

Analysis to the Development Trend of Chinese School Physical Education Based on Information Technology

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Abstract

This paper is mainly to collate, analyze and evaluate the research of network information technology in physical education teaching at home and abroad. At the present stage, this kind of research content is scattered, the perspective is one-sided, and the method is single. The paper analyzes and explores from different levels, and gives relevant suggestions based on the perspective of social responsibility.

Keywords

Information technology, physical education, teaching.

1. Introduction

The development of information technology, in addition to plays a pivotal role in Chinese industry, agriculture, services and other industries. And on the application of school education, it not only provides a good development environment for the teaching workers, but promoted the development of the teaching jobs in some degree. Under the trend of information technology development, a new teaching mode came into being, which is called the Information Technology Assisted Teaching. With the rapid development of information level, the information technology assisted teaching has become an indispensable teaching mode for more and more major. Physical education is a special subject, and information technology assisted physical education, which is more advantageous for students to cultivate learning ability and form the habit of lifelong physical exercise.

2. The importance of information technology in physical education teaching

The research of information technology in college physical education teaching has become one of the hot topics in the educational circles. It enriched the teaching forms through the application of information technology in physical education teaching and promoted the modernization development of PE teaching concept. The traditional model of physical teaching is difficult to adapt to the rapid update of modern sports information. The teaching mode of information technology assists physical education has been increasingly emphasized and applied to practical teaching at the same time. The organic combination of information technology and physical education provides rich resources for physical teaching, and improves the teaching environment of physical education. Besides, for the application of information technology assisted physical teaching on the one hand, this speeds up the informatization development of the PE contents and teaching forms to make it more adaptable to the social development. On the other hand, it can effectively promote autonomous learning interest for students, and stimulate their exploration desire of related sports knowledge. Therefore, the combination of physical education teaching and information technology can expand students' learning platform for the physical education, including thinking angles, content, time, place, method of learning and so on. It can not only meet the demand of students' own development but also improve the level of PE teaching by creating a good teaching atmosphere, enriching the form of course teaching and improving the quality of teaching. This is very useful for training professional talents in sports, and it also has an important significance for the benign development of physical teaching.

3. Analysis on the present situation of information technology assisted teaching

3.1 Research status of information technology assisted teaching in foreign countries

The United States, as one of the world's developed countries; it has a relatively complete system in the research field of information integrated education, which also played a role of leader in other countries. As early as 60 years in the last century, the concept of information technology was proposed with the birth of the information economics in the United States, and there appeared large scale issue of information technology. In the 1970s, the rapid development of information technology opened the curtain of curriculum reform all around the world. The information technology was integrated into the basic course at school so as to change the drawbacks of traditional teaching. In the early 1990s, the Claremont University Professor *Kenneth Green* initiated and hosted a large research project "The Campus Computing Project". In the late 1990s, former US Vice President *Al Gore* published a speech entitled "Digital Earth: Understanding the Earth in twenty-first century" at the California Science Center, and proposed the concept of "Digital Earth", thus leads to the "digital city", "digital campus" and so on ^[1]. Following the 1998 and 2000, the United States ISTE ("International Society for Technology in Education") formally promulgated the educational technology standards for students and teachers; a new information education program was promulgated in 2005. In addition to the establishment of student-centered, it is more inclined to guide students to master the knowledge and skills in network information age, to lay the foundation for the study of information technology. The information technology applied to the physical education teaching occurred earlier in foreign countries, and it has developed rapidly in college teaching. The universities for early use of network information technology assisted physical education teaching are Stanford University, University of Southern Queensland in Australia and so on. In 2001, Massachusetts Institute of Technology began to apply electronic materials to physical education teaching, and they carried out teaching through the network electronic course for the teaching content of all sports projects. Furthermore, a network platform was constructed for the assessment of physical educations, which fully embodied the technical characteristics of physical teaching modernization, also achieve the diversification of physical education forms and improve the flexibility of physical teaching. As the network information technology is constantly deepening, in addition to being an important part of physical teaching, it has become the development direction of physical education modernization. In foreign countries, even if the network information technology and physical education teaching is developing and improving continuously, under the network information environment, the research on physical education and teaching mode is still in its infancy.

3.2 Analysis on the current situation of domestic information technology assisted physical education

The implementation of "211 Project" in 1993, as well as the establishment of Chinese Education and Research Computer Network (CERNET) in 1995, symbolized the beginning of research and experiment for the combination of information technology and curriculum in our country. The relevant state departments promulgated a series of policies, in order to shorten the gaps with other countries as soon as possible. In 1999, the Ministry of Education made the decision of setting up computer courses gradually in primary and secondary schools, and carried out the implementation in 2001; they planned to complete a basic spread of information technology educational mission in nationwide elementary and secondary schools within 5-10 years. In 2010, according to the guidelines of "National medium and long-term educational reform and development plan (2011-2020)", Ministry of Education formulated a "Decade of education information development plan (2011-2020)", which means to use educational informationization to stimulate the education modernization, and promote the innovation of education, in order to ahead from a big country of higher education towards a powerful country of higher education as soon as possible.

The development for information technology assisted other subjects teaching is longer than physical education teaching. For now, most are sports competition and measurement in the aspect of information technology assisted physical education, and it is far from enough in physical education

teaching. Several nationwide well-known universities such as Beijing University of Physical Education, Shanghai Institute of Physical Education and Chengdu Institute of Physical Education has obtained some important achievements in physical network multimedia courseware-making and construction of network teaching interactive platform^[2] with a few famous sports department of universities, such as Tsinghua University Department of physical education teaching, Shanghai Jiao Tong University Department of physical education, East China Normal University Department of physical education, and so on. Shanghai Jiao Tong University established the "Network of Physical Education in Chinese Colleges" based on Shanghai Jiao Tong University, and integrated quite more curriculum resources of physical education in colleges and universities^[3]. In addition, both the subjects of Ministry of Education and research projects of other universities had the attempt and practical application of network information technology assisted physical education teaching. These are the representative results: Tsinghua University Sports Department of physical education not only enlisted the fine-quality physical education curriculums in disciplinary construction, but also worked on compiling all new opened course textbooks and multimedia courseware to meet the needs of college students in the 21st century. Physical Education Institute of Soochow University committed to the construction of excellent courses, and the curriculums with initial success are as follows: basketball, track and field, exercise physiology and other disciplines. Thus we can see the inevitability of information technology applying in Sports teaching, which opens up a new field for the reform of traditional physical teaching in sports colleges and universities.

Domestic research on information technology assisted physical education mostly cited foreign achievements, it has a detailed exposition of the concept of integration, objectives, significance and theoretical foundation, but without further research and analysis on the investigation of current integration, countermeasures and effective mode construction. There are quite a number of articles involving only macroscopic, surface of teaching mode, methods and information technology integration, but no further studies on how to integrate, what to integrate, to which extent, integrated presentation way^[4]. In recent years, as our government enhanced the emphasis on information technology teaching, they began to strengthen the information technology of key teachers' training, so as to make it possible for a fast development of information technology assists subjects. Of course, our country have a vast territory and significant regional differences, all regions IT resources are unevenly distributed, the master degree of information technology for professional teachers is uneven and the ability of students learning information technology is not enough, these are main problems need to be solved urgently in the field of information technology assists subjects teaching at present.

3.3 New information technology assisted teaching model— "MOOC"

"MOOC", the literal translation is "massive open online courses," which is a newly emerged course that curriculum teaching presented in online forms. Different from traditional curriculum, a large number of MOOC participation is involved, and the participants are not subject to nationality and race restrictions. They just only need to register a mailbox to participate. In addition, the curriculum covers a very extensive range. In terms of teaching, the teachers and learners all over the world can be connected via certain common topic or subject, there will be an evaluate after learning and then award a certificate if assessment is positive. The MOOC can be traced back to the earliest 1962, American inventor and knowledge creator *Douglas Eagelbart* put forward the research program "Augmenting Human Intellect: A Conceptual Framework to the Stanford Research Institute". This research program emphasizes the possibility of using computer as a assistance tool of augment intellect to apply. Since 2008, Professor *Jim Groom* from Mary Washington University, Professor *Michael Branson Smith* from York College of the City University of New York and large quantities of educators began to adopt this course structure, and they also successfully hosted their own large-scale network open courses in universities of countries around the world. The MOOC is also very popular In China. Although MOOC in our country is still in the preliminary stage of development, many universities have already seen the prospect of MOOC development; they also organized actively and encouraged teachers to develop MOOC teaching.

4. Conclusion

As stated previously, the research on information technology applied in physical teaching are on the rise both at home and abroad, and it also achieved some valuable results. But overall, it also has some deficiencies: (1) the content of the study is not thorough and systemic. (2) The perspective of research is relatively small; it lacks the comprehensive study into the information technology assists physical education teaching from different angles and multiple levels. (3) The research method is comparatively simple, which mainly on Questionnaire Survey and Descriptive Approach, but little empirical research has been conducted yet. There is no significant difference in information technology assists teaching between China and foreign countries, however at present, there are still some gaps between China and the developed countries in the field of network information technology assists physical training, technical and tactical analysis, and so on. Compared with the rapid development of other subjects, the research on information technology applied in physical education is relatively slow and poor. Under the penetration of information technology, there are still a series of subjects that need to be studied systematically and thoroughly, such as the research on physical teaching and learning model in the informatization, the theory and method in instructional design under the network environment, and so on.

Reviewing the development of Chinese network information technology assists instruction, to better adapt to the need of modern society and reform the present situation of information technology assists instruction, especially assists physical education teaching, firstly we have to break through original and inertial thinking mode, and make the innovative revolution based on original development. The second is to be practical and advanced; we should do everything according to our own capabilities on the basis of seeking truth from facts. For the research on network information technology assists physical education teaching, it can be carried out in the form of the coexistence of theory and practice under multi levels and angles, and be explored comprehensively and systematically by combining the multi-disciplinary research. In practice, there should be a comprehensive range of exploration about information technology assists teaching models and measures of physical education from the perspective of social responsibility.

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