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Research on the Cultivation of Students' Innovative Ability in Physical Education Teaching in Colleges and Universities Under the Environment of Information Technology

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Abstract: In college physical education teaching, how to cultivate students' innovative ability has become a new topic of higher education. Review the current situation of physical education teaching in colleges and universities, examine its existing problems in cultivating students' innovative ability, and on this basis, research and cultivate students' innovative ability. The method of cultivating students' innovative ability is explored in terms of college physical education teaching objectives, classroom structure, teaching content, teaching means, teaching methods, competitions inside and outside the class, extracurricular activities, and teaching staff.

Keywords: innovative ability, physical education teaching, information technology

1. INTRODUCTION

In today's world, the development of science and technology is advancing by leaps and bounds, and the era of knowledge economy is coming quietly, and it is changing human society and people's way of life and thinking with great power. Knowledge innovation, technology innovation, management innovation, system innovation and concept innovation have become a huge driving force for promoting social progress. On the premise of adhering to educational innovation and deepening educational reform, the development of school physical education needs more innovation. By updating concepts, adjusting structure, creating environment, paying attention to students' mental health, cultivating students' creative thinking, and cultivating high-quality and high-level creative talents for social development.

Ability refers to the psychological characteristics that are necessary for a person to successfully complete a certain activity and directly affect the efficiency of the activity. A person's ability is always formed and developed in activities and is expressed in activities. In addition, ability is a prerequisite for a person to successfully complete a certain activity, and the strength of ability determines the efficiency of an activity. At present, many physical education teaching methods in colleges and universities still stay in the simple teaching of sports technology and basic skills mastering, ignoring the improvement of students' quality and related abilities. The teaching content is outdated, and the teaching method lacks systematization. Teaching content is the key to achieve training goals and improve the quality of talents.

Our country's school physical education ignores the individual differences of students, lacks pertinence, does not match the current quality education, and seriously affects students' innovative ability. Nowadays, cultivating students' innovation ability in colleges and universities is the guiding ideology that requires the transformation from the previous skill education to the development of basic activity ability. Innovation ability not only requires students to complete imitative exercises, but also requires students to generate new ideas in the process of

practice, so that students can give full play to their creative potential, to further cultivate and stimulate creative thinking. Quality education attaches great importance to the development of students' intellectual potential, and never regards students as receivers of knowledge. Therefore, without the cultivation and development of innovative ability, there cannot be quality education in the true sense. Cultivating students' innovative ability is the core of quality education, and it is also the need for talents in the future development of social knowledge economy.

The traditional college physical education teaching structure emphasizes the dominant position of teachers in teaching, and students are passively receiving signal education in the learning process, ignoring the importance of students' innovative ability, intelligence, and non-intellectual factors (motivation, interest, emotion, will) in learning. The teaching method mostly adopts a single mode of "explaining—emonstrating—practicing—correcting mistakes—consolidating and improving", which limits the cultivation of students' initiative and innovative ability. The reform of physical education teaching in colleges and universities should pay attention to the innovation of classroom teaching structure and teaching methods. Classroom teaching is the main channel to cultivate students' innovative ability, and the reform of teaching methods is the key to cultivating students' innovative spirit and ability.

2. THE PROPOSED METHODOLOGY2.1 The Basic Methods and Ways of Cultivating Students' Creative Ability

For many years, physical education in my country has been mainly taught by teachers to students by word of mouth, while students obeyed the teacher's orders and did not dare to go beyond the rules, forming a stereotyped "explain-demonstrate-drill-correct-re-practice" model. Some people Call it "cramming" teaching. The theoretical knowledge and skills taught in such old-fashioned teaching are far away from physical practice. How can this kind of teaching motivate

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students to learn? Students live in the "frame" set by the teacher all day long, facing outdated ideas and backwardness. From the point of view, how can students talk about innovation in such an environment? The main body of cultivating innovation ability is students, and the active thinking of students depends on their interest in teaching materials and learning and practice process, and on the active participation of students. Teachers should creatively create a relaxed, harmonious, and democratic teaching atmosphere, change the role of the main body, adjust the position of teaching and learning, and provide students with a good learning environment.

Teachers are role models for students to learn, and teachers' innovative thinking has strong inspiration and promotion for students. Therefore, to cultivate students' innovative ability in physical education, teachers must first become a person full of personality and innovative spirit. In classroom teaching, it focuses on stimulating students' imagination, encouraging emotional investment, allowing students to boldly innovate assumptions, and at the same time focusing on cultivating students' creativity and innovation consciousness. The development of students' innovative habits is inseparable from practical activities again and again, and there should be no excessive interference and premature judgment during teaching. Students' innovative thinking is gradually developed in the process of continuous trial and continuous correction. Continuous accumulation can stimulate students' fun of exploration and emotional experience of success or failure. Einstein once said: "Imagination is more important than knowledge".

Imagination is the most dynamic aspect of thinking activities. It is conducive to breaking the stereotype of thinking and opening a new world. It is an important factor in cultivating students' innovative ability. Therefore, teachers should pay attention to combining the characteristics of physical education in teaching and adopt different methods to cultivate students' imagination. Teachers can design scenarios to enrich students' imagination and create good conditions for the development of imagination; they can also develop students' curiosity and a wide range of hobbies, and gradually open the door to imagination, thereby developing students' imagination. Divergent thinking is the innovation of students the main components of ability, but the teaching of divergent thinking methods cannot be explained clearly in a few minutes in the warm-up activities.

Divergent thinking and creative personality are only two main aspects of innovation ability, and the role of other factors of innovation ability in physical education teaching cannot be ignored. Only by choosing a special time to explain in a targeted manner can it be possible for students to master it better. In 1992, the state education commission promulgated the "national ordinary colleges and universities physical education curriculum teaching guidelines", which stipulates that the hours of physical education theory in ordinary colleges and universities should not be less than 12% of the total hours. Excavating the creative factors in teaching materials, from the perspective of cultivating students' innovation, inducing students' innovative thinking, innovative consciousness, and innovative ability, and laying a solid foundation for innovation.

2.2 Strategies to Cultivate Students' Innovative Ability

Teachers should guide students to question boldly, encourage them to seek differences, inspire students' divergent thinking,

inspire students' association and imagination, break through the shackles of traditional concepts that teachers teach and students learn, and give students space to create, imagine, and think. The so-called reverse thinking is to think about problems from the opposite angle to conventional thinking. Most inventors like to look at problems from a unique perspective and have the habit of reverse thinking and divergent thinking. They do not play cards according to common sense, and their ideas seem strange or even ridiculous to ordinary people. However, it has been proved that many inventions and creations are produced according to reverse thinking. In physical education teaching, we can also cultivate the habit of reverse thinking as a breakthrough point to introduce teaching, to achieve the effect of winning by surprise. For example: when teaching the back-style high jump, you can teach the students to cross the pole first, and then teach the run-up to take off.

Because the students are most impressed by the teacher's "moving over the pole" and are eager to try, the teacher seizes this opportunity to make the best use of the situation to teach, and it is easy to obtain the best teaching effect. In physical education teaching, we should completely break the routine, emancipate the mind, respect the individual rights, and wishes of students, maintain personality equality with students, and strive to form a good teaching-learning relationship between teachers and students, so that students can learn in an independent and harmonious classroom atmosphere. Carry out physical exercise in the middle of the day, truly stimulate students' interest in sports, make students feel satisfied and fulfilled, gradually form a love for sports, establish a healthy thought of lifelong sports, and develop the habit of lifelong exercise. The concept innovation of college physical education teachers is the premise of cultivating students' innovative ability.

Physical education teachers should regard innovative education as the core of physical education teaching and strengthen the study and research of modern educational theories. Renew the concept, change from teacher-oriented to student-oriented, from "teacher" to "educator", the knowledge structure and ability structure of college physical education teachers should be continuously improved and updated, cultivate students' innovative ability, and stimulate students' curiosity desire and desire to create, guide students to associate, imagine and innovate. Divergent thinking refers to the way of thinking that solves the same problem and strives to conceive from different angles, find different solutions, explore multiple answers, and finally solve the problem satisfactorily. In physical education, teachers should train students' ability to diverge thinking purposefully and in a planned way.

Teachers can cultivate students' divergent thinking by creating problem situations and asking questions. For example, when teaching slam dunk techniques, teachers can ask students: What are the ways to slam dunk? Inspire students to discuss boldly, express their opinions, and let them think about and solve this problem based on their usual experience accumulation. In physical education teaching, we must have a sense of innovation, actively introduce new teaching content, explore new teaching methods, reform the traditional injection teaching methods and corresponding examination methods, implement heuristic and discussion teaching methods, and encourage students to think independently. In the preparation part of the class, students take turns to organize preparation activities to cultivate students' creative and organizational skills. In terms of teaching content and methods, students are

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encouraged to speak and debate in the classroom, and ideas, methods and means such as learning-guiding sports, discovery sports, happy sports, and life-long sports are introduced into the classroom, which not only enriches the teaching content, but also develops students Think and create imagination.

3. CONCLUSION

The new concept of physical education teaching innovation is not only a breakthrough and transcendence of traditional physical education teaching, but also an inheritance and promotion of the innovative essence of traditional physical education teaching. The purpose of higher education is to cultivate talents, especially creative talents, and physical education is no exception. In the process of realizing this innovative goal, all physical education teachers need to establish a strong innovative concept, fully coordinate various factors in teaching, and create a democratic atmosphere. Innovation can bring fresh vitality to physical education teaching, and it is of great significance to comprehensively improve the comprehensive quality of students. Cultivating and cultivating many innovative talents is the new historical mission of school physical education, and it is the new historical mission of every college physical education. The unshrinkable duties and obligations of teachers.

4. REFERENCES

- [1] Jiang Di. Research on the method of cultivating students' innovative ability in college physical education teaching [J]. Journal of Nanjing Institute of Physical Education (Social Science Edition), 2006, 20(003):85-87.DOI:10.3969/j.issn. 1008-1909.2006.03.026.
- [2] Ling Yuehong, Wei Shihai. Research on Cultivating Students' Innovative Ability in College Physical Education Teaching [J]. Hubei Sports Science and Technology, 2003, 22(4):3.DOI:10.3969/j.issn.1003-983X.2003.04.055.
- [3] Liu Congmei. Research on the teaching mode of "independence-cooperation-creation and innovation" in college sports under the background of "Internet +" [J]. Chongqing and the World, 2016(46):3.DOI:CNKI:SUN:CSXS.0.2016-12 -040.
- [4] Zhao Xinmin. Research on "multi-dimensional, digital" teaching of college physical education under the background of "integration of sports and education" in the new era [J]. Sports Science and Technology Literature Bulletin, 2022, 30(1):5.

- [5] Ji Yatai. Experimental research on the application of the "four-link" teaching model in the public sports football class of colleges and universities in Inner Mongolia [D]. Inner Mongolia Normal University, 2014.
- [6] Li Pei, Ye Qiang, Yang Chen. Teaching reform and exploration of sports virtual simulation experiments under the perspective of sports and medical integration [C]//The Eleventh National Sports Science Conference.0[2023-06-17].
- Jiang Di. Research on the method of cultivating students' innovative ability in college physical education teaching
 Journal of Nanjing Institute of Physical Education:
 Social Science Edition, 2006, 20(3):3.DOI:CNKI:SUN:LJTB.0.2006-03 -025.
- [8] Tang Xiaohe. Research on the combination of high school physical education and information technology [J]. China Educational Technology and Equipment, 2013(28):77-78.DOI:CNKI:SUN:ZJJB.0.2013-28-048.
- [9] Chen Changhong. Research on the Cultivation of Students' Innovative Ability in Junior High School Information Technology Teaching [J]. Digital World, 2018, 000(012): 101. DOI: 10.3969/j.issn.1671-8313.2018.12.098.
- [10] Fan Bo. Research on the cultivation of students' innovative spirit and practical ability in primary school information technology teaching [J].[2023-06-17].
- [11] Liu Chao. Research on the cultivation of students' innovative ability in college physical education teaching
 [J]. Fujian Sports Science and Technology, 2008, 27(2):
 2. DOI: 10.3969/j.issn.1004-8790.2008.02.019.
- [12] Zhang Hua. Experimental Research on Inquiry-based Teaching Mode in Tennis Special Courses in Colleges and Universities under the Background of Information Technology [D]. Southwest University [2023-06-17]. DOI: 10.7666/d.y1882723.
- [13] Li Ling. Research on the application of flipped classroom in college physical education under the environment of information technology [J]. 2021.DOI: 10.12270/j.2095-588X.2021.04.107.
- [14] Zhang Shifeng. Research on the Cultivation of Students' Mathematical Innovation Ability in the Information Technology Environment [J]. Good Parents, 2018(24): 1.

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