

Research on Information Technology Application in College Physical Education

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Abstract—With the ever-accelerated development of social productive forces and continuous promotion of informationization, talent culturing attitudes are changing accordingly. Society needs the talents with widely-ranged theoretical knowledge and relatively professional talents. Therefore, the traditional single college function and teaching system could not adapt to the needs of social development any longer, and even falls behind the development of other disciplines, and its education functions need to be strengthened. On the basis of "teaching the existing knowledge", the college's physical teaching should focus on culturing the students' abilities for finding, analyzing and solving problems. So that the students could know the solutions to the problem, and the teaching method also informs the students the method to find the solution, and provide information technology environment for students to get the desired knowledge easily. Fully applying the information technology and actively performing the network teaching in college physical education are good ways for improve the quality-oriented education and health education, and it will make outstanding contributions for fostering the talents for information age.

Keywords—*information technology; application; college physical education*

I. INTRODUCTION

Currently the network has spread to all the colleges and the information technology are widely applied to college teaching field as a modern teaching method. Information technology teaching method is a modern teaching method different from the traditional ones and more comprehensively and profoundly impacts the higher education, which will lead a revolutionary change to the field of higher education. This change is motivated by the application of information technology; it would make education a great expression for the personal study will of the education subject. As the breakthrough and the high ground of deepening the education reform, education technology is playing an increasingly important role; it's a major strategy world education reform and development to make educational informationization driving the education modernization. Despite China's educational informationization started a little late, but there is a significant development in the last eight years. Since 2000, we launched a series of policies and initiatives designed to further promote the educational informationization, deepen the education reform and achieve outstanding leap forward development of education. Under the promotion of policies, initiatives and projects for educational informationization, the government put a lot of manpower, materials and financial resources to purchase equipments, build network, train teachers and develop software, and other

disciplines try and explore new education and teaching model under the information technology environment. As an education process, physical education has common with other disciplines, it's the bilateral activities to learn the indirect knowledge with purpose, plan and organization, and realizes the teaching and learning target under the guidance of teachers. The difference is also exists, it's primarily learn and master the subject knowledge and skills through the ideological activities taught by teachers, and the physical education is based on students and teachers' thinking activities, which teaches the knowledge, technology, skills in the main means of physical activity, it particularly pays attention to "learning" in "do", "learning" in "practice", which fully embodies the student-oriented thinking. Physical education is an important part of university education, and university physical education is the final stage of the physical education. Comparing with other disciplines exploring information technology and rapid development of curriculum integration and education resources construction, researches on guiding modern information technology in college physical education application seems a little lagged and relatively weak, impact of teaching and learning research model under informationization environment, teaching design theory and methods under networking environment, the impact of network media on the traditional college physical education, analysis and comparison of physical education informationization development at home and abroad, theory and methods for modern distance education are still lack of systematic and in-depth study.

This study takes normal college physical education goals as the starting point, under the quality-oriented education with slogan of "life-long physic" and "health first", combining the experience in physical education technology theory and practical research, focusing the special nature of university physical education is the final stage of the physical education, we made general survey on college teachers and students to understand their cognitive level, needs and perceptions about information technology application in physical education and grasp the models, wholly promote the information technology applied in the college physical education, further enhance the teaching function of the system, optimize the teaching content, rich teaching activity patterns, change the traditional teaching concepts, optimize teaching process, foster students self-learning, improve and enhance student learning effect, explore various effective ways and means for information technology application in college physical education, summarize the effective model of information technology applied in college physical education, which could be used as reference.

II. APPLICATION ADVANTAGES OF INFORMATION TECHNOLOGY IN COLLEGE PHYSICAL EDUCATION

Under the information technology environment, information technology applications in physical education means to apply the information technology in practice activities, so as to better complete the course objectives, it combines the information technology, information resources, information methods, teacher resources and curriculum contents together in the process of curriculum teaching, so as to accomplish the teaching task, which is a new teaching method. The information technology applications in the physical education emphasize to use information technology to serve the curriculum; emphasize information technology application in education; emphasize that it's should try to find areas in which information technology could enhance the learner's training effect, inform the students the life-long physical education, and promote the development of overall quality, which is the goal of information technology applications in college physical education.

The teaching contents and methods under the information technology environment could be integrated in the physical teaching course process, so as to achieve brand new higher teaching goal and obtain the optimal results, its meaning is very profound. Firstly, it should change the traditional teaching methods. The teachers could perform action explanation and demonstration in teaching through the multimedia teaching, which could present a visual and audible teaching material, it's could repeat the important and difficult teaching contents willingly with a particular sound and image display, the teaching content development and change process with simulation, visualization, realistic approach could be shown in the teaching process, break the limitation of time and space, highlight the important and difficult teaching points for students in a visual, active, three-dimensional, comprehensive style, so as to improve the teaching effectiveness greatly. Visibly, the modern information technology applications in physical education is certainly in a timely manner, it not only enables the students to learn the knowledge, reduces the cognitive process, but also learns techniques to enhance the understanding, memory and grasp of the learned technical movements, which may develop their abilities to think, observe and learn, so as to achieve teaching process optimization and improve the information efficiency of class teaching, the method could give full play to the teaching structure of "teacher leading, student learning".

Secondly, stimulate the student interest in learning and mobilize the learning enthusiasm of students. The traditional physical education is always demonstrated by the teacher and learned by the students singly, this teaching model has been so dull, and the teaching method applying multimedia is quite different. Students are facing a computer with a mystery world, the computer integrates the text, sound, pictures, video for multimedia technology in new vivid forms with colorful resources, scenes, etc., which has been far beyond the physical teachers' explanations and demonstrations. Students are spirited with interest all through the teach process, not only active in the classroom atmosphere to stimulate the students a strong interest in learning, but also greatly mobilize the enthusiasm of students to actively participate. This lively teaching methods overcomes the previously language-based teaching and normal

demonstration, the new method creates a good teaching environment and promotes the quality and ability of students.

Thirdly, it is conducive to the implementation of various teaching modes. The teaching model should be in a certain teaching ideas, teaching theory under the guidance of teaching practice. Based on the rich teaching practice, it classifies specific teaching objectives and teaching mission with a stable and simple teaching structure theoretical framework, and specific operational practice teaching procedures and methods. Today's information technology has independent learning, active exploration, cooperation, communication and other advantages, various teaching modes could be performed with high-quality implementation through the multimedia and network technology. The modern teaching philosophy emphasizes student-oriented and gives full play to the strengths of students, however, the traditional teaching model does not focus on the strengths of students except uniformly teaching; physical education model requires to mobilize the interest of students, and request the teachers making effort in the teaching, so as to achieve the desired results through the efforts of students, and create a pleasant emotional experience, it could meet the need, in order to stimulate students to actively participate in the activities with their interested information, and develop their own abilities; modern education has formed a new education model: teaching the knowledge → fostering the ability → develop innovative capacity.

Fourthly, it helps to overcome the teachers' own limitations and improves the teaching effectiveness. Teachers in the information age should have the ability to do the demonstration rather than powerless, they may personally avoid difficult moves, such as the vacant, high-speed, high flip contained in the in physical education materials, such difficult technical movements are almost impossible to be seen clearly for the students if completed in a moment, it would be difficult for them to establish a complete representation in mind for these quick movements. However, the introduction of multimedia courseware can make up the shortcomings or conditions, so as to lay a solid foundation for the overall development of students.

Of course, everything including the technologies could be divided into two, there are merits and shortcomings. During our tennis teaching experiment, there are also significant shortcomings. Any room, multimedia classroom, it has limited space, so there is no enough space for student activities. The physical education practices still needs real space and time for classroom teaching practice, the students could learn the technology and develop the capacity only through repeated practice.

III. TEACHING FACTOR ANALYSIS FOR INFORMATION TECHNOLOGY APPLICATION IN COLLEGE PHYSICAL EDUCATION

The information technology applications in the college information takes teacher's "teaching" as the center of the teaching model, teachers and students involved in a teaching mode of "learning and teaching". A complete classroom teaching system is composed of four parts such as teachers, students, teaching materials, teaching media, according to the system theory view, these four elements are not in isolation, simply mixed state, but interrelated, interacting organic form. In

the specific teaching course, they showed a complex and close relationship.

The information technology applications in education continue to impact on teachers and meet the challenges; teachers are the key elements of the new technology. We could only continue to improve the information teachers in this area, in order to adapt the literacy education development. When facing the information technology application in education represented by multimedia, computer network, large number of teachers lack psychological preparation and understanding errors, which are mainly shown in the following three aspects:

Firstly, the mystery feeling. Since multi-media and computer networks are an emerging technology, some teachers, especially older teachers, do not understand its many features, their produce a sense of mystery to computers and networks, which results that it's difficult to master and use this technology due to non-computer professionals. In fact, but we know, any mature technology, especially more advanced technology, will become more humane, intelligent for the users.

Secondly, skepticism attitude. Over the years, we have lots of information teachers accustomed to working with their own teaching theory and methods, that is, teachers teaching and students learning the skills taught in the traditional teaching methods, they use even skeptical attitude on whether the students could complete the teaching task specified in multimedia computers and network courseware, or whether the students can meet the teaching requirements in case of lack of knowledge,. The concepts shall be changed; the teacher should learn how to develop with the step of the development of the era.

Thirdly, the fear of hardship. Due to our extensive pre-service teachers, the information and cultural knowledge foundation are relatively weak, the general lack of information technology knowledge and skills of information technology make a psychological fear of difficulty, which led them to teach little or without using modern education technology, and it can not recognize the role and importance of information technology in education, which could not understand the convenience given by information technology to the teaching activities.

From the above three aspects, we can see that the current teacher information technology status has been the major obstacle on deepening the reform of physical education and improve the quality of teachers is imperative. Therefore, the major teachers should enhance their modern education and technology knowledge, especially the information technology training is necessary.

IV. PROBLEMS AND SOLUTIONS OF INFORMATION TECHNOLOGY APPLICATION IN COLLEGE PHYSICAL EDUCATION

The information technology application in the field of college physical education is a gradual process. It is necessary inject new vigor and vitality to the physical education, while inevitably the college information education system will meet new demands and challenges.

As the information technology application in college physical education faces difficult problems in practice, the questionnaire includes the following two aspects: information

on information technology application in teaching physical education recognition degree; and information literacy of physical teachers.

The college information of teachers on the networking skills includes the Internet information services, e-mail, and information search and downloads the general lack of skills, etc., only 37.39% of teachers use the Internet to search, inquiry, download information. With the construction of the network environment, more and more college teachers keep developing in this area to improve quality education, so as to adapt to the development needs; otherwise, it is very difficult to keep the pace of network education.

Through the investigation we also learned that teachers will apply information technology in the information classroom teaching and face a number of software and hardware problems, only 18.26% of the teachers will be information technology application in the real classroom teaching in the actual work. This figure is very low compared to other subjects, the reasons are: there is no matching teaching content of teaching courseware, college conditions, lack of effective classification of information resources, lack of adequate information on resources and other external environmental factors; so that the teacher had to face the urgent need to improve the overall quality of this urgent problem, not only a lot of training opportunities in a range of issues.

Technology support shall be the premise of successful teaching application, in terms of courseware for physical education is much less comparing with and other disciplines, which gives teachers great inconvenience. If the teachers take too much time and energy to design their own, this makes teachers heavy teaching tasks of modern education techniques and can not take into account in physical education in the application.

To strengthen the campus network infrastructure continuously, gradually increase the popularity of the Internet level, bridging the digital divide. Technologically advanced full-featured network infrastructure is the development of the Internet, and we should promote the information technology applications on the basis of information materials. Current information technology development is quickly developing, and the technical integration, business integration, network integration are increasingly evident. We must strengthen the technical, operational and network research and explore the introduction of the trend. Optimize the network structure, improve network performance, meet the information needs of university students' information network platform, and establish the necessary mechanisms to reduce the information and the various disciplines, decrease the differences between the various groups to promote the college physical education reform. On your CD, please indicate the format and word processor used. Please also provide your phone number, fax number and e-mail address for rapid communication with the publisher. Please always send your CD along with a hard copy that must match the CD's content exactly. If you follow the foregoing, your paper will conform to the requirements of the publisher and facilitate a problem-free publication process.

V. CONCLUSION

On the basis of "teaching the existing knowledge", the college's physical teaching should focus on culturing the students' abilities for finding, analyzing and solving problems. So that the students could know the solutions to the problem, and the teaching method also informs the students the method to find the solution, and provide information technology environment for students to get the desired knowledge easily. Fully applying the information technology and actively performing the network teaching in college physical education are good ways for improve the quality-oriented education and health education, and it will make outstanding contributions for fostering the talents for information age.

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