

Research on the Optimum Design of College Physical Education Teaching Contents for the Improvement of College Students' Health-Related Physical Fitness

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Abstract. Health is the goal of physical education curriculum teaching, in recent years, people pay more and more attention to university physical education curriculum, and the reform of physical education curriculum in colleges and universities is also steadily advancing. College physical education curriculum not only exercises the physical quality of students, but also makes them maintain a positive attitude towards life, develops students' divergent thinking, thus achieving their all-round development. Implementing health-related physical fitness curriculum can effectively improve the health level and health management ability of college students. Studying the teaching of physical fitness curriculum in colleges and universities, in allusion to the psychological and physiological characteristics of college students, creating a novel physical fitness teaching content design, and make it play a role in improving students' physical health and achieve all-round development. Health fitness is an effective health promotion model; which conforms to the "people-oriented" education thought and idea of colleges and universities, and the social development trend. Based on the analysis of the current situation of college physical education teaching, this paper proposes the optimal design of college physical education teaching contents based on health-related physical fitness.

Keywords: health-related physical fitness, physical education, teaching design.

1. Introduction

College students are the builders of future development of motherland, and their physical quality determines their own value in future social development, we should guide them to achieve all-round development, physical education is a very important link of it. Based on the analysis of relevant data in recent years, the physical quality of domestic college students has shown a downward trend year by year, which further shows the importance of physical education curriculum. The level of students' physical fitness will directly affect their future development, and physical fitness course is applied in the reform of physical education curriculum, which conforms to the overall development trend of college physical education. This paper introduces the physical fitness into the physical education teaching in colleges and universities, hopes to improve the physical quality of contemporary college students through health-related physical fitness teaching, enhance their physique, and provide a healthy guarantee for college students to adapt to society and promote social development.

2. The Concept and Characteristics of Health-related Physical Fitness

The "physical fitness" was first proposed by American scientists, in a broad sense, it refers to the ability of the human body adapting to the external environment, and it is another extension of people's concept for health. According to the different influences of physical fitness on exercise, we divide it into health-related physical fitness and skill-related physical fitness. Health-related physical fitness is the closest physical fitness to human health; it is the ability of the cardiovascular, lung and muscle to exert optimal efficiency. Health-related physical fitness is the physical fitness that most people seek to promote their health, prevent diseases and improve their daily work and learning efficiency, for college students, what they need most is health-related physical fitness.

The characteristics of health-related physical fitness mainly include three parts: education, practice and lifelong. First, education, the knowledge involved in physical fitness education is the common problem among students in daily life and sports, the concept of health-related physical fitness teaches

coping strategies by scientific means. By learning and mastering these basic common senses, if students encounter similar problems in their later life, they can more steadily and calmly deal with these problems; therefore, it has educational characteristics. Its education and traditional sports teaching concepts complement each other; it enhances the scientific nature of traditional physical education teaching concepts and highlights the humanized nature of college physical education teaching. Second, practice, health-related physical fitness education focuses on cultivating students' practice, so that they can apply the learned knowledge and skills to daily exercise, it emphasizes the process of participating in sports activities, rather than blindly advocating the guidance of sports skills. In this process, students not only learn sports knowledge, but also improve their physical fitness level. Finally, through these correct fitness instructions, students can scientifically and actively participate in sports, so that they can have a better understanding for lifelong sports, and thus developing a good habit of lifelong exercise.

3. Current Status of College Physical Education

3.1 Old Teaching Concept of University Physical Education

The traditional teaching concept of physical education has been unable to meet the students' growing needs for physical exercise; the main reason is that the concept of physical education is relatively old. Due to the problems in physical education concept, curriculum, teaching methods and teaching organization, the textbooks are relatively old in contents and cannot instruct students to develop correct fitness awareness. Especially the obsolescence of sports concept has made it difficult to cultivate the reform goal of lifelong sports concept for college students, this problem is an issue that needs to be improved in college physical education. Therefore, the college physical education teaching in our country should change the traditional teaching method, according to different training objectives, different teaching methods are used to different teaching methods are used to improve fitness awareness and physical health level of college students.

3.2 Single Teaching Contents

At present, college physical education focuses on physical training and skillful practice; the teaching venues are mostly football field, basketball courts and playground, mainly are outdoor activities, however, it lacks due attention to the basic theoretical knowledge.. Therefore, the sports skills mastered by college students are mainly based on imitating the demonstration movements of teachers, they lack grasp of the essentials and details of the movements, which makes the whole training process full of blindness, the training efficiency is greatly reduced, and the teaching effect is greatly reduced. The basic theoretical knowledge in college physical education is highly instructive for mastery of skills, on the basis of understanding the mastery and action norms, students carry out targeted exercises, it will greatly benefit teaching effectiveness and training effect.

3.3 Unreasonable Curriculum Settings

The syllabus used in college physical education teaching has always attached importance to social values and neglected the students' personality; the college physical education teaching is too unified and standardized, so that physical education teaching is not based on the goal of talent training. The teaching forms of college physical education are relatively simple, the teaching contents are relatively old, and the course structure is relatively simple, and the teaching methods are relatively monotonous, it causes the stylization of classroom teaching, which hampers the thinking of college physical education teachers, it impossible for college students to participate in sports learning activities. Although some emerging sports are now put into the physical education materials, but because the current physical education teaching staff is not enough, there are fewer courses available, so the physical education classes generally stay in the ball, track and field, aerobics and other projects, most of the students have touched these projects since childhood, which makes students lose interest in learning, reduces students' attention to physical education classes, and it is difficult to stimulate

students' interest in learning sports, college students can't agree with the physical education model, which affects the quality of physical education.

3.4 Imperfect Sports Assessment System

The assessment of college physical education classes is still affected by the spoon-fed education, in sports evaluation; it is still based on athletic ability and competitive sports as the standard, this assessment mechanism does not consider the personality of students, and requires students to pursue the scores unilaterally, make each student must meet the standards in the assessment project, the choice of students is limited in the assessment, it is not conducive to the healthy development of college physical teaching. In the evaluation mechanism, there must be quantitative evaluation, each student should implement different evaluation mechanisms, and the scientific orientation should be used to evaluate the examination, so that students can develop in teaching evaluation.

4. The Necessity of Introducing Health-related Physical Fitness into the Physical Education Curriculum in Colleges and Universities

School physical education is an important part of education, which is the foundation of national sports, and an important indicator for cultivating social composite talents. The school's physical fitness curriculum is mainly based on physical exercise, emphasize adaptation and moderation, its main teaching content is to impart the basic knowledge, basic skills of health-related physical fitness, improve students' ability to participate in sports practice, cultivate students' healthy sports lifestyle, promote students' physical and mental health, improve their social adaptability, contribute to social development, and promote the development of mass sports.

The physical education curriculum in colleges and universities has established many teaching objectives; it does not only develop the physical quality of students, but also teach healthy lifestyles, attitudes and behaviors, so as to achieve the purpose of lifelong exercise. The health-related physical fitness highlights "health first" guiding principle, and closely links health and physical education. It is a comprehensive application of multidisciplinary knowledge. Scientific physical education curriculum is conducive to develop students' sports interests and hobbies.

Considering the revision and supplement of the guiding ideology of physical education curriculum, teachers should change the old teaching guidance ideology, rethink past teaching methods and modes, continuously improve knowledge level, explore more advanced teaching methods, actively complete teaching tasks and meet the various fitness needs of students. Physical fitness courses are first divided into classified teaching modes to break students' fear of physical education, make students re-recognize physical education is a way to obtain health, recognize and learn healthy resources, master certain modern sports knowledge and certain sports skills.

5. Optimization Design of College Physical Education Teaching Contents based on Health-related Physical Fitness

5.1 Theory Curriculum of Health-Related Physical Fitness

Conduct health education curriculum, introduce the impact of sports on individual health, pay attention to their own health, and conduct self-obligation supervision, introduce the common injuries during exercise; understand the classification of injuries and the prevention and treatment of injuries, explain the knowledge and skills of health massage and the principles of sports training, promote the overall development of physical fitness through different training principles. Draw up exercise plan according to own characteristics.

5.2 Practice Curriculum of Health-Related Physical Fitness

A complete practice class consists of preparation activities, basic part and end part. The preparation activities are to gradually move the body from a quiet state into a motion state, and gradually adapt

to the movement of the training part with greater exercise intensity, avoid cardiovascular, respiratory and other internal organs suddenly experiencing large exercise loads to cause accident, avoid muscle strain, ligament rupture, joint pain and injury of other moving organs. In the warming-up exercise, aerobic exercise and stretching exercise with less exercise intensity can be used, and the time is allocated for 10-15 min. The basic part is the main content of classroom teaching; the basic part includes sports content, exercise intensity and exercise time. The health-related physical fitness not only includes the basic teaching of physical education, In addition to imparting athletic skills and motor skills to students, according to the theoretical knowledge of health-related physical fitness, purposefully arrange physical quality exercises, gradually improve students' aerobic fitness, muscle strength, muscle endurance, flexibility and so on. The end part is mainly to avoid the adverse symptoms of the cardiovascular system and respiratory system caused by sudden stop of exercise. The commonly used activities include relaxation running, slow walking, relaxing gymnastics, self-massage, etc., the time for activities is generally about 5 minutes.

5.3 Exercise Ways for Health-related Physical Fitness

- (1) Exercise frequency: 3 to 5 days per week.
- (2) Exercise intensity: control range of exercise heart rate: 120-160 times/min, maximum heart rate= $220-\text{age}$. The exercise intensity is about 60% to 80% of maximum heart rate, and the metabolic intensity is medium.
- (3) Exercise time: 60 min, preparation part 10 min, basic part 40 min and end part 10 min.
- (4) Movement mode: long-term and regular exercise, such as jogging, cycling, swimming, etc.
- (5) How to conduct exercise: training needs advance gradually in due order, preparation activities need to be done adequately, and stretching after training is more important.
- (6) Exercise method: combined equipment strength training, training methods of upper limb strength include push-up, pull-ups, etc.; training methods of core area strength include flat support timing, abdominal back muscle exercises, etc.; lower limb strength training methods include leapfrog, deep squat, etc.
- (7) Load and number of repetitions: it is recommended that each group has 8 to 12 repetitions.
- (8) Points for attention: prevent excessive fatigue, do not suffocate for a long time, exercise and breath have a certain rhythm, and the exercise order is from large muscle groups to small muscle groups to waist and abdomen, etc.

6. Conclusion

The teaching of health-related physical fitness curriculum is beneficial for students to enhance heart and lung function, improve body quality, improve immunity, enhance the adaptability of organisms, and psychologically adjust students' learning pressure, and maintain a healthy mentality, thereby enhancing self-confidence, guide students to form a healthy lifestyle and exercise independently, and promote the healthy development of students' mind and body.

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References

- [1]. Wang Yali. The U.S. Model of Health-related Physical Fitness Programs in Our Colleges and Universities, Experimental Study[J], Sports & Science, 2010, 31(1), pp.104-108.

- [2]. Li Han, Wang Xiaozan. Physical Fitness Curriculum Theory Research in Primary and Secondary School Based on the Cognitive[J], Journal of Physical Education Institute of Shanxi Teachers University, 2011, 26(5), pp.56-59.
- [3]. Zhang Chunhua, Chen Peijie. Practice and Consideration of Construction of Course in "Theory and Method of Evaluating Physical Adaptive Ability"[J], Journal of Shanghai University of Sport, 2007, 31(2), pp.88-90.
- [4]. Wang Xiaodong, Research on Improving the Sub-health Status of College Students by Physical Fitness Courses[J], Blooming Season, 2015, (8), p.268.
- [5]. Wu Zhaoxing. The Status Quo of Physical Fitness Development and Its Influence on the Teaching Reform of Physical Education Curriculum in China[J], Science and Technology Innovation Herald, 2009, (32), p.164.
- [6]. Lai Jinsong. Research on the Application of Physical Fitness Training" in University Physical Education Curriculum[J], Journal of Langfang Teachers University (Natural Science Edition), 2015, 15(2), pp.96-99.
- [7]. FeiWeina, Zhang Zizhi. Initial Research on Teaching Mode Innovation of College P.E. and Healthy Education Curriculum under the Ideology of Physical Fitness, Journal of Shaanxi Institute of Education, 2009, 25 (3), pp.105-108.