Application of Basketball Techniques and Tactics Training in College Physical Education Curriculum Teaching

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Abstract: This research aims to explore the systematic application path of basketball techniques and tactics training in college physical education courses. The article analyzes the structural contradiction of "emphasizing techniques while neglecting tactics" that commonly exists in current college basketball teaching, and points out the core problems such as the separation of students' technical and tactical abilities and the weakness of tactical awareness caused by the traditional linear teaching model. The research proposes that an integrated teaching paradigm of "promoting learning through competition and integrating techniques and tactics" must be constructed, and technical training should be placed in a clear tactical context through systematic teaching design based on game scenarios. At the implementation level, it emphasizes the comprehensive use of diversified teaching methods such as video analysis and restrictive condition games, and the establishment of a consistent path for cultivating tactical awareness. The research concludes that the key to reform lies in breaking the constraints of the traditional teaching model and constructing a continuous training system from technical specifications to tactical decision-making, ultimately realizing the paradigm shift of college basketball teaching from skill impartation to comprehensive competition ability cultivation.

Keywords: College Basketball; Integration of Techniques and Tactics; Teaching Strategies; Tactical Awareness; Game Scenarios; Training System

1. Introduction

Basketball, a highly competitive and widely embraced team sport, holds a prominent place within the physical education curriculum of Chinese universities. It serves not only as a form of physical activity but also as a crucial platform for fostering teamwork, strategic acumen, and psychological resilience among students [1]. Nevertheless, prevailing basketball instruction in universities often demonstrates a predilection for technical proficiency over tactical understanding and practical drills over theoretical knowledge. Consequently, students may acquire individual skills but encounter difficulties in coordinating effectively and reacting strategically during gameplay, indicating a deficiency in comprehensive tactical awareness [2]. This circumstance impedes the complete fulfillment of the basketball course's pedagogical objectives and diverges from the school sports reform imperative of "integrated teaching, diligent practice, and regular competition." Consequently, a thorough investigation into the judicious application of basketball technical and tactical training within university physical education courses possesses considerable theoretical and practical value [3].

Extensive research has accumulated both domestically and internationally regarding basketball technical and tactical teaching. Early foreign studies focused on Tactical Cognitive Training, emphasizing the development of students' decision-making abilities through video analysis, scenario simulation, and other methods, with training models exhibiting highly systematic and data-driven characteristics[4]. Domestic research, on the other hand, is mostly concentrated on the explanation of specific technical and tactical methods and the summary of teaching experiences, generally agreeing that technique is the foundation of tactics, and tactics are the soul of technique[5]. Existing literature clearly points out that university basketball teaching needs to transcend simple movement imitation, shifting towards the cultivation of tactical awareness and practical combat abilities, and proposes innovative models such as the "comprehension teaching method" and the "game teaching method."

However, existing studies mostly explore teaching philosophies from a macro perspective, or analyze technique and tactics as relatively independent modules. There is a lack of systematic and operational research on how to achieve deep integration and coordinated advancement of the two

within the limited class hours of regular university physical education courses. Based on this, this study aims to improve the teaching quality of university basketball courses as the core goal, and strives to construct an application framework for the integrated training of basketball techniques and tactics suitable for ordinary university students. Specific objectives include: analyzing the theoretical basis and core elements of university basketball technical and tactical training; diagnosing key problems in current teaching; and designing and demonstrating specific strategies and practical models for the integration of technical and tactical teaching.

2. Theoretical Foundation

The scientific implementation of basketball technical and tactical training in colleges must be based on a profound understanding of the inherent laws of basketball and teaching principles. This chapter aims to systematically sort out and construct its theoretical foundation, providing a core basis for the design of subsequent teaching strategies.

2.1 The Dialectical Unity of Basketball Technique and Tactics

Technique and tactics represent fundamental, interconnected dimensions of athletic ability in basketball. These elements exist in a dynamic and mutually reinforcing relationship. Technique serves as the tangible foundation upon which tactical execution is built. Successful implementation of any tactical objective, ranging from intricate team maneuvers to basic individual offensive actions, relies on consistent, refined, and reliable technical skills. Deficiencies in fundamental skills, such as passing, dribbling, and shooting, render even the most innovative tactical strategies ineffective.

Conversely, tactics provide the strategic framework and direction for technical application. Technical training divorced from tactical context lacks purpose and efficiency. Tactics define the objective, timing, and coordination necessary for effective technique execution, guiding players in the appropriate selection and combination of skills within dynamic game situations [6]. For example, instruction on the "screen play" tactic necessitates a precise understanding of passing timing, cutting routes, and shooting options while in motion, thereby integrating discrete technical elements into a cohesive skill sequence. Therefore, collegiate instruction should move beyond a linear, fragmented approach of prioritizing technique over tactics, and instead adopt an integrated pedagogical model that emphasizes driving technical development through tactical requirements and ensuring tactical success through robust technical proficiency.

2.2 Structured Model and Generation Mechanism

Tactical awareness, a pivotal component of technical and tactical proficiency in basketball, encompasses the cognitive processes by which athletes observe, evaluate, decide, and execute appropriate actions in response to dynamic game situations. This cognitive skill can be structured into a progressive model based on cognitive complexity: fundamental technical awareness (perception and control of individual movements), localized tactical awareness (comprehension of basic collaborative actions between two or three players), comprehensive tactical awareness (understanding of the team's offensive and defensive strategies and tempo), and global game awareness (holistic situational analysis and adaptive decision-making). Collegiate instruction should prioritize the transition from localized to comprehensive tactical awareness.

Tactical awareness is not an innate ability but rather a learned skill cultivated through systematic instructional intervention. The underlying mechanism involves the development of an extensive "scenario pattern" database and the establishment of rapid "if-then" response protocols within the student's cognitive framework. This is achieved through repetitive "perception-action" coupling exercises conducted within specific tactical contexts. Effective pedagogy necessitates the incorporation of numerous semi-structured tactical drills, video-based scenario analysis, and constrained conditional games. These methods compel students to engage in continuous observation, critical thinking, and strategic decision-making under simulated competitive pressure, thereby accelerating the progression from conscious deliberation to subconscious automaticity and facilitating the internalization of tactical awareness.

3. Current Situation and Problems

Although basketball tactics and techniques teaching is widely carried out in Chinese colleges and universities, there are still systemic challenges in teaching objectives, content structure, and training methods that are incompatible with the development laws of contemporary basketball and the requirements for cultivating students' comprehensive qualities[7]. An in-depth analysis of these current situations and problems is the prerequisite for building a scientific training system.

3.1 Limitations

Basketball teaching in colleges and universities has long followed the traditional linear model of "technology-led, tactics-delayed." In terms of course organization, the teaching process of "decomposition-demonstration-imitation-repetition" is generally adopted, and complex basketball skills are broken down into isolated individual techniques such as dribbling, passing, and shooting for teaching. The advantage of this model is that it facilitates classroom management, and technical movements are easy to standardize for evaluation. However, its fundamental limitation lies in the artificial separation of technology from the tactical context on which it depends.[8]

Teaching implementation is often characterized by "emphasizing the individual, neglecting the whole; emphasizing form, neglecting decision-making." Classroom training focuses heavily on individual technical refinement in non-confrontational or low-confrontational states, while the cultivation of tactical awareness, spatial perception, and instant decision-making abilities, which are crucial to winning or losing games, is seriously insufficient. Even when tactical teaching is introduced, it is often limited to fixed routine drills, lacking flexible application and creation of tactical principles in dynamic, confrontational environments. The teaching model presents a significant disconnect between the "training ground" and the "competition field," making it difficult to effectively transfer what students learn in the classroom to actual combat.

3.2 Core Problems in Teaching

3.2.1 Structurally Disconnected Technical and Tactical Training

Technique and tactics are often treated as separate stages or modules in teaching arrangements, leading to situations where there is "technique without tactics" or "tactics are discussed but lack technical support." Students do not understand the tactical purpose when learning basic techniques, and they cannot execute tactical coordination due to unfamiliarity with the techniques. This disconnection makes it difficult for students to establish an organic connection of "technique serves tactics, and tactics drive technical improvement," resulting in a slow formation of comprehensive practical combat capabilities.

3.2.2 Students' Weak Tactical Awareness and Decision-Making Ability

Due to the teaching emphasis on the movements themselves, students' understanding of basketball often remains at the level of "how to do the movements," lacking an in-depth understanding of "when to do it," "why to do it," and "how to do it in coordination with teammates." Specific manifestations include: narrow court vision, poor ability to predict the situation, weak sense of offensive and defensive transition rhythm, and lack of creativity to adapt to changes under pressure, instead following fixed routines. Tactical awareness, as the "brain" connecting technique and game performance, has not been systematically cultivated.

3.2.3 Singular Teaching Methods and Biased Evaluation Orientation

Teaching methods are still dominated by one-way teacher instruction and mechanical repetition by students, with insufficient application of methods that can effectively stimulate tactical thinking, such as situational simulations, problem-oriented learning, video analysis, and small-scale themed games. Correspondingly, the teaching evaluation system overemphasizes the standardization and achievement rate of technical movements (such as the number of fixed-point shots made), while seriously neglecting the evaluation of tactical understanding, execution effectiveness, and on-court decision-making quality. This evaluation orientation further reinforces the "emphasize technique and neglect tactics" behavior pattern of teachers and students, forming a vicious cycle.

3.2.4 Teaching homogenization

Curriculum content is often uniform, failing to fully consider the significant differences among

students in physical qualities, athletic foundation, cognitive styles, and on-court position preferences. Future post players receive the exact same technical training as guards, neglecting their exclusive tactical roles and technical needs, which not only reduces training efficiency but also inhibits the discovery of students' specialized potential and personalized development.

3.3 Multi-Dimensional Factor Analysis

3.3.1 Teacher Level

Some teachers' knowledge structure and teaching philosophy have not kept pace with the times. They may possess solid technical skills, but their understanding of the development of modern basketball tactics, especially the scientific methods of tactical awareness training, is not deep enough. Limited professional development channels lead to slow updates in their teaching strategies, making it difficult to translate advanced concepts such as "game-like training" and "cognitive training" into practical classroom practice.

3.3.2 Curriculum and Resources Level

Public sports courses in colleges and universities generally face the reality of limited class hours and long intervals. It is already difficult to complete systematic teaching from technique to tactics within short and disjointed class hours. In addition, teaching resources are mostly limited to basic field equipment, lacking video equipment for tactical analysis, data collection tools, and rich digital teaching resources, which limits the introduction of modern and refined teaching methods.

3.3.3 Student Level

There are huge differences in students' basketball foundation upon enrollment. Students with zero basic knowledge and those with near-professional level coexist in the same classroom, which places extremely high demands on differentiated instruction. At the same time, many students are influenced by previous sports learning experiences, and their expectations for physical education classes remain at the level of "physical activity." They lack initiative in tactical learning that requires in-depth thinking, and their learning motivations are diverse and complex.

3.3.4 Environment and Culture Level

The campus basketball culture atmosphere directly affects the extended effect of teaching. Many colleges and universities lack normalized platforms such as departmental leagues and class competitions, and students lack opportunities to practice and apply the techniques and tactics learned outside the classroom. The failure of classroom teaching and extracurricular competitions to form an effective linkage hinders the continuous generation and consolidation of students' practical abilities.

4. Implementation Strategies

4.1 Systematized Teaching Design Based on Game Situations

The implementation of integrated techniques and tactics instruction is best achieved through a departure from traditional linear models, adopting a spiral curriculum structure based on a "whole-part-whole" methodology. Instructional design should commence with simplified game simulations, such as "2-on-2" half-court scenarios, to facilitate students' understanding of fundamental basketball game principles and self-assessment of their performance deficits. Subsequently, instructors should identify and isolate key technical and tactical themes, including, but not limited to, "dribble penetration following a screen" or "pick-and-roll defense hedging and recovery," for targeted analysis and refinement. This analytical process addresses prevalent technical deficiencies or tactical misconceptions observed during gameplay. It is crucial that this decomposition exercise moves beyond isolated, non-confrontational technical repetition, focusing instead on situation-specific drills with controlled parameters, such as passive defense or prescribed offensive pathways. Emphasis should be placed on the appropriate execution and timing of techniques within a tactical framework. Following theme refinement, the training context should be immediately returned to more complex game scenarios, such as "3-on-3" or full-court simulations with augmented rules, for application and validation. This design ensures that technical skill acquisition is driven by tactical requirements and culminates in practical application, creating a comprehensive cycle of instruction, learning, practice, and competitive performance.

Curriculum content should be structurally tiered to align with students' cognitive development. The introductory phase should emphasize "basic technical movement application in simple coordination," fostering the initial integration of techniques with fundamental coordinated actions, such as passing and cutting or screening. The intermediate phase should advance to "technical selection and decision-making in partial tactical scenarios," focusing on the appropriate choice of technical movements based on defensive adaptations in two-to-three-person coordinated plays. Examples include passing, dribbling, or shooting in response to a screen. The advanced phase should elevate to "role-specific technical execution within the overarching tactical framework," guiding students to comprehend the tactical role and corresponding responsibilities of individual techniques within the team's tactical system, such as fast breaks or zone defenses. Each phase should be accompanied by progressively complex confrontation exercises to facilitate continuous skill development.

4.2 Application of Diversified Teaching Methods

To enhance students' tactical acumen and decision-making capabilities, pedagogical strategies should extend beyond the conventional lecture-demonstration format, embracing a multifaceted approach incorporating contemporary teaching methodologies.

The video analysis method facilitates a crucial link between theoretical principles and practical application. This involves analyzing both exemplary tactical scenarios from professional competitions and, importantly, incorporating recordings of students' own training sessions and matches. Through comparative analysis, students are guided to critically evaluate their decision-making processes, movement patterns, and technical executions, contrasting them with established tactical models or the successful performances of their peers. This process transforms abstract tactical concepts into tangible, visually-based cognitive frameworks. Utilizing performance-based analysis provides direct, impactful feedback, significantly accelerating the acquisition of tactical understanding.

Constrained game scenarios represent a fundamental training technique for fostering the integration of skills and tactical awareness. By implementing specific constraints, students are required to strategically think and act within a defined tactical context. Examples include mandating that "every offensive action incorporate at least one screen," stipulating that "the defensive scheme must employ a designated zone defense formation," or requiring that "following a successful score, the team must execute a full-court press." Such exercises translate tactical imperatives into explicit game regulations, compelling students to comprehensively apply their skills to resolve specific tactical challenges under conditions approximating real-game pressure. This approach is highly effective in cultivating tactical execution and adaptability in competitive environments.

Tactical board drills and dynamic simulations serve to improve students' spatial cognition and predictive abilities. Supplementing traditional static tactical board presentations, dynamic simulation software or interactive teaching aids can be implemented to enable students to actively engage in offensive and defensive roles, dynamically illustrating tactical movement patterns, passing sequences, and defensive rotations. This process underscores the comprehension of the tactical dimensions of "space," "time," and "angle," assisting students in developing a dynamic tactical understanding, thereby establishing a cognitive foundation for accurate anticipatory judgments in dynamic, high-velocity competitive situations.

Differentiated group training addresses the heterogeneity of student skill levels. Students are dynamically grouped according to their technical proficiency, tactical comprehension, and preferred playing positions. Distinct training themes and objectives are designed for each group: the foundational group focuses on reinforcing the consistency of technical movements within fundamental coordination patterns; the intermediate group emphasizes technical combinations and decision-making speed in complex scenarios; and the advanced group can explore role-specific responsibilities and on-court versatility within defined tactical systems. This ensures that each student experiences meaningful progress within their individual "zone of proximal development."

4.3 Cultivating Tactical Awareness

Strengthening fundamental technical training is paramount to enhancing tactical awareness. Proficiency in basic skills forms the bedrock of tactical acuity. Coaches should prioritize the instruction of fundamental skills, enabling athletes to achieve mastery and apply them adeptly within competitive scenarios. Shooting, passing, dribbling, and defending constitute the core skill set in basketball. Coaches must facilitate athletes' comprehensive understanding of the fundamentals, essential

techniques, and variations of these skills through structured drills and focused training regimens.

Reinforce the "Observe-Judge-Decide" cycle in scrimmage exercises. Before any form of scrimmage, instructors should clearly define the core tactical tasks for both attacking and defending sides (e.g., "the attacking side focuses on observing vulnerabilities in the defensive formation," "the defending side focuses on identifying the opponent's primary attackers"). During practice, the instructor should interrupt the play at appropriate times to guide students in reviewing their decision-making process, externalizing their implicit thinking, and conducting peer reviews and instructor feedback.

Establish a reflection and summary mechanism based on match performance. After each instructional match or significant scrimmage, structured group discussions or individual tactical log writing should be arranged. Students should be guided not only to reflect on technical errors, but also to focus on analyzing the successful and unsuccessful cases of tactical execution, communication issues in teamwork, and control of the game tempo. Through continuous reflective practice, students are encouraged to learn from experience, transforming perceptual knowledge into rational understanding, and gradually constructing a personalized system of tactical knowledge.

5. Conclusion

Through a systematic analysis of the current state of basketball technical and tactical instruction in colleges and universities, its theoretical foundation, and implementation paths, this study draws the following core conclusions: First, the fundamental contradiction in college basketball instruction is manifested as a structural misalignment between the traditional skill-transfer model and the need to cultivate students' comprehensive practical combat capabilities. The currently prevalent "technique first, tactics later" linear teaching model, as well as the training orientation of "emphasizing individual technique and de-emphasizing overall tactics," makes it difficult for students to establish a cognitive framework for the integration of technique and tactics, which restricts the substantial development of their competitive ability. Second, the systematic absence of tactical awareness is a deep-seated problem affecting teaching quality. Research shows that most teaching remains at the level of action imitation, lacking targeted training in students' cognitive abilities such as observation, judgment, and decision-making, resulting in a serious disconnect between students' technical actions and tactical thinking, making them unable to adapt to the requirements of modern basketball for rapid decision-making and coordinated response. Third, the uniformity of teaching methods and the one-sidedness of the evaluation system jointly reinforce the path dependence of "emphasizing technique and de-emphasizing tactics." The traditional teaching method dominated by teacher demonstration makes it difficult to stimulate students' tactical thinking, while the evaluation system that overemphasizes technical attainment further weakens the importance attached by teachers and students to the cultivation of tactical ability.

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