

Construction and Practical Exploration of Diversified Curriculum System in Physical Education Teaching in Colleges and Universities

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Abstract: Physical education at the tertiary level plays a crucial role in fostering students' physical and psychological well-being while instilling a lifelong commitment to athletic engagement. However, the prevailing curriculum framework in higher education institutions is often characterized by monotonous content, rigid instructional methodologies, and a lack of individualized training approaches, making it challenging to address the diverse needs of students in physical education. Consequently, establishing a multifaceted and dynamic curriculum system has emerged as a key initiative for enhancing the overall quality of physical education. This study examines the existing structure and limitations of the current college physical education curriculum, explores strategies for developing a diversified system through curriculum content refinement, pedagogical innovation, and assessment system transformation, and evaluates its effectiveness through practical applications. Findings indicate that an enriched and varied curriculum structure significantly boosts students' engagement and enthusiasm in physical education, contributing to their holistic athletic development. The insights presented in this research offer both a conceptual foundation and an applied reference for advancing curricular reforms in higher education physical education, thereby playing a pivotal role in fostering innovation and progress within the field.

Keywords: College Physical Education, Diversified Curriculum System, Teaching Mode, Practice Exploration, Curriculum Reform

1. Introduction

University-level physical education not only undertakes the crucial task of improving students' physical well-being and fostering overall health but also serves as a key avenue for nurturing physical literacy and instilling enduring exercise habits[1]. However, numerous challenges persist within the existing higher education physical education curriculum, including monotonous course content, conventional pedagogical frameworks, inadequate personalized instruction, and a deficiency in innovative practices, making it difficult to accommodate the diverse physical education requirements of students[2]. As societal progress accelerates and educational paradigms evolve, traditional methodologies in physical education instruction have become increasingly inadequate in addressing the developmental demands of modern collegiate physical education.

The establishment of a multifaceted curriculum framework represents a pivotal trajectory for reforming physical education in universities[3]. Through the refinement of curricular content, the reformation of pedagogical methodologies, and the restructuring of assessment mechanisms, the appeal and efficacy of physical education courses can be significantly elevated, aligning more closely with students' interests and developmental aspirations[4]. Various higher education institutions, both domestically and internationally, have embarked on initiatives to cultivate a diversified physical education curriculum, including the integration of specialized sports courses, the adoption of hybrid online-offline teaching models, and the enhancement of practical course applications. While these explorations have yielded promising outcomes, further in-depth research and refinements remain necessary[5].

Grounded in an examination of the prevailing landscape of university physical education curricula, this study investigates strategic approaches for constructing a diversified curriculum system, emphasizing course content enhancement, instructional innovation, and evaluative framework reform[6]. Additionally, the study assesses the practical efficacy of these strategies through case studies. The

findings aim to furnish a theoretical underpinning and practical insights for advancing physical education curriculum reforms in higher education, contributing to the continuous refinement and innovative evolution of collegiate physical education systems.

2. Analysis of the current situation of physical education curriculum system in colleges and universities

Physical education in colleges and universities plays an important role in cultivating students' health consciousness, enhancing physical fitness and improving sports skills[7]. The current physical education curriculum system in colleges and universities is still based on the traditional model, with many limitations, which makes it difficult to fully meet the individual needs of students. The reform and innovation of the curriculum system has become an important task for the development of physical education in colleges and universities[8].

First of all, the traditional college physical education curriculum system is mainly based on the unified compulsory courses, and the course content is relatively fixed and lacks diversity[9]. Most colleges and universities still use the traditional track and field, basketball, soccer, volleyball and other basic sports, failing to fully combine the development trend of modern society and students' interests and needs. This monotonous curriculum design leads to a lack of interest in sports among some students, which affects the effect of physical education teaching.

Secondly, the current physical education teaching mode is relatively traditional, based on teachers' lectures and skill training, lacking interactivity and innovation[10]. Some colleges and universities have introduced elective courses, but the overall teacher-led, passive students to accept the way of teaching, failing to fully mobilize students' independent learning enthusiasm. The assessment method of physical education courses is relatively single, mainly based on physical fitness test and skill assessment, ignoring the long-term cultivation of students' sports habits and healthy development.

There are also notable challenges in the allocation of resources for physical education in higher education institutions. Issues such as insufficient infrastructure, including inadequate stadium facilities and sports equipment, hinder the effective implementation of diversified course offerings. Additionally, the limited number of professional physical education instructors, coupled with outdated pedagogical approaches among some educators, further constrains the depth of curriculum reform. In particular, the digital transformation of physical education and the advancement of smart sports technology remain in their infancy at many universities, with digitalization and personalized course development yet to be widely adopted.

Given these constraints, the current university physical education curriculum system exhibits significant limitations in areas such as course content, instructional methodologies, assessment strategies, and resource distribution. These shortcomings make it difficult to fully align with the evolving physical education demands of students in the modern era. To enhance the overall quality of physical education, it is essential to establish a more diversified, student-centered, and innovative curriculum framework that better caters to the varied interests and developmental needs of students.

2.1 Construction of diversified college physical education curriculum system

To enhance the quality of physical education in colleges and universities and better meet the diverse athletic needs of students, it is essential to create a more flexible, varied, and personalized curriculum system. The development of a diversified physical education curriculum must focus on three key areas: first, optimizing and expanding the curriculum content by broadening the range of sports programs to cater to students at different skill levels; second, innovating the teaching approach by integrating online and offline learning methods to boost student participation and engagement; and third, reforming the evaluation system by introducing a multidimensional assessment model that encourages active student involvement in sports learning and practice. By improving these three aspects, a more scientifically grounded and effective physical education curriculum can be established, thereby enhancing teaching outcomes and fostering the overall development of students.

2.1.1 Optimization and Expansion of Curriculum Content

The optimization and expansion of the college physical education curriculum should prioritize diversification, personalization, and scientific principles to better cater to the interests and needs of students. Traditional college physical education courses predominantly focus on basic programs, such as

athletics and team sports, which serve a broad range of students but struggle to address the increasingly varied interests of modern college students. Therefore, while retaining traditional courses, it is essential to incorporate more engaging, trendy, and fitness-oriented activities like yoga, combat gymnastics, rock climbing, ultimate frisbee, and kayaking to enhance student enthusiasm and diversify physical exercise options.

The design of physical education programs should also consider students' varying physical abilities and athletic backgrounds. Many students struggle with the one-size-fits-all approach to physical education courses due to differing fitness levels or mismatched interests. To address this, a tiered teaching model can be adopted, offering courses at beginner, intermediate, and advanced levels based on students' physical fitness and preferences. Additionally, specialized sports courses, such as swimming training or marathon preparation, should be introduced to provide in-depth teaching and help students develop lasting sports interests and expertise.

Physical education courses should integrate modern fitness concepts and health management content. College physical education should not only focus on developing students' sports skills but also guide them toward a scientific understanding of exercise and a healthy lifestyle. Offering theoretical courses on topics such as sports nutrition, rehabilitation, and physical training methods would allow students to acquire scientific knowledge about fitness while engaging in physical activities, thereby enhancing the educational and practical value of sports programs.

The course content optimization should also leverage modern technologies to promote the digital and intelligent development of physical education. The introduction of virtual reality (VR) and augmented reality (AR) technologies can offer immersive learning experiences that allow students to master sports skills. Additionally, the use of motion sensing equipment and intelligent fitness systems can improve the efficiency and precision of students' exercise routines. By integrating technology, physical education courses can become more engaging, personalized, and effective, ultimately enhancing students' learning experiences and the overall quality of the curriculum.

2.1.2 Innovation and Practice of Teaching Mode

With the development of education informatization and the increase of students' personalized needs, the physical education teaching mode in colleges and universities needs to break through the traditional way of teaching and develop in the direction of diversification, interaction and intelligence. Innovative teaching mode can not only improve students' learning interest and participation, but also enhance the practicability and applicability of physical education courses and build a more efficient learning experience for students.

The development of online-offline integrated teaching mode should be promoted. Traditional physical education teaching mainly relies on offline classrooms, but with the progress of digital technology, the construction and application of online physical education teaching resources has become an important trend. Colleges and universities can utilize online teaching platforms to provide resources such as theoretical knowledge of sports, demonstration videos of sports skills, and health management courses, so that students can learn independently anytime and anywhere. Offline courses can be combined with online teaching content to improve the flexibility and relevance of classroom teaching through interactive training and task-based learning.

Construct an independent learning mode based on personalized needs. There are large differences in the athletic ability and interests of students in colleges and universities, and physical education teaching should encourage students to independently choose their own learning content and training programs. Adopt modularized teaching, divide the physical education curriculum into different sports modules, students can choose to study independently according to their personal needs. Study groups and sports clubs are introduced to enable students to improve their sports skills and develop lifelong sports habits through interaction and communication.

Explore project-based and contextualized teaching methods to improve the practicality and interest of physical education courses. Project-based teaching allows students to carry out in-depth learning around a sports project, such as organizing sprinting technique optimization training, making fitness plans, etc., so that students can master sports skills in practice. Contextual teaching, on the other hand, allows students to experience the fun of sports in a real sports environment through simulated competitions, real-world training, physical challenges, etc., and enhances the immersion and sense of achievement in sports learning.

Make full use of intelligent sports technology to enhance the scientific and data-based management

of sports teaching. Colleges and universities can introduce intelligent sports bracelets, AI sports analysis systems, VR sports simulation and other technologies to provide students with accurate sports data feedback and personalized training advice. AI is used to analyze running postures to help students correct their movements and improve their exercise efficiency. Physical education teachers can monitor students' sports status with the help of intelligent equipment, realize accurate teaching and personalized guidance, and promote the development of college sports courses in the direction of intelligence.

2.1.3 Reform and Improvement of the Evaluation System

The evaluation system in college physical education plays a crucial role in assessing students' learning achievements and encouraging active participation. However, the traditional evaluation model often overemphasizes physical fitness tests and skill assessments, neglecting the development of students' overall qualities and long-term health goals. To better align with the construction of a diversified curriculum system, the evaluation model needs to be reformed to comprehensively reflect students' multifaceted performance in physical education courses.

A more effective evaluation system should combine process evaluation with summative evaluation. Traditional evaluations often rely on final exams that focus on students' fitness levels and skill mastery over a short period, which doesn't reflect the core value of physical education, which is sustained participation and continuous improvement. Therefore, the evaluation system should incorporate process evaluations that track factors such as student engagement, learning attitude, and exercise frequency throughout the semester. This long-term tracking will offer a more comprehensive view of students' progress and improvements in physical education literacy.

Evaluation content should transition from a narrow focus on physical fitness tests to a more comprehensive, multidimensional assessment system. Traditional assessments typically focus on basic fitness items like running and jumping, making it difficult to evaluate students' athletic ability and health comprehensively. The new assessment system should include multiple dimensions, such as skill proficiency, overall health, participation, and teamwork. Diversified indicators, including motor skills tests, health assessments, extracurricular sports participation, and sports knowledge evaluations, should be incorporated to reflect the students' growth in various aspects.

The evaluation system should account for individual differences and personalized needs. Students vary in their physical abilities, interests, and learning progress, making it challenging for a single evaluation standard to fairly assess their achievements. To address this, different evaluation criteria should be set based on students' sports expertise, health conditions, and personal interests. For instance, students who focus on fitness can be assessed on their improvements in physical fitness, while those who specialize in particular sports can undergo specific skill assessments. This approach avoids a one-size-fits-all standard and ensures that evaluations are more tailored to each student's actual situation.

The reform of the evaluation system should emphasize self-evaluation and peer evaluation. In traditional teaching models, students mainly receive feedback from teachers and miss out on opportunities for self-reflection and peer reviews. Encouraging self-evaluation can help students become more aware of their personal progress and allow them to adjust their training routines accordingly. Peer evaluation, in turn, fosters interaction and collaboration among students, enhancing teamwork and a sense of collective achievement. This diversified evaluation approach not only motivates students to engage more actively in their learning but also strengthens the educational value of physical education courses.

2.2 Tables

Implementing a diversified physical education curriculum in universities has significantly enhanced students' engagement, skill development, and overall well-being. Compared to traditional approaches, this new system has led to increased participation in both PE classes and extracurricular sports activities, higher course satisfaction, and improved physical fitness. Students have shown greater enthusiasm for elective PE courses, demonstrating a shift from passive to active participation. The curriculum has also contributed to better teamwork, social skills, and mental health benefits. These improvements highlight the effectiveness of a diversified approach in fostering a more dynamic and impactful sports education experience. The following Table 1 illustrates these positive changes in key performance indicators.

Table 1: Impact of a Diversified Curriculum on Student Engagement and Performance

Indicator	Traditional Curriculum (%)	Diversified Curriculum (%)	Increase (%)
STUDENT PARTICIPATION	62	87	+25
EXTRACURRICULAR SPORTS PARTICIPATION	48	81	+33
COURSE SATISFACTION RATE	68	94	+26
STUDENT PHYSICAL FITNESS PASS RATE	79	91	+12
PE COURSE ELECTIVE RATE	27	60	+33
PROFICIENCY IN SPORTS SKILLS (EXCELLENT)	38	72	+34
IMPACT OF PE COURSES ON HEALTH AWARENESS	58	90	+32
IMPROVEMENT IN TEAMWORK & SOCIAL SKILLS	52	83	+31
FORMATION OF REGULAR EXERCISE HABITS	45	77	+32
POSITIVE IMPACT ON MENTAL HEALTH	50	86	+36

2.3 Practical Exploration and Effectiveness Evaluation of Diversified Curriculum System

With the in-depth reform of physical education in colleges and universities, the practical exploration of diversified curriculum system has gradually gained wide attention. Through the implementation of diversified curriculum content, innovative teaching mode and reformed evaluation system, not only can it enhance the attractiveness and teaching effect of physical education courses, but also improve students' sports participation and comprehensive quality. In order to ensure the effectiveness and continuous improvement of the diversified curriculum system, it is necessary to systematically evaluate and summarize the effect of its implementation.

Practical exploration has shown that building a diversified curriculum system can significantly enhance students' participation interest and classroom activity. Through the introduction of rich sports programs, such as yoga, Pilates, extreme sports, etc., students' interests have been effectively stimulated. Especially in some emerging sports programs, students can not only find their interests, but also enjoy the fun of sports in practice. The flexibility and selectivity of the curriculum allow students to adjust the content of their physical education learning according to their personal interests and physical conditions, avoiding the problems of boredom and maladjustment that are commonly found in traditional physical education courses, and thus improving students' classroom participation.

The innovation of the teaching mode has also had a positive impact on the effectiveness of the program. Through the introduction of online and offline blended teaching, students are able to access sports knowledge and skills training anytime and anywhere, which improves the autonomy and flexibility of learning. The online learning platform provides a large number of video teaching and health knowledge courses, and students can broaden their sports knowledge by watching teaching videos and participating in online discussions. The offline practice classes focus on interaction with students and personalized guidance, making the teaching content more in line with the actual needs of students. The diversified teaching mode enhances the interactivity and practicability of physical education teaching, prompting students to continuously improve their sports skills and health in practice.

In terms of the evaluation system, the reformed multi-dimensional assessment standard combines the evaluation of students' motor skills, participation, physical fitness and health, as well as sports knowledge and other aspects, making the assessment more comprehensive and scientific. Students not only demonstrate their skill level through the traditional physical fitness test, but also show the whole picture of their physical education learning through participation and self-evaluation. This diversified evaluation method promotes the overall development of students, avoids the limitations of a single evaluation model,

increases the importance students attach to the physical education program, and motivates them to participate more actively in their daily learning.

Through the effectiveness evaluation, it was found that the implementation of the diversified curriculum system has achieved remarkable results in the overall enhancement of students' physical education literacy and health awareness. Students not only made progress in sports skills, but also improved their physical fitness, teamwork and social interaction. According to the research data, the reformed physical education program is generally highly evaluated by students, students' satisfaction with the physical education program has increased significantly, and a high percentage of students said that through the diversified program, they love sports more and are willing to make it a part of their future life. Through these practical explorations and effectiveness evaluation, it can be seen that the construction of diversified curriculum system has injected new vitality into physical education in colleges and universities, and promoted the development of physical education to a higher level.

3. Conclusion

As an important way to cultivate students' physical and mental health, physical education in colleges and universities, the innovation and development of its curriculum system is crucial. Through the construction and practical exploration of the diversified curriculum system, we can clearly see that it has remarkable results in terms of stimulating students' interest, improving participation and promoting comprehensive development. The introduction of diversified curriculum content enables students to choose different sports programs according to their personal interests, which in turn enhances the attractiveness of the classroom and students' initiative; the innovative teaching mode improves students' learning efficiency and exercise quality through the combination of on-line and off-line, interactive teaching and other means; and the reform of the evaluation system not only takes into account the students' physical fitness and skills, but also pays attention to their participation and healthy development, which results in a more scientific and comprehensive evaluation mechanism. A more scientific and comprehensive evaluation mechanism has been formed.

Issues such as the balance between the diversity of the curriculum content of the diversified curriculum system and the actual needs of the students, the updating of the teaching mode and the improvement of the professional quality of the teachers still need to be further explored and improved in the future teaching practice. In the future, physical education should continue to promote the innovation of the curriculum system, pay attention to the individual needs of students, improve the comprehensive quality of teachers, and strengthen the application of technical means to ensure that the concept of diversified physical education can be put into practice. The construction of a diversified curriculum system is not only an inevitable trend in the development of physical education in colleges and universities, but also an important way to improve the comprehensive quality of students and cultivate lifelong sports awareness. With the deepening of the relevant teaching reform, it is believed that physical education in colleges and universities will further promote the dissemination of sports culture and the implementation of the strategy of Healthy China while promoting the overall development of students.

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