Research on the University Teaching Mode Based on Information Technology

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Abstract: It is an inevitable trend of the development of knowledge economy and information society to strengthen the integration of modern information technology and teaching mode in Colleges and universities. From the perspective of advanced teaching ideas and modern information technology, this paper expounds how to create and innovate the teaching mode of college and University, and research and analyze the teaching mode of university based on information technology and its characteristics, and then reposition the role of teachers and students in the teaching mode.

Keywords : Information technology; Teaching mode; Network teaching

INTRODUCTION

With the rapid development of science and technology, information technology has been greatly affected by the way of production, life style, thinking mode and learning style. With the development of information technology, the people's learning and communication break the boundaries of the past, the human ability to improve and play a new role in the space.

The twenty-first Century is a fierce competition in the 21st century, the fierce competition in the world is the economic strength, science and technology competition, the key is the talent competition, and talent depends on education. Higher education is an important part of the national innovation system, which is the important part of the national innovation system. In order to complete the mission and meet the challenges, The colleges and universities must make full use of information technology to break through time and space constraints and realize the sharing of information resources, realize educational resources sharing, expand the scale of education, improve the speed of education, construct the lifelong education system.

THE MAIN PROBLEMS OF THE CURRENT EDUCATION TEACHING MODE REFORM

The so-called Instructional Models (Course), is a certain teaching ideas, teaching theory and learning theory. In order to achieve a specific teaching objectives, in the classroom teaching of the various elements in a specific way to combine into a specific way with a relatively stable teaching structure of the teaching structure.

The traditional teaching mode of our country is "The Classroom Teaching Mode" which is followed by thousands of years. In this model, the teachers will be teaching content loaded into the teaching media in teaching activities, students through certain channels to obtain knowledge of feedback to the teacher. The teachers are teaching voluntarily, is the whole teaching process dominate, while the students are passive external stimulation of the receiver, the media is assist teachers to instill in students a tool. The advantage of classroom teaching mode is to help the teachers to play a leading role in the classroom teaching of the organization, management and control; it is the neglect of students' initiative. The students are in a passive acceptance of knowledge, the lack of independent exploration of the opportunity, its independence seriously weakened, leading the less of conducive to the cultivation of self-learning ability, and the situation can not mobilize the enthusiasm of the students, initiative and creativity. The theory basis of teacher centered classroom teaching mode is the behavior principle, and the influence of the behavior theory in the higher education institutions in our country is deeply rooted. This teaching mode can meet the requirements of the agricultural society and industrial society to the knowledge accumulation type, but it can't train the innovative talents needed in the information era.

THE INFORMATION SOCIETY'S REQUIREMENTS FOR THE TALANTS IN THE TWENTY-FIRST CENTURY

According to the analysis of the expert survey, in twenty-first Century the new talent needs of the information society should be that: full of noble moral character, with a high degree of innovation ability and strong information literacy (including the ability to obtain the information, analysis, processing capacity, the use of capacity and evaluation) of the new talents.

The report of the International Commission for education in twenty-first Century to the United Nations Educational, scientific and Cultural Organization (UNESCO) submitted the report "Education - wealth contained in which" proposed: for the four pillars of education in twenty-first Century, is to develop the learners to learn 4 skills, can be used to express the 4 L:(1)Learning to know, that is, students learn to use the knowledge of cognitive tools, learning to do things (2)Learning to do, that is, to develop learners through the interaction with the environment, through practice, through the ability to obtain knowledge; (3)Learning to live together, learn to live together with others, cooperation, cooperation learning, promote negotiation learning; (4) learning to be, learn to live, learn to develop their own, to pay attention to personality education. The 4 "L", which is clear about the modern education should be from the aspects of the cultivation of students' quality, but also contains the specific way and goal of innovative education. Through the interaction with the environment, through the acquisition of knowledge; to cooperate with others to learn, learn to learn, to learn their own development, and so on. Moreover, in the information society, knowledge update quickly, "education system" has become a new demand, as soon as possible, a large number of access to knowledge become a necessary thing.

INFORMATION TECHNOLOGY TO PROMOTE THE REFORM OF COLLEGE TEACHING MODE

The development of information technology has provided the conditions for the reform of teaching mode. In the history, the occurrence of the 4 educational revolution is closely related to the revolution of education. The first took place in the 2nd century AD Jews in order to resist the Greek culture and other reasons, send someone to centralize the education of children, family education began in school education; for the second time the words caused; the third source in printing especially the invention of movable type printing, it makes human knowledge has become a real sense of social knowledge and no longer monopolized by a few people. This information technology is as a symbol of the revolution of the fourth revolution of education, the rapid pace of its popularization, the response is strong, the impact of the far-reaching, is not comparable to the previous three revolutions. The development of information technology has created the conditions for the reform of teaching mode: the rapid development and popularization of information highway, network communication technology, multimedia technology, expanding people's cognitive space, multimedia set map, text, sound, like a body, realize the integration of the objective world, the wide spread of Internet business, which will make the teaching mode change from the fundamental.

Compared with the traditional teaching environment, the teaching environment of computer network has the following characteristics: the network interaction is conducive to stimulate students' interest in learning, improve students' enthusiasm for learning, cognitive plays the main role of the students; diversified information according to the hypertext organization of educational information resources is conducive to the external knowledge, perception understanding and memory to stimulate students; the large capacity storage technology, provides a rich variety of hitherto unknown, learning resources for students; the network technology makes it possible to share all kinds of resources, for the convenience of different countries, different regions of the people online collaborative learning; open the network that makes the students no longer subject to physical time limit.

THE TEACHING MODE AND ITS CHARACTERISTTICS BASED ON INFORMATION TECHNOLOGY

1.The theoretical guidance

The establishment of any teaching model needs to have a mature theoretical basis, consistent with a certain educational philosophy. Education teaching mode based on information technology, which is mainly based on the theory of constructivism and modern cognitive psychology. Constructivism believes that learning is the process of acquiring knowledge. Knowledge is not acquired by teachers, but learners are in a certain social and cultural context (a certain situation), with the help of others (teachers and learning partners), the use of the necessary learning resources, through the construction of meaning. It emphasizes the dynamic role of cognitive subject of learning, the learner is the main body of information processing, the active construction of meaning, the teacher is help to construct meaning and facilitator, and should not be knowledge and inculcating students is the main access to information. From this point of view, the learning environment can be effectively formed, and the characteristics of modern information technology to promote the construction of meaning, is the most ideal cognitive tool.

The modern cognitive psychology of the people as a positive quest for knowledge and information processor that human cognition process is one of external or internal information processing process, the human brain is an information processing system, and the students' knowledge learning and training process can be regarded as information acquisition, processing, by receiving, storage, processing, retrieval, transmission and other aspects of the development of the students' thinking ability, training the students to discover and acquire the information ability.

2.The teaching mode based on information technology

The teaching mode based on information technology is based on the advanced teaching theory, giving full play to the advantages of modern information technology, realizing the transformation of the relationship between the elements of the teaching process, and the overall goal of the quality education.

The traditional teaching system is composed of 3 elements: the teachers, the students and the teaching materials (teaching content), which is based on information technology. Since it is a teaching system, from the point of view of the system, these elements are not simply to be put together, but rather to each other, each other, the formation of information teaching structure form In this teaching mode, the relationship between teachers and students, teachers and teaching content, students and teaching content through information platform is a network structure interaction.

In this teaching model, students are the active construction of information processing of the main body and the knowledge significance with the use; the teacher is teaching guides and organizers, meaning construction of the helpers and promoters; teaching content knowledge is no longer simple teachers to teach the content, nor the students' knowledge as the sole source of, but the students actively construct meaning of; information platform (news media) is no longer means to help teachers to impart knowledge, but to create situations, collaboration learning, discuss the communication tools of cognitive and emotional interaction of incentive tools.

3. Based on the teaching mode of information technology and traditional teaching model comparison in the information technology teaching mode based on, the teachers and students are interactive relationship, teachers give students guidance and help, the same teachers can also collect lots of new information in the teaching process, is the so-called teaching benefits the teachers as well as the students.

4. The characteristics of learning in the teaching mode based on Information Technology

(1) The interactivity

Computer network has a strong interactivity, multimedia computer can provide excellent pictures and texts, rich and colorful information. In the interactive teaching network, between the teachers and the students take interactive information transmission, secondary school students in the network not only receive information, also can express, the students can not only with their local school teachers have interaction, but also can seek advice to provide network service of any a teacher (domestic and foreign), put forward the question and expressed their views. Interactive way can not only stimulate students' learning interest, but also make the students have a strong desire to learn, form learning motivation.

(2)The main body of the student learning

The interactive learning environment can make the students choose the content, learning strategies and the practice of their own level according to their own learning foundation and learning interest. According to the view of cognitive learning theory, people's cognition is not the external stimulus, but the product of the interaction between the external stimulus and the psychological process. In order to be effective, the external stimulus is necessary, but it plays a decisive role in people's internal psychological process. In the course of teaching, students are the main body of study, must play the initiative of students, enthusiasm, to get effective cognition. Interactive multimedia computer provides a variety of active participation in the activities of students' initiative and enthusiasm to play a good condition, so that students become the subject of learning.

(3) The cooperative learning

The collaborative learning, provide for multiple learners on the same issue with a variety of different point of views of observation and analysis of comprehensive opportunity to draw on the wisdom of the masses. This is not only a great benefit to the deepening of the problem, but also for the development of advanced cognitive ability, the cultivation of cooperative spirit and the formation of good interpersonal relationship. Collaborative learning based on computer network has many different models, such as the discussion, competition, cooperation, and the role play.

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