

Exploration of an Integrated Cultivation Model for Competitive and Cooperative Awareness in College Badminton Elective Courses

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Abstract: In the context of the increasing emphasis on cultivating students' social literacy and sound personality in current college physical education, the traditional teaching model of badminton elective courses often falls into the rut of merely imparting skills or unilaterally emphasizing competition, failing to fully realize the profound value of sports in promoting student socialization. This study aims to explore a cultivation model that organically integrates competitive and cooperative awareness. It begins by theoretically elucidating the inherent tension between competitive and cooperative awareness and their unique value within the field of physical education, while analyzing the integration mechanism afforded by the characteristics of badminton. Subsequently, it systematically constructs an integration-oriented teaching model, encompassing hierarchically integrated teaching objectives, sequentially structured teaching content, and the application of collaborative teaching strategies. Finally, it clarifies the implementation pathways and evaluation principles of this model from aspects such as fostering a supportive classroom ecology, designing process-oriented feedback, and establishing a multidimensional evaluation system. This study provides a systematic proposal with both theoretical depth and practical applicability for the reform of college badminton courses, holding positive significance for cultivating students' social adaptability and comprehensive competencies in complex situations.

Keywords: competitive and cooperative awareness; integrated cultivation model; badminton elective courses; teaching model; college physical education

Introduction

As a vital component of the higher education system, the college physical education curriculum has seen its objectives extend beyond the traditional enhancement of physical fitness and mastery of skills, increasingly focusing on the cultivation of students' social development and comprehensive competencies. In light of this orientation, the teaching practice of elective courses such as badminton faces new demands: how to effectively foster the synergistic development of students' competitive spirit and cooperative awareness while imparting specialized sports skills. However, existing teaching models often treat these two aspects as separate or emphasize one over the other, failing to explore their intrinsic integration mechanism from the holistic level of curriculum design, which limits the full realization of the educational function of physical education courses. Therefore, systematically exploring and constructing a cultivation model for college badminton elective courses that aims to integrate competitive and cooperative awareness is not only an endeavor to deepen and innovate the pedagogical essence of the course but also a necessary pathway to respond to the contemporary demands of talent cultivation in higher education and to promote students' social-psychological maturity through physical education. The significance of this study lies in its attempt to form a complete logical chain from theoretical elucidation and model construction to implementation evaluation, thereby providing a theoretical reference and practical framework for related teaching reforms.

1. Theoretical Elucidation and Educational Significance of Integrating Competitive and Cooperative Awareness

1.1 The Intrinsic Connection and Dynamic Balance Between Competitive and Cooperative Awareness

Competitive awareness and cooperative awareness, often perceived as opposite ends of a behavioral spectrum, actually constitute an interdependent and dialectically unified complex of consciousness within social interaction. The core of competitive awareness lies in the recognition and pursuit of differentiation and superiority. It drives individuals to respond to external challenges through self-transcendence, with its psychological mechanism involving goal setting, motivation stimulation, and performance comparison. Cooperative awareness, on the other hand, is rooted in the understanding of common interests and group efficacy. It emphasizes the shared nature of goals, the complementarity of resources, and the coordination of actions, with its operation relying on trust building, communication, and role identification. From a systemic perspective, the two do not simply coexist but exist in a profound state of dynamic tension: competition infuses vitality and an efficiency orientation into cooperation, preventing collective action from falling into inertia; cooperation, meanwhile, sets boundaries and an ethical framework for competition, providing it with a sustainable social foundation and a sense of belonging^[1].

The establishment of such a dynamic balance signifies the maturation of an individual's social-psychological development. It requires individuals to transcend linear, either-or thinking and to develop a form of "coopetitive intelligence" — that is, the ability to accurately discern situational demands and strategically switch between competition-oriented striving and cooperation-oriented integration with dynamic weighting. The integration of these forms of awareness not only optimizes behavioral output in specific task situations but also, on a deeper level, shapes a more flexible and adaptable social cognitive model. It provides the core psychological mechanism for individuals to engage in effective interaction within complex and uncertain social environments, serving as the crucial mental foundation for rational actors to achieve the synergistic enhancement of individual value and collective well-being.

1.2 The Unique Value of Integrating Dual Awareness in the Field of Physical Education

With its highly contextualized and embodied nature, physical education provides a unique practical field for integrating competitive and cooperative awareness. Distinct from abstract theoretical instruction, physical activities require learners to make decisions amidst immediate physical confrontation and collaboration, allowing them to directly experience competitive pressure and cooperative demands. This experience integrates cognitive judgment, emotional fluctuation, and volitional engagement, transforming abstract concepts such as rules and victory or defeat into tangible, embodied experiences. Consequently, it promotes the shift in the integration of awareness from the mere acceptance of concepts to practical comprehension and active construction.

Therefore, physical education holds prominent integrative and transferable value in cultivating the fusion of awareness. By creating interactive scenarios that combine structured rules with unstructured on-the-spot adaptation, it drives students to continuously reflect on and adjust their competitive and cooperative behaviors through immediate feedback. This process not only enhances individual and team performance within the sports context but, more importantly, fosters a transferable social competency—that is, the ability to make rational decisions under pressure, communicate effectively in interactions, and advance collaboratively while pursuing excellence. This "social-mindedness" cultivated through physical activities carries significant preparatory educational value for students in adapting to future complex social and professional environments^[2].

1.3 Analysis of the Integration-Bearing Mechanism of Badminton Sport Characteristics

Badminton, with its specific technical structure, tactical logic, and competition format, inherently accommodates the need for integrating competitive and cooperative awareness. At the technical level, the individual must master the precision, power, and placement of shots (a competitive orientation), while also understanding how combinations of strokes and rhythm control can create opportunities for a partner or restrict an opponent (cooperative thinking). At the tactical level, whether it involves the "control and counter-control" in singles or the "rotation coordination and role division" in doubles, athletes are required to make complex cooperative decisions within a highly competitive framework.

The sport's competition rules, especially in doubles and team formats, compulsorily embed individual competition within the objectives of team cooperation, creating a structured context for integration. Therefore, as an instructional vehicle, the badminton elective course inherently contains rich mechanisms and internal logic that prompt students to experience, reflect upon, and integrate competitive and cooperative awareness.

2. Construction of an Integration-Oriented Teaching Model for Badminton Elective Courses

2.1 Integrated Design of Competitive Competency and Cooperative Spirit within the Teaching Objective Dimension

2.1.1 Construction of a Hierarchical Integration Objective System

The teaching objectives should exhibit a clear hierarchical progression. Foundational objectives focus on enabling students to initially understand and demonstrate the possibility of coexistence between competition (e.g., pursuing shot quality) and cooperation (e.g., sustaining a rally) during single-technique drills or simple competitive exercises. Developmental objectives require students to strategically balance individual performance with team collaboration in complex tactical situations (e.g., offensive-defensive transition in doubles), achieving dynamic selection of competitive and cooperative behaviors. The culminating objective concerns the internalization and formation of a stable social-cognitive schema within students, enabling them to consciously and rationally apply dialectical thinking regarding competition and cooperation in any sporting or broader social interaction.

2.1.2 Dual Anchoring in Behavioral Performance and Cognitive Understanding

The articulation of objectives must be anchored simultaneously in specific, observable behavioral performances and internal cognitive understanding. For instance, behavioral objectives include "during team competitions, the student can proactively communicate tactical adjustments with a partner through verbal or gestural cues based on the match situation"; corresponding cognitive objectives require that the student "can analyze and articulate the rationale behind opting for collaborative defense over individual aggressive play in specific game situations." This dual anchoring ensures the assessability of teaching effectiveness and guides the instructional process from training external behaviors to cultivating internal thinking.

2.1.3 Value Guidance in the Affective-Attitudinal Dimension

The teaching objectives must encompass the affective-attitudinal domain, guiding students to develop positive attitudes towards healthy competition and sincere cooperation. This includes fostering respect for rules, opponents, and partners; demonstrating responsibility and resilience in the face of competitive losses or cooperative errors; and experiencing and valuing the sense of collective efficacy derived from achieving goals through joint efforts. This dimension is crucial for the integrated cultivation model to realize its full value^[3].

2.2 The Interactive Logic of Competition and Cooperation in the Sequential Arrangement of Teaching Content

2.2.1 Stage of Separate Experience for Competitive and Cooperative Elements

In the initial phase of the course, relatively focused teaching content modules are designed to separately strengthen competitive awareness and cooperative awareness. For instance, arranging a precision serve assessment oriented towards individual performance ranking (competition-dominant), and conducting multi-shuttle synchronized relay drills that require absolute adherence to instructions and emphasize synchronicity (cooperation-dominant). This stage aims to enable students to clearly perceive the different behavioral requirements and psychological states corresponding to the two types of awareness, thereby establishing a clear cognitive foundation for subsequent integration.

2.2.2 Stage of Simple Interweaving of Competitive-Cooperative Situations

Once students have acquired basic separate experiences, content that forces a simple interaction between the two is introduced. For example, in a "challenge-based teaching match," a rule is set where only after completing three or more consecutive coordinated actions (cooperation) can a team earn the right to score through an attack (competition). Another example is found in teaching basic mixed doubles tactics, where the role division and methods of cooperation between male and female players

within the offensive-defensive system are clearly defined, and then tested in scoring matches. The characteristic of the content at this stage is that the goals and rules of competition and cooperation are explicitly linked, prompting students to begin learning how to make preliminary integrated decisions under constrained conditions^[4].

2.2.3 Stage of Deep Integration of Competitive-Cooperative Thinking

In the mid-to-late stages of the course, teaching content that is highly open-ended, dynamic, and approximates authentic, complex situations is designed. Examples include organizing a team championship that requires autonomous lineup arrangement, in-game command, and psychological support; or designing matches with rule variations (such as mandatory partner swaps after each game). This type of content lacks fixed formulas for competition and cooperation. It requires students to continuously analyze the situation, assess their own and their teammates' condition, anticipate opponents' intentions, and make instantaneous, creative strategic choices regarding competition and cooperation. This process facilitates the automated integration and innovative application of competitive and cooperative thinking in practice.

2.3 Application of Collaborative Strategies in Teaching Methods and Organizational Forms

2.3.1 Situational Embedding and the Creation of Cognitive Conflict

In terms of teaching methods, the Situational Embedding Method is widely employed. This involves placing students within simulated scenarios that contain competitive-cooperative tension by pre-setting specific rules, objectives, or conditions. For example, establishing a rule in doubles practice such as "earning points through smashes is only permitted after forcing the opponents to lift the shuttlecock through precise net-shot cooperation." This creates a cognitive conflict between "the desire to attack and score (competition)" and "the necessity to prioritize meticulous cooperation (collaboration)." The purpose of such methods is to stimulate students' active thinking, forcing them to explore the connections between competitive and cooperative elements in the process of solving real teaching tasks.

2.3.2 Problem-Based Inquiry Method and the Guidance of Reflective Dialogue

The Problem-Based Inquiry Method is adopted to guide students in deep reflection and dialogue around core questions following practice or competition. The instructor can pose questions such as, "During the previous rally, was it more effective to persist with an individual offensive tactic, or to proactively seek tactical variations in combination with your partner?" Through structured discussion, students are able to externalize their implicit decision-making processes. By collectively reflecting and analyzing the advantages and disadvantages of different competitive-cooperative strategies in various situations, their metacognitive abilities are promoted, allowing experience to be elevated into transferable thinking patterns^[4].

2.3.3 Organizational Restructuring Methods and the Construction of Dynamic Social Interdependence Relationships

In terms of organizational form, ongoing organizational restructuring is implemented. Fixed practice partnerships are broken up, and methods such as heterogeneous grouping, role rotation, and team-based project competitions are systematically employed. For instance, students are assigned to take on different roles across various class sessions, such as "on-court core player," "tactical collaborator," and "situation observer and advisor." This construction of dynamic social interdependence requires students to continually adapt to new cooperative partners and competitive environments, and to experience the different demands placed on competitive-cooperative behaviors by various roles. Consequently, it holistically cultivates their social adaptability and strategic flexibility, fundamentally preventing the rigidity and one-sidedness in the development of their awareness.

3. Implementation Pathways and Multidimensional Evaluation of the Integrated Cultivation Model

3.1 Classroom Ecology Cultivation and Learner Agency Mobilization

3.1.1 Creation of a Supportive Psychological Environment

Establishing a safe and respectful classroom atmosphere is the primary prerequisite. This entails

clearly and consistently enforcing interaction rules centered on fair competition and active collaboration, with immediate and explicit guidance provided for any behavior contrary to sportsmanship (such as excessive individualism or blaming peers). Instructors must model a rational attitude towards competitive outcomes and demonstrate the importance placed on the collaborative process. This approach helps reduce students' performance anxiety and encourages them to dare to experiment and take risks within complex competitive-cooperative situations, even when faced with temporary setbacks.

3.1.2 Empowerment of Learners' Decision-Making Participation

Mobilizing learner agency requires substantively granting students the right to participate in classroom decision-making. For instance, before a team competition, guide students to jointly discuss lineup arrangements and tactical strategies; during practice sessions, allow groups to autonomously choose the focus of their drills or variations of the rules within a certain scope. This process of empowerment transforms students from passive task executors into active co-constructors of solutions, enabling them to more profoundly experience the necessity of formulating competitive strategies and engaging in cooperative negotiation through the process of taking on responsibility.

3.1.3 Institutionalization of Reflective Dialogue Space

The classroom ecology should incorporate institutionalized reflection sessions. Following crucial practice or competitive activities, structured small-group discussions or whole-class sharing sessions should be established. These sessions guide students to conduct reviews using prompts such as, "How did our choices balance offense and coordination?" or "How did the opponents' strategy compel us to adjust our collaborative approach?" The instructor, serving as a facilitator, poses open-ended questions rather than providing standard answers, thereby encouraging students to internalize their experiences into transferable competitive-cooperative cognitive schemas. Reflective dialogue connects external physical practice with internal cognitive construction, representing an advanced form of agency development^[5].

3.2 Process-Oriented Feedback and the Guided Design of Competitive Situations

3.2.1 Process-Oriented Feedback Mechanism Focusing on Competitive-Cooperative Behaviors

The instructor's observation and feedback should expand beyond mere correction of technical execution to include immediate analysis of the quality of competitive and cooperative behaviors. Such feedback should be specific and descriptive rather than judgmental. For example: "In that last point, you created an offensive opportunity through successive frontcourt-backcourt maneuvers (cooperative tactical execution), but the subsequent smash selection overlooked your opponents' positioning (a lapse in competitive decision-making)." This type of feedback helps students establish a refined connection between behavior and outcome, clarifying the specific direction for adjusting their competitive-cooperative strategies.

3.2.2 Educational Adaptation of Competitive Situations

The direct adoption of standard competition rules often reinforces a purely result-oriented form of competition. Therefore, it is necessary to implement an educational adaptation of competitive situations within the classroom by embedding guiding rules. For example, establishing "collaboration bonus points" in doubles matches (e.g., awarding extra points for scoring through specific cooperative methods), or introducing a "strategy briefing session" in team competitions, requiring the submission of a concise tactical plan that includes competitive-cooperative analysis for evaluation reference. These adaptations transform the competition itself into a vehicle for achieving teaching objectives, rather than merely serving as a final assessment tool.

3.2.3 Parallel Implementation of Individual and Team Dual-Track Evaluation

During competitions and practice sessions, attention and feedback regarding performance are implemented in parallel along two tracks: individual and team. This involves documenting an individual's key decisions, level of effort, and skill execution (the competitive dimension), while also assessing their communication, support, role fulfillment, and shared leadership behaviors within the team (the cooperative dimension). This dual-track approach conveys a clear message to students: both individual excellence and team success are valued, and they can be synergistically enhanced through effective competitive-cooperative integration.

3.3 Principles for Constructing the Evaluation Index System for Integration Effectiveness

3.3.1 Principle of Multi-dimensional Integration

The evaluation indicators must encompass multiple dimensions, including cognition, behavior, and affective attitude. The cognitive dimension can assess students' understanding and analytical application of competitive-cooperative principles through methods such as situational judgment tests and tactical analysis reports. The behavioral dimension quantifies their performance in competitive-cooperative behaviors via classroom observation records and match statistics (e.g., cooperative scoring rate, percentage of assistive shots). The affective attitude dimension can utilize validated scales or in-depth interviews to understand changes in students' respect, sense of responsibility, and collective identity, among other aspects. Only through multi-dimensional integration can a comprehensive picture of the integration effectiveness be depicted.

3.3.2 Principle of Process and Development Orientation

The evaluation must place significant emphasis on process and development orientation. This means focusing not only on summative performance at the end of the semester but also on tracking the trajectory of changes in each student's competitive-cooperative awareness and behaviors throughout the entire course cycle by employing methods such as portfolios, learning logs, and comparisons of stage-based performance. The purpose of evaluation lies in diagnosing the learning process and revealing developmental pathways, rather than merely assigning grades. Its feedback should be used to support students' continuous improvement.

3.3.3 Principle of Situational Authenticity

Evaluation tasks should be embedded, as much as possible, within authentic or highly simulated complex sports situations to elicit students' integrated competitive-cooperative performance. For example, a comprehensive challenge task may be designed that involves unknown opponents, requires forming a team on an ad hoc basis, and necessitates devising a complete tactical plan. Performance in such authentic contexts more effectively reflects the level of students' internalized integrative capabilities than isolated skill tests or written examinations, ensuring that the evaluation results possess higher ecological validity and predictive value.

Conclusion

This study has systematically constructed an integration-oriented cultivation model for college badminton elective courses through in-depth analysis of the theoretical foundations for integrating competitive and cooperative awareness and the bearing mechanism of badminton's unique characteristics. The model emphasizes the hierarchical integration of competitive competency and cooperative spirit in its teaching objectives, adheres to a sequential arrangement logic progressing from separate experience to deep integration in its teaching content, and focuses on creating situations, guiding reflection, and constructing dynamic social interdependence relationships in its teaching methods and organizational forms. To ensure the effective operation of this model, the study further proposes key implementation pathways, including fostering a supportive classroom ecology, implementing process-oriented feedback and guided competition design, and establishing a multi-dimensionally integrated evaluation system.

This model's exploration offers a new perspective and a systematic solution for curriculum reform that transcends mere skill instruction. Its core value lies in elevating badminton teaching into an embodied educational practice that promotes students' social-cognitive development and cultivates "cooperative intelligence." Future research could build upon this model to further explore its applicability and adaptation strategies across different sports and student populations, to conduct in-depth longitudinal tracking of the impact mechanisms of integrated cultivation on students' long-term social behaviors and attitudes, and to refine and optimize the model's efficacy through quantitative empirical studies.

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