

Integration and Innovation: Construction and Practical Research on the Teaching Mode of Integrating Ethnic Fitness Gymnastics into College Fitness Gymnastics Curriculum

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Abstract: In order to promote the reform of college aerobics courses and the inheritance of ethnic sports culture, this study is guided by the coordinated development of cultural inheritance and sports education, focusing on the construction and practice of the teaching mode of integrating ethnic aerobics into college aerobics courses. The research results indicate that ethnic aerobics and college aerobics courses have a multidimensional integration foundation in terms of value objectives, content system, teaching practice, and policy environment, while facing constraints such as rigid curriculum system and insufficient teacher quality; The integrated teaching model constructed has scientific and practical adaptability, which can significantly improve students' physical fitness, skill level, and creative ability, effectively strengthen students' national cultural cognition and cultural confidence, and improve their attitude towards course participation and learning satisfaction; The problems of insufficient integration of culture and teaching exposed in practice can be optimized through strategies such as constructing a "action culture context" trinity teaching logic. This study provides a practical paradigm for the deep integration of ethnic culture and physical education curriculum, which is of great value for improving the quality of physical education in universities and inheriting excellent Chinese ethnic sports culture.

Keywords: ethnic fitness exercise; integrated teaching mode; cultural inheritance; physical education

1. Introduction

Against the backdrop of the deepening of the strategy of building a strong cultural nation, the inheritance and development of excellent traditional Chinese culture has become one of the core missions in the field of education. As a key field for talent cultivation and cultural inheritance, universities' physical education courses have both the basic functions of improving physical fitness and cultivating lifelong sports awareness, as well as the core responsibilities of cultural education and national emotional cultivation. As a core component of the physical education curriculum system in universities, aerobics is widely favored by students due to its fashionable, fitness oriented, and ornamental characteristics. It has achieved significant results in enhancing students' physical fitness, shaping their body shape, and cultivating teamwork abilities. However, the current college aerobics courses generally face practical obstacles such as homogenization of content and lack of cultural connotations. The curriculum overly emphasizes the introduction of Western competitive aerobics elements, and the exploration and transformation of local ethnic sports and cultural resources are insufficient, making it difficult to match the diverse demands of cultural identity construction and personalized development of college students in the new era.

As a fusion product of ethnic sports culture and modern fitness concepts, ethnic fitness exercises use traditional dances and competitive movements of various ethnic groups as core materials, and have dual attributes of Ethnic group and scientificity[1]. They are an important carrier for the inheritance of ethnic culture and the promotion of national spirit. Integrating it into college aerobics courses can not only enrich the curriculum content system and overcome the cultural shortcomings of traditional courses, but also achieve the coordinated unity of physical education and cultural education, help cultivate students' national identity and cultural confidence, and conform to the development direction of "strengthening cultural guidance" in the national college physical education curriculum reform. It is also an important

path for the creative transformation and innovative development of national sports culture.

By reviewing the current research status at home and abroad, it can be seen that the integration of ethnic sports and school sports in foreign countries has accumulated a lot of practical experience, providing useful reference for China [2]; Although the domestic academic community has achieved phased results in the connotation, value, and curriculum reform of ethnic fitness exercises, existing research mostly focuses on the introduction of a single action or partial adjustment of content, lacking systematic and in-depth exploration of the integration of the two, especially the construction of a teaching model that combines theoretical depth and practical feasibility, making it difficult to support universities to carry out normalized and standardized integrated teaching practices. Based on this, this study focuses on the dual goals of cultural inheritance and physical education, with the integration of ethnic fitness gymnastics and university fitness gymnastics courses as the core topic. It systematically analyzes the integration foundation and constraints, constructs and verifies the integration teaching mode, proposes optimization paths and guarantee mechanisms, aiming to enrich the theoretical system of university physical education curriculum integration teaching, and provide theoretical support and practical reference for the deep integration of ethnic culture and physical education curriculum.

2. Related work

Conceptual definition is the logical starting point of academic research. Accurately clarifying the connotation and extension of core concepts can lay a solid foundation for subsequent research. This study focuses on three core concepts: ethnic aerobics, college aerobics courses, and integrated teaching models, and defines them based on research context and practical needs.

Ethnic fitness exercise is a product of the deep integration of ethnic sports culture and modern fitness concepts. It refers to a sports and fitness project that combines ethnic characteristics, fitness, inheritance, and ornamental value, with traditional sports movements and dance elements of various ethnic groups as the core materials, following the physiological laws of human movement, and scientifically created [3]. Its core characteristics are reflected in three aspects: firstly, national identity, rooted in the cultural soil of a specific ethnic group, carrying the historical memory, values, and aesthetic taste of the nation, with distinct national identity in action form and music style; Secondly, it is scientific in nature, as the motion design conforms to the principles of human movement mechanics and can effectively improve the physical fitness of practitioners, such as cardiovascular function, coordination, flexibility, etc; The third is inheritability, which achieves intergenerational transmission of ethnic culture through the interpretation of body movements and is an important carrier of ethnic cultural inheritance. Compared with traditional ethnic sports, ethnic fitness exercises weaken competitiveness, strengthen mass fitness attributes, and better meet the educational needs of university physical education courses.

The college aerobics course is an important component of the college physical education curriculum system, which refers to a public physical education course or professional elective course aimed at improving students' physical fitness, cultivating lifelong sports awareness, and shaping healthy aesthetic concepts [4]. The main teaching content includes basic aerobics movements, combination routines, and creative practice, using a combination of theoretical teaching and practical operation. It is open to all college students. Its curriculum positioning is both fundamental and developmental, aiming to fulfill the basic educational tasks of physical education courses while also conforming to the trend of physical education curriculum reform in the new era, integrating cultural educational concepts, and meeting the personalized development needs of students. The curriculum system usually covers two core parts: theoretical modules (sports physiology, fitness knowledge, curriculum related theories) and practical modules (basic movement training, routine exercises, and creative practice).

The integrated teaching model is the core concept of this study, specifically referring to the systematic teaching paradigm of integrating ethnic fitness exercises into university aerobics courses [5]. It is not simply a matter of content overlay, but an organic integration that covers multiple dimensions such as teaching objectives, teaching content, teaching methods, teaching organizational forms, teaching evaluation and guarantee mechanisms. The core essence lies in the coordinated development of sports education and cultural education, through the reconstruction and optimization of curriculum elements, to achieve a deep integration of the cultural value of national fitness gymnastics with the fitness and educational value of university fitness gymnastics courses, ultimately achieving the comprehensive goal of improving teaching quality, inheriting national culture, and enhancing students' cultural confidence.

The development of this study requires the support of interdisciplinary theories, combined with relevant theories in the fields of physical education teaching, cultural inheritance, educational psychology,

etc., to provide scientific basis and logical support for the construction of a teaching mode for integrating ethnic fitness into university aerobics courses.

The theory of cultural inheritance is one of the core theoretical supports of this study. This theory holds that cultural inheritance is the process of intergenerational transmission of cultural elements through various means such as education and dissemination, and education is the key carrier of cultural inheritance. As a concrete manifestation of ethnic culture, the process of integrating ethnic aerobics into university aerobics courses is essentially an educational inheritance process of ethnic culture. According to the theory of cultural inheritance, the construction of integrated teaching mode needs to focus on exploring the cultural connotations behind ethnic fitness exercises, organically combining the transmission of cultural knowledge with the teaching of body movements, guiding students to understand the core essence of ethnic culture in physical exercise, achieving the sublimation from "skill acquisition" to "cultural identity", and ultimately achieving the goal of ethnic cultural inheritance.

The constructivist learning theory provides important guidance for the process design of integrated teaching. This theory emphasizes that learning is a process in which learners actively construct the meaning of knowledge. Teaching should fully leverage students' subjectivity, create authentic learning situations, and guide students to complete knowledge construction through independent exploration and collaborative communication. In integrated teaching, based on constructivist learning theory, situational teaching activities (such as ethnic cultural themed teaching scenarios) and project-based learning tasks (such as ethnic fitness gymnastics creation projects) can be designed to guide students to actively participate in action learning and cultural exploration. Through small group cooperation, creative practice can be completed, and deep construction of aerobics skills, ethnic fitness gymnastics knowledge, and ethnic cultural connotations can be achieved in the practical process.

The theory of curriculum integration provides methodological support for the construction of elements in integrated teaching models. This theory holds that curriculum integration is the process of organically integrating knowledge, methods, and values from different disciplines or fields to form a holistic curriculum system, with the core being the realization of collaborative symbiosis among various curriculum elements. According to the theory of curriculum integration, the integration of ethnic aerobics and university aerobics courses should follow the principles of relevance, systematicity, and feasibility. The integration of fitness goals and cultural goals should be achieved in teaching objectives, the integration of aerobics skills and ethnic aerobics elements in teaching content, the integration of traditional teaching methods and new teaching methods in teaching methods, and the integration of skill evaluation and cultural evaluation in teaching evaluation, ultimately forming a complete integrated curriculum system.

3. Analysis of the integration basis and restrictive factors of three ethnic fitness exercises into college aerobics curriculum

3.1 Integration fundamentals

The integration of ethnic aerobics and university aerobics courses is not accidental, but rather a solid foundation for their deep integration based on multi-dimensional synergy, including value goals, content systems, teaching practices, and policy environments. From the perspective of value goal alignment, both aim to improve students' physical fitness and cultivate lifelong sports awareness, while also serving the functions of aesthetic cultivation and team collaboration spirit shaping, which is highly consistent with the educational philosophy of "health first" in university sports. More importantly, the cultural heritage value carried by ethnic aerobics complements the educational value of university aerobics courses, and can jointly serve the collaborative educational goal of "sports education+cultural education", providing core guidance for integrated practice.

At the level of complementary content system, college aerobics courses mainly focus on modern fashion movement elements. Although they have strong fitness and ornamental value, their cultural connotations are relatively lacking; And ethnic fitness exercises are rooted in the cultural soil of various ethnic groups, rich in unique movement symbols and cultural meanings, which can effectively make up for the cultural shortcomings of traditional fitness exercise courses. Both of them use body movements as the core carrier in terms of action structure and practice form, and have strong compatibility. Through scientific creation, the organic integration of action elements can be achieved, enriching the curriculum content system. In terms of the feasibility of teaching practice, physical education teachers in universities generally have a professional foundation in aerobics teaching. After systematic training in ethnic aerobics

culture knowledge and movement skills, they are able to handle integrated teaching tasks; At the same time, in the new era, college students' sense of identity with ethnic culture continues to improve, and there is a strong demand for diverse physical education curriculum content, providing a good student foundation for the development of integrated teaching.

The supportive policy environment is also an important foundation for integration. At the national level, policy documents such as the "Opinions on Implementing the Project of Inheriting and Developing Excellent Traditional Chinese Culture" and the "Guidelines for Physical Education Curriculum Teaching in Ordinary Higher Education Institutions" have been successively issued, which clearly propose to promote the integration of ethnic culture and school education, deepen the reform of physical education courses in universities, strengthen the cultural leading function of physical education courses, and provide clear policy guidance and institutional guarantees for the integration of ethnic fitness into university fitness courses.

3.2 Constraints

Although the two have a multidimensional integration foundation, they still face many constraints in the process of practical promotion, mainly concentrated in four aspects: curriculum system, teaching staff, resource guarantee, and cognitive concepts. At the level of curriculum system, current university aerobics courses mostly adopt fixed teaching syllabi and textbook systems, with a rigid mechanism for updating course content and a lack of flexible space to accommodate ethnic aerobics content. At the same time, the academic community has not yet formed a unified teaching standard and evaluation criteria for integrating ethnic fitness into aerobics courses, which makes it difficult to achieve standardized and systematic promotion of integrated teaching, and prone to problems such as arbitrary content selection and vague teaching objectives.

The lagging construction of the teaching staff is one of the core limiting factors. Existing university aerobics teachers are mostly skilled in teaching and creating modern aerobics, but lack understanding of the cultural connotations, movement systems, and creative rules of ethnic aerobics. They lack systematic knowledge of ethnic culture and training in ethnic aerobics skills. Some teachers have weak cultural education awareness, making it difficult to achieve deep integration of ethnic culture and action teaching in teaching, which affects the quality and effectiveness of integrated teaching. The constraints on resource security are more prominent. On the one hand, there is a lack of teaching resources for ethnic fitness exercises, including core resources such as textbooks, teaching courseware, and action material libraries that are both scientific and applicable; On the other hand, the mechanism of school local cooperation is not sound, and the resource connection between universities, ethnic cultural institutions, and traditional sports inheritors is not smooth, making it difficult to obtain high-quality ethnic cultural resources to support teaching practice.

The deviation in cognitive concepts also constrains the integration practice. Some university administrators have insufficient recognition of the value of integrated teaching and regard it as a supplement to regular courses, lacking attention and investment in integrated teaching; A small number of students are influenced by the fashionable perception of traditional aerobics, and have a biased understanding of ethnic aerobics, believing that it is "not fashionable enough" and has low enthusiasm for participating in learning, which in turn affects the effectiveness of integrated teaching.

4. Construction and practical exploration of the teaching mode of integrating ethnic aerobics into college aerobics courses

4.1 Construction of teaching mode for integrating ethnic fitness gymnastics into college fitness gymnastics courses

Based on the analysis of the integration foundation and constraints in the previous text, combined with the dual goal orientation of cultural inheritance and sports education, this study constructs a six in one integrated teaching mode of "goal content method organization evaluation guarantee", achieving a deep and organic integration of ethnic fitness gymnastics and university fitness gymnastics courses. In terms of construction principles, we strictly adhere to the core principles of balancing cultural inheritance and sports education, unifying scientificity and feasibility, combining systematicity and gradual progress, and balancing common requirements and individual development to ensure the scientific and practical applicability of the model construction.

The reconstruction of the teaching objective system is the core prerequisite for model construction, which requires the coordinated unity of fitness goals, cultural goals, and educational goals. The knowledge objectives focus on the transmission of basic theories of aerobics, cultural connotations of ethnic aerobics, and principles of movement techniques; The skill objectives focus on cultivating students' basic movements in aerobics, core elements of ethnic aerobics, and the ability to create integrated routines; The cultural goal aims to enhance students' national cultural identity and cultural confidence; Emotional goals focus on shaping lifelong sports awareness, teamwork spirit, and healthy aesthetic concepts. The construction of the teaching content system should follow the logical path of "screening integration layering", selecting ethnic fitness exercise materials that combine cultural representativeness and fitness science, such as the shoulder movements of Mongolian Andai dance, the step elements of Guozhuang dance, etc., and organically integrating them with the basic movements of aerobics, forming a three-level content system of basic modules (action element learning), fusion modules (combination routine practice), and expansion modules (creative practice and cultural exploration), and designing them according to difficulty levels to meet the learning needs of different basic students.

The innovative teaching method adopts a combination strategy of "traditional optimization+new introduction". Based on traditional teaching methods such as optimization demonstration method and explanation method, new teaching models such as situational teaching method, project-based learning method, and flipped classroom are introduced, combined with multimedia technology to construct an integrated online and offline teaching scene. The teaching organization adopts a dual line model of "classroom leadership+extracurricular extension", with classroom teaching as the basis, combined with group teaching and layered teaching to improve teaching accuracy; Expand learning scenarios through extracurricular activities such as ethnic fitness gymnastics clubs, cultural exhibitions, and research and practice. The reconstruction of the teaching evaluation system adheres to the principle of combining process evaluation with summative evaluation, and complementing quantitative evaluation with qualitative evaluation. It constructs a multi-dimensional evaluation index system covering four dimensions: knowledge mastery, skill improvement, cultural cognition, and learning attitude. At the same time, a support system will be established from three dimensions: teacher training, resource construction, and institutional guarantee, providing solid guarantees for the implementation of the model.

4.2 Practical exploration of integrating ethnic aerobics into college aerobics courses

To verify the feasibility and effectiveness of the integrated teaching model, this study selected two parallel classes of the 2023 public physical fitness aerobics course at a certain university as research objects and conducted an 18 week teaching practice exploration. The experimental group (32 people) adopts the constructed integrated teaching mode, while the control group (32 people) adopts the traditional aerobics teaching mode. The two groups maintain consistency in student foundation, teacher configuration, teaching duration, and other aspects to ensure the scientific nature of practice. In the early stage of practice, three major preparations were completed: development of teaching resources, specialized training for teachers, and baseline survey for students. The system compiled integrated teaching materials, courseware, and action material libraries, and provided specialized training for teaching teachers on cultural knowledge and action skills related to ethnic fitness exercises; Through questionnaire surveys, physical fitness tests, interviews, and other methods, collect baseline data on students' physical fitness, aerobics foundation, and ethnic cultural cognition level, providing a benchmark for comparing practical effects.

In the practical implementation stage, the preset teaching plan is strictly followed for promotion. The experimental group carries out teaching in the order of "basic module fusion module expansion module", integrates ethnic cultural background explanation into action teaching, and synchronously carries out online resource learning and offline group creation practice; The control group was taught modern aerobics movements and routines according to the traditional teaching syllabus. Teachers shall establish a dynamic monitoring mechanism in the practical teaching process, track teaching effectiveness in real time through classroom observation, student feedback questionnaires, stage tests and other approaches, and adjust teaching strategies promptly for prominent teaching difficulties. Specifically, in view of the unsmooth transition between ethnic movements and aerobics movements, specialized connection training sessions can be incorporated to enhance the coherence of movement teaching.

In the later stage of practice, the focus is on data collection and effectiveness evaluation. Data collection covers both quantitative and qualitative indicators: quantitative data includes physical fitness test data, skill test scores, theoretical exam scores, and learning attitude questionnaire data of two groups of students before and after practice; Qualitative data includes student interview records, teacher

reflection logs, evaluation results of creative works, classroom observation records, etc. By using mathematical statistics to analyze the differences in quantitative data and grounded theory to encode and analyze qualitative data, this study systematically evaluates the practical effects of the integrated teaching model in improving students' physical fitness, cultivating skill levels, and strengthening cultural cognition, providing empirical evidence for the optimization and improvement of the teaching model.

5. Conclusion

This study focuses on the collaborative development of cultural heritage and sports education, and focuses on the construction and practical issues of integrating ethnic fitness exercises into university aerobics courses. Through literature review, theoretical analysis, model construction, and teaching practice, the study systematically explores the foundation, constraints, and implementation paths of the integration of the two, and draws the following core conclusions:

Firstly, ethnic aerobics and university aerobics courses have a multidimensional integration foundation, and both are in line with the educational philosophy of "health first" in university sports in terms of value goals, which can achieve the synergy and complementarity of fitness education and cultural education; It has strong compatibility in terms of content system, and the cultural connotation of ethnic aerobics can effectively make up for the cultural shortcomings of traditional aerobics courses; The feasibility of integrating teaching practice and policy environment provides solid support for the construction and implementation of integrated teaching models. At the same time, the integration of the two still faces constraints such as rigid curriculum system, insufficient teacher quality, lack of resource guarantee, and cognitive bias, which need to be addressed through systematic design.

Secondly, the six in one integrated teaching model of "goal content method organization evaluation guarantee" constructed in this study has scientific and practical applicability. This model is guided by the goal of collaborative education, and through the organic integration of a three-level teaching content system (foundation integration expansion), a combination of "traditional+new" teaching methods, a dual line teaching organizational form of "classroom+extracurricular", a multi-dimensional evaluation system, and a three-dimensional guarantee mechanism, it achieves a deep integration of ethnic aerobics and university aerobics courses, rather than simply overlapping content.

Thirdly, teaching practice verification shows that the application effect of integrated teaching mode is significant. Compared with the traditional aerobics teaching mode, the integrated teaching mode can more effectively improve students' physical fitness indicators such as cardiovascular function, coordination, flexibility, etc., significantly enhancing students' aerobics skills and ethnic aerobics creation ability; At the same time, it can effectively strengthen students' understanding of ethnic culture, enhance their sense of ethnic cultural identity and cultural confidence, improve their attitude towards course participation and learning satisfaction, and fully demonstrate the synergistic effect of "sports education+cultural education".

Fourthly, the optimization of integrated teaching mode needs to focus on core issues and make precise efforts. The problems exposed in practice, such as insufficient integration of culture and teaching, inaccurate hierarchical teaching, and lack of collaboration in extracurricular extension, can be solved by constructing a "action culture context" trinity teaching logic, improving the precise hierarchical mechanism, and building a "classroom extracurricular practice" collaborative system, providing guarantees for the normal application of the model.

The development of this study enriches the theoretical system of integrated teaching in college physical education courses, and the constructed integrated teaching model provides a practical paradigm for the deep integration of ethnic culture and physical education courses. It has important theoretical value and practical significance for promoting the reform of college aerobics courses, inheriting excellent Chinese ethnic sports culture, and improving the quality of college physical education. At the same time, this study still has limitations such as narrow sample coverage and limited practical period. In the future, the research scope can be expanded to select different types of universities for comparative studies, extend the practical period to track long-term educational effects, and further explore the deep integration path of integrated teaching mode with online education and smart sports, providing more comprehensive support for the widespread promotion and long-term development of ethnic fitness exercises in universities.

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