WHIOCE PUBLISHING PTE. LTD.
PROVIDING
FIRST-CLASS SCIENTIFIC INFORMATION
FOR TOP SCHOLARS

2025 Volume 3, Issue 9
Contemporary Education Frontiers
ISSN (Online): 3029-1860 ISSN (Print): 3029-1879

Research on the Application Effects of Layered Teaching Method in Basketball Instruction at Vocational Colleges

Yaxin Zheng, Xiaoqing Lai, Jiang Liang
Sichuan Top IT VocationaI Institute, Chengdu 611743, Sichuan, China

**Author to whom correspondence should be addressed.*

Abstract: *Objective:* To explore the implementation pathway and application effects of the layered teaching method in vocational basketball instruction. *Methods:* Based on students'skill level differences, a three-tier teaching system was constructed consisting of basic, intermediate, and advanced layers. Differentiated teaching objectives were formulated for each tier, modular teaching content was organized, and a multi-dimensional value-added assessment mechanism was established for a semester-long teaching practice. *Results:* Students in the basic layer showed significant improvement in basic technique proficiency rates, with notably enhanced learning confidence. Students in the intermediate layer demonstrated substantial improvement in skill combination ability and tactical execution success rates. Students in the advanced layer exhibited stronger creativity and decision-making abilities in high-intensity confrontations. Overall classroom participation enthusiasm increased, and teaching efficiency and quality achieved remarkable advancement.
Keywords: Layered teaching method; Vocational education; Basketball

Online publication: October 26, 2025

1. Introduction

Students at vocational colleges have vastly different physical education foundations. Traditional unified basketball teaching methods struggle to accommodate the developmental needs of students at different levels, resulting in students with weak foundations having difficulty keeping up while those with higher levels lack sufficient challenge, leading to poor teaching outcomes. As an important practical form of individualized instruction, the layered teaching method emphasizes setting differentiated teaching plans based on students'current levels, enabling each student to achieve optimal development within an appropriate range[1]. Therefore, this study explores the application model of the layered teaching method in vocational basketball courses by constructing a three-tier teaching system, aiming to provide empirical evidence and practical reference for resolving teaching dilemmas and improving educational quality.

2. Implementation design of the layered teaching method

2.1. Setting layered teaching objectives

The setting of teaching objectives follows the principle of unifying differentiation and progression, formulating specific objectives that align with each tier's zone of proximal development. Objectives for basic-layer students focus on establishing movement standardization and mastering fundamental skills, emphasizing the formation and consolidation of correct movement patterns while cultivating interest in basketball and participation confidence. Objectives for intermediate-layer students shift toward improving technical movement stability and understanding and applying simple tactical coordination, emphasizing skill transfer ability and game situation adaptability. Objectives for advanced-layer students point toward deep integration and creative application of technical and tactical systems, focusing on comprehensive development of game reading ability, adaptive decision-making ability, and leadership coordination skills. Objectives for each tier encompass three dimensions: cognitive, skill-based, and affective. Cognitive objectives involve basketball rules, tactical principles, and health knowledge. Skill objectives cover technical movements, physical fitness, and practical ability. Affective objectives address team spirit, willpower, and professional qualities. The objective system presents a spiral ascending structure, with difficulty gradients between tiers while maintaining internal connections, ensuring each student gains a sense of achievement through appropriate challenges[2].

2.2. Organization of layered teaching content

Teaching content organization adopts a strategy combining modular design with flexible configuration. The basic technique module includes core movements such as dribbling, passing and receiving, shooting, and defense, with different practice densities and complexity levels set according to tier differences. The basic layer emphasizes decomposed practice and repetitive reinforcement of individual techniques, ensuring movement quality by reducing practice difficulty and slowing teaching pace. The intermediate layer emphasizes technical combination and continuity training, increasing technical application practice under confrontational conditions to improve skill stability. The advanced layer focuses on technical application and improvised creativity in high-intensity confrontations, incorporating technical decision-making training within complex tactical contexts. The tactical teaching module adopts progressive presentation: the basic layer masters basic positioning and simple coordination; the intermediate layer understands common tactical systems and execution essentials; the advanced layer conducts training in tactical variations and on-site adjustments. The physical training module designs differentiated strength, speed, and endurance training programs based on each tier's current physical fitness status and development needs. Content organization emphasizes continuity between tiers, establishing common learning sessions to promote exchange and interaction among students at different levels, avoiding isolation effects caused by layering, while retaining individualized practice periods to meet differentiated needs[3].

2.3. Construction of layered teaching assessment

The assessment system construction breaks through traditional single-standard models, establishing a mechanism integrating multiple assessment subjects and multi-dimensional assessment indicators. Assessment subjects include three levels: teacher assessment, student self-assessment, and peer assessment. Teacher assessment focuses on technical standardization and progress amplitude. Student self-assessment concerns learning attitude and effort level. Peer assessment emphasizes team contribution and collaborative performance. Assessment indicators encompass both process-oriented and outcome-oriented assessment. Process-oriented assessment tracks dynamic performance such as classroom participation, practice enthusiasm, and team collaboration quality. Outcome-oriented assessment examines skill mastery level, changes in physical fitness, and game application ability. The key innovation lies in implementing value-added assessment, using individual students as the reference frame, focusing on progress amplitude relative to starting levels rather than horizontal comparison between tiers, eliminating psychological pressure that layering might bring. Assessment standards are differentiated according to tier characteristics: the basic layer emphasizes progress speed and foundation consolidation; the intermediate layer focuses on skill stability and tactical understanding; the advanced layer

emphasizes innovative application and comprehensive performance. Assessment results serve not only as a basis for grade determination but also as a diagnostic tool for teaching adjustment and student development. Through timely feedback guiding subsequent learning directions, a positive interaction is formed where assessment promotes learning.

3. Analysis of application effects of the layered teaching method

3.1. Changes in classroom teaching quality

Differentiated instruction significantly enhances classroom teaching efficiency and effectiveness. Teaching organization becomes more orderly, as teachers can provide precise instruction according to tier characteristics, avoiding the drawbacks of traditional teaching that accommodates the majority while neglecting both ends of the spectrum. The configuration of practice density and intensity becomes more reasonable: basic-tier students receive sufficient time for repetitive practice, intermediate-tier students obtain appropriate challenge intensity, and advanced-tier students receive high-level training stimulation, ensuring effective learning and practice time for students at all tiers. The completion rate of teaching content improves due to enhanced alignment between objectives and content, with higher task completion rates across all tiers and more controllable teaching progress. The quality of classroom interaction improves as teachers provide precise guidance for students at different tiers, student questions become more targeted, and teacher-student communication efficiency increases. The timeliness and effectiveness of error correction significantly improve, as teachers can quickly identify typical errors at each tier and provide individualized guidance, ensuring the quality of technical skill formation. The classroom atmosphere becomes more positive, with students maintaining focus due to high content alignment and sustaining enthusiasm through perceivable progress, achieving a qualitative leap in overall teaching quality.

3.2. Developmental differences among students at different tiers

Differentiated instruction produces differentiated developmental effects on students at different tiers. Basic-tier students demonstrate the most significant progress, with improvement rates relative to their starting levels faster than other tiers. The establishment of standardized and stable skill mastery lays the foundation for continuous development, while the building of learning confidence creates conditions for subsequent advancement. Intermediate-tier students exhibit development characterized by enhanced skill stability and deepened tactical understanding, with improved ability to maintain technical movements under competitive conditions and systematic cultivation of game awareness and coordination abilities, presenting a comprehensive and balanced developmental trajectory. Advanced-tier students achieve breakthroughs in tactical creativity and leadership abilities, capable of making sound decisions in complex game situations and demonstrating stronger individual style and team organization capabilities, with some students exhibiting potential for professional development. Students at all tiers show convergence in emotional attitudes and professional qualities cultivation, with development in non-skill dimensions such as sense of responsibility, team spirit, and resilience showing no differences due to tiering. This demonstrates that while differentiated instruction attends to skill differences, it maintains the integrity of educational objectives, achieving organic unity between individualized development and comprehensive development.

4. Conclusion

Through scientific layering, precise instruction, and multi-dimensional assessment, this method effectively resolves teaching dilemmas caused by differences in student foundations, enabling students at different tiers to obtain development space matching their abilities. Future research can further explore dynamic layering mechanisms, cross-tier collaboration models, and personalized teaching plans supported by information technology, promoting the deepened application of the layered teaching method in a broader scope and advancing high-quality development of vocational physical education.

Disclosure statement

The author declares no conflict of interest.

References

[1] Diao R, Wang Z, Liu Y, et al., 2025, GameSense: hierarchical spatio-temporal transformer for basketball player tracking and tactical performance analysis. Scientific Reports, 16: 334.

[2] Sun Y, 2024, Research on the Application of "Dynamic Layering" Teaching Method in College Basketball Classroom. Region-Educational Research and Reviews, 6(2): 14-17.

[3] Hartono M, Kurniawan W R, Wijayanti D G S, et al., 2025, Implementing TaRL in physical education: Mastering specific skills in soccer games for junior high school students. Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan, 44(1): 156-168.