Integration of Volleyball Training and Competition Instruction in College Elective Courses

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Abstract: For a long time in the past, college volleyball academic courses have struggled to separate their training and competition situations. This lack of a clear connection between training and competition makes it easy for the student to master the skills needed to succeed at volleyball; however, it does not motivate them to learn. The purpose of this research was to utilize a mix of training and competition as a framework to develop a model of an educational application that would help address the gaps present in traditional educational methods. Through practice, this type of fusion between training and competitions has been shown to improve the students' tactical understanding and practical application capabilities when playing volleyball. The case study model and dynamic evaluation system are two components of the fusion model that can serve as resources for similar types of volleyball courses. Based on the teaching experiences within the course, there are opportunities to continually optimize and adjust the model.

Keywords: Volleyball Training; Match Instruction; College Elective Courses; Integrated Application; Teaching Reform

1. Introduction

Currently university volleyball elective classes are structured by following the historical linear decomposition of exercises into full matches resulting in students struggling to apply singularly taught techniques to actual match play flexibly. The curriculum's design limits volleyball's natural benefits of working cohesively and adapting cooperatively therefore students lose interest due to increased amounts of time spent repetitively training. The investigation of integrating training and competition will serve as the focal point for enhancement in the overall quality of the instructional process. A fundamental component within this is redesigning the instructional process so that tactical application and the development of technological skills occur within an environment that naturally occurs side by side.

2. Theoretical Foundations for Integrating Volleyball Training and Match Instruction

2.1 Defining Core Concepts in Volleyball Training and Match Instruction

Most volleyball training involves deconstructing and practicing repetitive or stationary movement specific to certain technical skills (for example: repetitive dunking or stationary route dunking) in order to develop consistency with muscle memory and motor patterning. In contrast, competition-based teaching involves the use of technology that allows for application within competition settings; therefore, students must read and analyze variables such as ball trajectory and positions of teammates; they must decide within a matter of seconds on an appropriate course of action. The fundamental distinction between the two forms of training and teaching lie within the established parameters of the two forms: while standardized and controllable forms are pursued during training, competition presents much uncertainty and pressure to perform through decision-making. Traditional models of teaching which apply separation between the two will generally result in students gaining the ability to complete standardized movements but lacking the ability to apply them to competitive situations. Thus, establishing a definite and clear description of the fundamental principles associated with each of the two models of teaching will provide the foundation for developing an understanding of their integration into a cohesive framework [1].

2.2 Theoretical Basis and Teaching Principles for Integrated Application

The theory of situational learning constitutes the core basis for integration, which emphasizes that skills should be acquired in an environment close to actual combat. The competitive nature of volleyball determines that isolated training is difficult to transform into practical skills, so the teaching principle must be directed towards the organic unity of training and competition. When designing courses, teachers need to embed technical points into simplified rules for adversarial activities, such as introducing moving targets and defensive interference in passing exercises. This type of confrontation with predetermined conditions encourages students to actively apply technology and make decisions, thereby consolidating their mastery of movements and enhancing their tactical awareness under the pressure of simulated actual combat.

2.3 Alignment Between Volleyball Characteristics and College Physical Education Objectives

Volleyball relies on continuous tacit cooperation and real-time communication among team members, and precise prediction and cooperation are required for every offensive organization. The team oriented nature of this project imposes clear requirements on students' collective consciousness and communication skills, and the important goal of university physical education is to cultivate students' teamwork spirit and social adaptability. The quality of volleyball technical movements directly affects the direction of the game. Students must maintain focus and make reasonable technical choices under pressure, which can effectively exercise their psychological qualities and stress resistance. College physical education courses can naturally achieve the internal demand of improving students' comprehensive quality through volleyball teaching, and transform the characteristics of sports into specific educational carriers.

3. Practical Challenges in Integrating Volleyball Training and Match Instruction in College Electives

3.1 Disconnect Between Training and Matches Due to Insufficient Teaching Resources

Many universities' volleyball elective courses face the practical problem of limited teaching venues, which need to meet the teaching needs of multiple classes simultaneously. Teachers often prioritize ensuring the necessary space for basic technical training when organizing teaching, such as arranging for students to repeat practice of dribbling or serving during halftime. This arrangement directly leads to a significant reduction in the training time for competitive matches that require full field running and complex rotations. After mastering individual techniques, students lack sufficient practical opportunities to experience how to apply these techniques in movement, such as quickly organizing a coherent attack after receiving a serve. Insufficient teaching resources force the curriculum structure to lean towards static and decomposed approaches, making it difficult to establish effective connections between technical learning and dynamic competition applications. As a result, students' tactical awareness and on-site decision-making abilities are not fully developed.

3.2 Superficial Instruction Impeding Deep Skill Mastery

The current teaching arrangement of volleyball elective courses often tends to cover multiple techniques such as serving, dribbling, passing, and dunking within one semester. The limited class hours force teachers to only provide basic explanations and demonstrations for each technique, and students' subsequent exercises mainly focus on stationary movements. This teaching process allows students to have a preliminary experience of various techniques, but it is difficult to delve into the compound exercises that combine footwork and positional rotation. For example, students may only master the posture of using both hands to step the ball forward when learning to do so, but rarely consolidate this technique in simulating the fast movements required for receiving or defending the ball. The breadth of teaching content has squeezed the deepening training of individual skills, and students' skills remain at the surface level of knowing the essentials of movements. Their technical stability and applicability in complex competition situations are both insufficient.

3.3 Low Student Engagement and Lack of Interest

The participation enthusiasm of students in volleyball elective courses is prone to gradually decline

in repetitive basic training, and single technical decomposition exercises lack sufficient variation and challenge. Many students have a certain foundation in volleyball, and they are prone to feeling tired of practicing fixed patterns of dribbling and passing in consecutive classes. However, students with zero foundation may feel frustrated when facing the same training content due to technical unfamiliarity and slow progress, and both groups of students may find it difficult to achieve sustained sense of achievement in the existing teaching process. Classroom organization sometimes places too much emphasis on teacher explanations and unified exercises, resulting in a lack of problem-solving oriented collaborative exploration and moderate competition among students. The lack of interactivity in the teaching process has weakened the team vitality and fun that volleyball should have, ultimately reflected in some students' low enthusiasm during practice. If the final assessment still focuses on isolated technical movements as the main criterion, students will lack the deep motivation to transform their skills into competitive abilities, and their learning engagement will naturally remain at the shallow stage of preparing for the exam [2].

3.4 Inadequate Assessment and Evaluation Systems

The current assessment system mainly relies on quantitative scoring of the quality of individual technical actions completed, such as evaluating the success rate of serving or the standardization of dribbling. This evaluation orientation encourages students to focus their practice on isolated technical aspects of exam preparation, and they tend to repeatedly practice fixed position wall kicks to improve exam stability. However, the crucial aspects of off the ball running, pre positioning, and tactical coordination with teammates in the game are difficult to effectively reflect in traditional assessment models. The singularity of evaluation criteria cannot accurately measure students' comprehensive application ability in real adversarial situations. Students who score high in exams may exhibit problems such as a single passing route or lack of protective awareness in actual combat. The teaching process is therefore constrained by the reverse assessment method, and both teachers and students may overlook the cultivation of tactical literacy and collaborative abilities that cannot be simply quantified.

3.5 Conflict Between Limited Course Hours and Systematic Instruction

The limited class hours in the teaching plan make it difficult to support the complete teaching chain required from technical decomposition to practical application. Teachers need to complete introductory teaching of multiple techniques within ten weeks, and the practice time for each technique is strictly controlled. When students are not yet proficient in basic serial techniques, the course progress requires them to move on to the next technical unit. The weak technical foundation makes it difficult to smoothly carry out simple adversarial exercises designed in the future. In order to complete the predetermined content within a limited time, teaching arrangements often compress or even omit the explanation of competition rules and the cultivation of tactical awareness. The lack of systematic teaching results in a fragmented and fragmented nature of course content, where students acquire more isolated knowledge points rather than a coherent system of abilities. The technical assessment at the end of the semester often only reflects their stage specific practice results rather than their actual athletic abilities.

4. Innovative Strategies for Integrated Application in College Electives

4.1 Optimizing Teaching Resource Allocation and Curriculum Design

Course designers must first meticulously plan the allocation of venues and time, dividing the standard volleyball court into multiple functional zones to support simultaneous teaching activities of varying types. Administrators can coordinate the scheduling of some courses during off-peak hours using auxiliary courts or outdoor facilities for foundational training, thereby reserving ample space in the main venue for organizing comprehensive teaching matches. Teaching teams should innovate by utilizing portable equipment such as mini-net volleyball and soft volleyball to design restricted competitive games, as these tools effectively lower the technical threshold for beginners and increase the number of rallies. The revision of the curriculum outline requires breaking away from the traditional linear structure of organizing chapters by technical categories, shifting instead to a modular unit centered on specific tactical themes. For instance, the "Offensive Organization" unit can integrate multiple technical elements like serving, receiving, and setting into a complete tactical flow of receiving serve offense for sequential instruction. Additionally, the teaching team must implement

differentiated instruction based on students' actual skill levels, designing tailored training tasks and competition objectives for different groups. This approach ensures that students with weaker foundations achieve success in simplified rule-based competition while allowing more skilled students to face more complex tactical challenges [3].

4.2 Establishing a Teaching Model Deeply Integrating Training and Competition

This teaching model requires instructors to simultaneously design corresponding competitive scenarios in each core technical teaching unit. The practice begins with themed contests featuring clear constraints, such as organizing simplified matches with "three-on-three teams limited to three hits over the net" during passing drills, where students must employ passing techniques to complete reception and defensive returns. Instructors then observe students' technical execution during these contests, pausing immediately to address common issues like delayed movement or poor ball control through targeted exercises like moving passes or continuous defense drills. Once students show initial improvement through specialized practice, the teaching process immediately returns to modified competitive settings to assess progress, such as adding rules like "every offensive play must involve a setter" in the same "three-on-three" contests to reinforce passing precision. In later stages, instructional matches should be designed with phased objectives—perhaps focusing on evaluating the execution quality of specific tactical combinations in the first round, while the second round emphasizes technical versatility and adaptability across different positions. This entire teaching cycle ensures technical training stems from practical needs and ultimately serves real-world application, allowing students to deepen their understanding of technical value through repeated cycles of "competition—identify issues—targeted training—repeat competition.".

4.3 Innovating Teaching Methods to Enhance Student Engagement

Teaching methods should shift the practice format from unidirectional technical imitation to multilateral interactive collaboration, with teachers designing tactical tasks requiring group members to solve together to drive the learning process. For example, in passing drills, instructors can organize a "triangular movement passing" relay game where each group of students must complete a specified number of passes without dropping the ball while moving. The game rules naturally prompt students to remind each other about positioning and timely substitutions. Classroom organization can introduce inter-group competition mechanisms, setting challenges for specific techniques and recording each group's best performance. Competition can effectively enhance students' practice focus and team honor. Teachers can arrange for students to take turns as temporary coach roles, responsible for observing the execution of designated tactical segments during practice sessions and providing brief feedback. Role-switching allows students to understand technical key points and tactical intentions from different perspectives. During the teaching process, differentiated success criteria should be set for students at varying levels. For those with weaker foundations, success may mean directing the ball to a predetermined area, while more skilled students need to execute more complex tactical sequences. Timely specific recognition of students' individual efforts and progress can strengthen their learning motivation and foster an overall positive and competitive atmosphere in the class [4].

4.4 Refining Diversified Assessment Mechanisms

The diversified assessment mechanism requires evaluation content to cover multiple dimensions such as technical application, tactical understanding, and team collaboration. Teachers first need to design a simulated game scenario for technical evaluation and assessment, such as setting up a continuous technical combination test for organizing attacks after receiving and serving, observing the overall effect of students completing ball cushioning, setting, and protection while moving. The performance of regular classroom teaching competitions should be included in the evaluation system, and teachers should give process scores based on students' awareness of position rotation and the rationality of key ball handling in actual practice. The evaluation subject can be jointly composed of teachers and students, organizing students to conduct mutual evaluations on designated tactical activities in groups, and encouraging them to pay attention to their teammates' running habits and collaborative contributions. The composition of semester grades includes different sections such as specialized skill tests, practical performance records, team project reports, and classroom practice attitudes. The weights of each section need to be clearly announced to students at the beginning of the course. Teachers use simple observation records to track the progress of students in different teaching modules, and use the effort and improvement in the learning process as an important evaluation

reference.

4.5 Introducing Information Technology for Teaching Support and Feedback

The teaching team can use ordinary camera equipment to record short video clips of students practicing and competing. Video analysis focuses on selecting representative technical moments or tactical coordination scenarios, and during classroom collective playback, teachers guide students to observe their own action details and decision-making opportunities on the field. The data feedback process introduces simple recording methods, such as designing tables to calculate the success rate of specific tactics in teaching competitions or the number of touches made by students when they rotate to different positions. Teachers use tablets to instantly retrieve relevant data or video clips at the practice site, providing objective and visual reference for students to explain the direction of technical improvement. After class learning sessions can be conducted by establishing a course group to share edited teaching video points, and students can focus on the existing problems during independent practice based on the annotated prompts. Information technology assistance ultimately needs to be combined with assessment and evaluation, such as requiring students to submit a self technical analysis report or a group tactical demonstration video as an important component of process evaluation.

5. Practical Cases and Effectiveness Evaluation of Integrated Application

5.1 Modular Teaching Case Design: Using Specific Tactics and Techniques as Examples

Taking the improvement of the ability to organize attacks through receiving and serving as an example, this teaching module begins with an observational teaching competition, where the rules require only one pass to be placed near three meters in order to organize an effective attack. The clear process of the competition exposed the common deficiencies in students' control of ball direction and movement positioning. The teacher then designed targeted mobile ball pads and series running exercises with one pass and two sets, focusing on strengthening students' technical stability in handling balls of different performance in dynamic situations. When students' technical performance improves, the practice content is upgraded to set conditions for confrontation, such as requiring the receiving and sending team to execute designated fast break tactics. In the later stage of the module, teaching competitions will be reintroduced, and teachers will encourage students to use their training results through a point reward mechanism and record the tactical execution of key balls on site. The entire case follows a closed-loop logic of "discovering problems in real combat, training to solve problems, and then testing the effectiveness in real combat", ensuring that each training session is directly linked to the clear goal of improving competition ability.

5.2 Organization and Implementation of Integrated In-Class and Out-of-Class Competition Platforms

The integrated platform of in class and out of class construction aims to repeatedly hone the skills and tactics learned in the classroom in a more open competition environment. Teachers first organize small-scale themed competitions in regular classrooms, such as the "three on three" arena competition focused on defense and counterattack. The competition rules are flexibly adjusted according to the current teaching focus. Extracurricular activities are organized by class or department, with low threshold volleyball leagues on weekends. The league adopts a round robin system and allows students to freely form teams to register. The platform management rules clearly require that each participating team must include students with different technical levels, in order to promote mutual teaching and experience sharing within the team. The teacher team arranges senior students or volleyball talents to serve as referees and technical observers for extracurricular leagues. They are responsible for recording typical tactical coordination and common mistakes that occur during the competition. The practical performance and data records of extracurricular competitions are systematically fed back to the classroom teaching process, and teachers use these real cases to conduct targeted reviews and explanations in the classroom. The operation of the entire platform is linked to course evaluation and participation in competitions. The number of appearances, roles played, and team scores of students in extracurricular leagues are all included in the final evaluation with a certain weight [5].

5.3 Assessment Methods for Student Learning Outcomes and Competency Development

The evaluation of learning effectiveness relies on a methodological system that combines process oriented and summative approaches. Teachers use recording tools to track changes in students' abilities, and establish individual reference benchmarks for basic skill verification at the beginning of the semester. The performance of classroom module competitions is evaluated in real-time by teachers based on tactical lists, with a focus on the rationality of key ball handling and tactical selection. The technical data recorded by student referees in extracurricular platforms forms practical archives, which are mutually verified with classroom evaluations. Regular student self-evaluation and group peer evaluation provide supplementary perspectives from the perspectives of collaboration and understanding. The final assessment is designed as a comprehensive practical scenario test, and the teacher team conducts a joint evaluation from multiple dimensions including technical application, awareness, and adaptability. These records together constitute a complete basis for reflecting the development of students' abilities.

6. Conclusion

Integrating competition components into the teaching practice is critical for a successful pre training integration of competition components throughout the teaching process. Effectively integrating competition components into a student's hands will support the student to develop both skill consolidation and the ability to think and make decisions during difficult times. The changes in the ways of teaching Physical Education (PE) will help further develop the student's ability to apply their learning in the future. A modular case design along with an evaluation model that evaluates multiple aspects of success will provide the necessary tools to continue improving the model. Future changes in PE process will need to address the use of personalized pathways and the tools that can support these pathways, in an effort to provide the ability to achieve the learning objectives for volleyball in an efficient way within the limited time available to teach this subject.

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