the fitting effect, the advantages are obviously better than the disadvantages. Therefore, for English multimedia teaching, using the algorithm proposed in this paper is very advantageous [8].

From Fig. 2, we can also see that in all the teaching effects, the teaching effect of using multimedia is far better than that of not using multimedia.

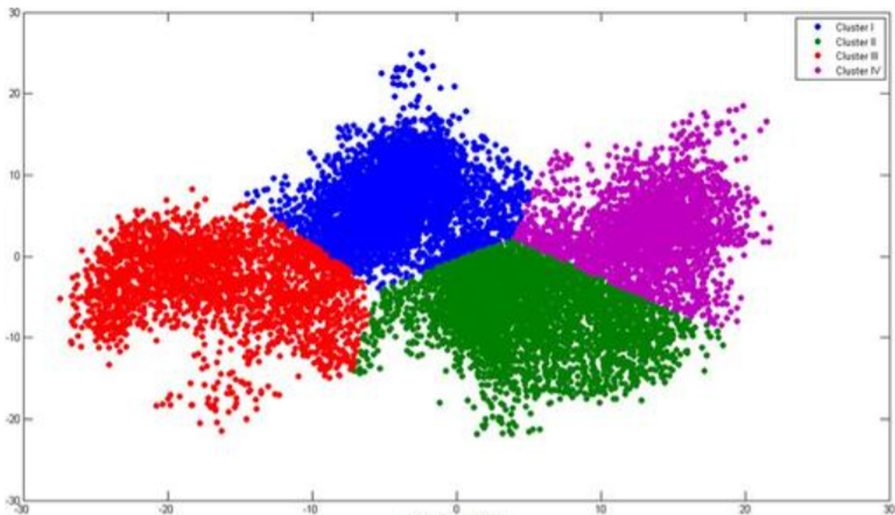


Fig. 1. Simulation advantages and disadvantages of traditional teaching

5 The Definition of Individualized Foreign Language Learning Environment in Classroom

5.1 On the Definition of Individualized Learning Environment of Foreign Language in Classroom

From the traditional point of view, The understanding of the learning environment is mostly from the external factors relative to learners or even very macro perspective [9]. such as: Learning environment refers to the classroom structure that enables teachers to teach and learners to learn smoothly, It includes a series of requirements such as how to set up and maintain the learning area in the classroom, draw up the calendar and daily work and rest, plan free activities, group activities, the time of the whole class activities, and

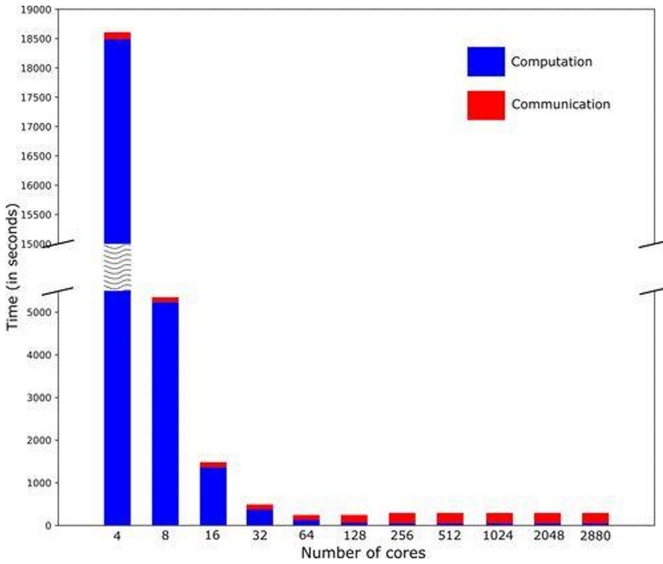


Fig. 2. Teaching effect simulation.

create a classroom community. From this angle, The researchers believe that: Learning environment refers to social environment, learning education, family influence, campus culture and other external factors. The definition of personalized learning environment in foreign language classroom is shown in Fig. 3.

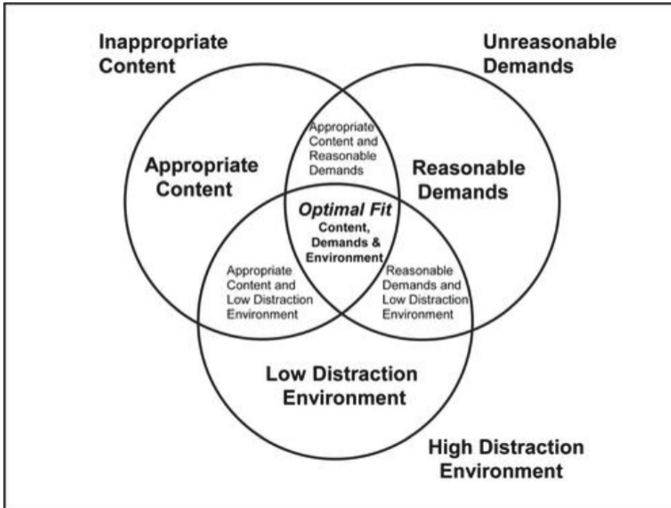


Fig. 3. The definition of individualized learning environment in foreign language classroom

To sum up the above understanding of learning environment, it can be summarized into three aspects:

1. Learning environment is the place where learning activities take place. As an external factor, it mainly includes classroom, campus, family and other social places. It is a learning environment based on teaching and behaviorism. It aims to promote learners' learning through external hardware facilities or equipment [10, 11].
2. Learning environment is the support of all kinds of learning resources for learning activities, which is still from the external factors. It includes knowledge resources, tool resources, human resources, and of course also includes the place where learning activities take place. But it emphasizes the use of these resources to assist the occurrence or continuation of learning activities. Obviously, resource view is a step further than place view, because it puts learners and learning activities in the center.
3. Learning environment is a kind of task which is different from place and resource. It includes not only place and resource, but also learning requirement for achieving learning task. Integrating place, resource and task, we call it learning situation, which can be supported by situational cognitive theory. The theory of Situational Cognition holds that learning and thinking are based on situations. They can not be embedded in the individual brain in isolation, but occur in the human brain through cultural activities or tools in situations. Those learning and knowledge separated from activities, tools and culture are inert [12]. Knowledge must be presented in real situations in order to stimulate learners' real cognitive needs. This is because knowledge exists in specific activities, situations and cultures. Only when people enter them can they learn the so-called knowledge [13].

5.2 Construction and Experiment of Individualized Foreign Language Learning Environment in Classroom

The purpose of this observation is to acquire and accumulate perceptual materials about learners and their learning environment through scientific and rational observation. Through the analysis of the interaction between teachers and students, learners and learners in the classroom, the use of multimedia and other teaching aids by learners, and the adoption of teaching methods and strategies, we can understand the appearance and internal mental activities in the classroom environment. The first-hand materials from the classroom are used to provide the basis for subsequent hypotheses and experiments. The subjects of observation and experiment should come from the same learning group and environment [14, 15]. Moreover, the observation and experiment should maintain the stability and continuity of time, content and scope, that is to say, the observation and experiment of the object should be carried out on the same sample in a relatively short period of time. Such observation can provide reliable and reliable basis for the experimental stage; on the contrary, if the time interval is long or the sample changes, the cognitive and mental level of the observation object is likely to have changed, then the observation based experiment will lose its reliability and validity. The author determines the object of observation from three aspects: the subject of the object, the time and the scope of knowledge.

The multimedia model in personalized learning environment is the multimedia integration that can't meet the needs of learners' learning activities. This model is more stable than learners and learning activities. In foreign language learning, the media supporting learners include listening, speaking, reading and writing. The stability of multimedia needs to be able to fully meet the learning needs of each learning group and each learning stage. Multimedia model is a collection of cognitive tools to support learning activities.

6 Conclusions

Teachers using multimedia technology in high school English classroom teaching can reduce the negative impact of traditional education mode in students' mind, which will have a far-reaching impact on their future study and life. It will help to deepen the impression of knowledge points in the minds of students and play a positive role in promoting them to meet the challenges in the future. Visual memory is one of the main ways of human memory. Teachers use multimedia technology to create a colorful classroom, which can let students focus on the teaching of knowledge points, and will play a positive role in promoting students' learning efficiency.

References

1. Huang, R.: Constructivism and multimedia foreign language teaching mode. *Audio Vis. Foreign Lang. Teach.* (2) (2000)
2. Wang, S.: On the advantages and possibilities of Multimedia Teaching. *J. Taiyuan Teachers Coll.* (4) (2000)
3. Huang, A.: A preliminary study on the effect of foreign language multimedia teaching. *J. Gannan Med. Coll.* (12) (2003)
4. Yang, L.: Tentative practice from traditional teaching to network. *J. Yanbei Normal Univ.* (6) (2006)
5. Jonathan, D.H.: *Theoretical Basis of Learning Environment*. Shanghai: East China Normal University Press, pp. 6-22 (2002)
6. Huanqi, Z.: *Prospects for Foreign Language Education*. East China Normal University Press, Shanghai (2001)
7. Zhixian, Z.: *Informatization Teaching Mode – Theory Construction and Practice Example*, p. 253. Science Education Press, Beijing (2003)
8. China Institute of curriculum and textbook, Thomson Learning press, USA. go for it!. Beijing: People's education press, Deng Zhiwei. *Personalized teaching theory*. Shanghai Education Press, vol. 202, pp. 55-57
9. Weisheng, L., *Experimental research guidance*. Beijing: Educational Science Press, : Introduction to educational research methods , p. 1997. Educational Science Press, Translated by Yuan Zhenguo. Beijing (2002)
10. Normal Education Department of Shanghai Education Bureau: *Statistical Methods of Education*. Higher Education Press, Beijing (1993)
11. Research Group on training in the process of new curriculum implementation. *New curriculum and student development*. Beijing Normal University Press, Beijing (2001)
12. Zhang, B.: *Case Study on Description, Acquisition and Inference of Personalized Demand*. Graduate School of Chinese Academy of Sciences, Beijing (2005)

13. Zhu, B., Wen, Z.: Research and application of learner model standard. *Comput. Eng.* (8), 300–304 (2002)
14. Sun, Z.: Research on the organization strategy of personalized learning content. Wuhan: Central China Normal University, 2006, Li Xinguo. Exploration of network foreign language teaching and education mode innovation. *Jiangsu Foreign Lang. Teach. Res.* (1), 33 (2006)
15. Wenjing, W.: Situational cognition and learning theory: the development of constructivism. *Global Educ. Outlook* 4, 3 (2005)