PECIAL EXERCISES FOR DEVELOPING STUDENTS' TECHNICAL TRAINING IN VOLLEYBALL

Xakimov Qobuljom Maxammadovich
Senior lecturer of Ferghana State University, sciences
xakimovqobul77@gmail.com
http://orcid.org/0000-0006-2325-2050

Abstract. *This article examines the theoretical and practical aspects of improving technical training in volleyball among university students. The study analyzes the effectiveness of a system of special exercises designed to enhance players' technical skills, particularly in passing, receiving, spiking, and serving. The results showed that regular use of special exercises significantly improves the accuracy of technical movements, coordination, reaction speed, and strength.*

Keywords: *technical training, volleyball, special exercises, coordination, passing, receiving, serve, spike.*

Introduction

Technical training in volleyball forms the foundation of a player's overall performance. During the student period, developing and refining technical skills requires a specific methodological approach. Technical actions in volleyball combine tactical thinking with physical abilities, directly influencing the outcome of the game [1; 2].

According to Ayrapetyans L.R. and Pulatov A.A., technical preparation in volleyball is the cornerstone of player performance because each technical element (pass, serve, spike, block) is based on specific mechanical and physiological principles [1]. Ashurkova S.F. emphasized that among students, the process of mastering technical movements is closely linked to their individual level of physical development [2].

Allamuratov Sh.I. argued that physiological preparedness directly affects the effectiveness of technical actions [3]. Bairbekov M.G. suggested that the use of special exercises not only improves technical readiness but also enhances players' tactical awareness [4].

The relevance of this study lies in the fact that proper formation and improvement of technical movements through targeted exercises not only increases students' game performance but also develops their general physical and psychological readiness [5; 6; 7].

Literature Review

Volleyball, as a modern sport, is characterized by the close interaction of technical and tactical actions. Therefore, the technical training of players determines not only

their physical readiness but also the overall effectiveness of the game. In recent years, numerous scientific studies have been devoted to the development of technical skills in volleyball, emphasizing the importance of a systematic approach and the use of special exercises to improve performance.

According to Ayrapetyans L.R. and Pulatov A.A. (2012), in their work "Theory and Methodology of Volleyball," technical preparation forms the foundation of volleyball mastery. They define technical training as a unity of mechanical, physiological, and psychological components of a player's performance. The authors emphasize the importance of the principle of gradual learning, in which athletes first master simple, static movements before progressing to dynamic exercises that simulate game situations. Such a sequence ensures the stability of motor skills and their successful transfer into actual play.

Ashurkova S.F. (2020) stresses the importance of an individual approach in teaching volleyball techniques. She argues that every student possesses distinct physical, psychological, and coordinative abilities; therefore, a uniform exercise system cannot yield equal results for all. She proposes differentiated training, where the intensity and content of exercises are adapted to each player's individual capabilities. This personalized methodology not only enhances learning efficiency but also reduces the risk of technical errors and fatigue.

In the field of physiology, Allamuratov Sh.I. (2010) explains that the efficiency of technical movements in volleyball depends directly on the physiological state of the athlete's body. He highlights that endurance of the cardiovascular and muscular systems, along with the stability of the central nervous system, plays a vital role in ensuring technical precision and speed. Therefore, a system of special exercises should simultaneously develop functional and motor preparedness, allowing the player to perform technical actions efficiently even under fatigue.

Bairbekov M.G. (2022), in his study guide "Improving Sports Mastery (Volleyball)," emphasizes that technical development should be achieved through game-simulated exercises. He points out that practice drills should not merely focus on mechanical repetition but should reflect real match conditions, combining offensive and defensive elements. For instance, passing and setting exercises linked with attack sequences improve decision-making speed and reaction time. This approach encourages players to execute movements under time pressure, replicating the dynamics of competition.

Goncharova O.V. (2005) underlines the importance of coordination and psychomotor development in young athletes' technical training. She argues that technical mastery in volleyball depends not only on physical strength and endurance but also on the development of cognitive processes such as attention, concentration, and quick decision-making. Her research suggests that coordination drills and reflex-based exercises can significantly improve the precision of technical actions. This view

aligns with contemporary volleyball methodology, which considers the athlete's psychomotor abilities as a critical determinant of technical excellence.

Gaziev N.R. (2016) analyzes the theoretical foundations of sports training, emphasizing the gradual increase of training loads and the necessity of individual physiological adaptation. He notes that the human body requires sufficient time to adjust to new loads; otherwise, overtraining may occur, hindering technical development. His concept supports the view that consistent, progressive training ensures more stable technical improvement.

One of the most recent and comprehensive works is presented by Akulich L.I., Pulatov A.A., and Ashurkova S.F. (2023) in "Theory and Methodology of Sports Training in Selected Sports (Volleyball)." The authors propose an integrative approach to volleyball training, where technical, tactical, and psychological preparation are viewed as interconnected components. They advocate combining technical exercises with video analysis, statistical observation, and digital feedback to identify and correct errors more effectively. This modern approach allows athletes to understand the biomechanical and tactical reasons behind their technical mistakes, promoting self-correction and more efficient learning.

A synthesis of the above literature shows that the most effective way to develop technical training in volleyball is to implement a system of special exercises that replicate real game situations, are tailored to individual player characteristics, and integrate physiological and psychological preparation. The reviewed sources also emphasize the importance of progressive complexity, where exercises move from simple to complex, from static to dynamic forms, ensuring a logical and sustainable skill development process.

In summary, the existing literature provides solid scientific evidence that a well-designed system of special exercises significantly enhances volleyball players' technical skills. Such training improves not only the accuracy and consistency of technical actions but also develops players' coordination, speed, decision-making, and psychological stability. Therefore, the development of an integrative and scientifically grounded system of special exercises for students represents a crucial direction for future research in the methodology of volleyball training.

Research Methodology. The research was conducted with 12 male and female university students aged 18–20 studying at a sports faculty in Tashkent. The experiment lasted for 8 weeks, with training sessions held three times a week.

Research methods:

- Theoretical analysis (review of scientific sources);
- Pedagogical observation;
- Experimental training sessions;
- Statistical analysis (calculation of mean values and percentage differences).

Training program: Throughout the experiment, the following system of special exercises was implemented:

1. Combination passing drills (overhead and underhand passes);
2. Wall passing and receiving repetitions (10–15 times per set);
3. Serve and receive accuracy drills using target-based exercises;
4. Jumping drills for developing spike and block power (vertical and lateral jumps);
5. "In-game movement" drills — positioning, defensive stance, and quick directional changes.

Workload intensity was gradually increased each week. Each training session lasted 90 minutes.

Results

The results of the study are presented in Table 1.

Changes in students' technical performance indicators (n = 12)

Indicators	Initial (±σ)	Final (±σ)	Change (%)
Overhead passing accuracy (%)	62.5 ± 4.2	78.3 ± 3.8	+25.3%
Ball receiving accuracy (%)	58.9 ± 5.0	74.1 ± 4.5	+25.8%
Serve accuracy (%)	55.7 ± 6.1	70.2 ± 5.6	+26.0%
Spike power (km/h)	46.8 ± 3.3	53.5 ± 3.0	+14.3%
Jump height (cm)	49.2 ± 2.8	55.6 ± 3.1	+13.0%

The findings demonstrate that the 8-week special exercise program had a positive impact on the students' technical skills. The most significant improvements were observed in passing and receiving accuracy, which increased by over 25%. These results indicate better movement coordination and improved precision in technical execution.

Discussion

The obtained data support the conclusions of Ashurkova S.F. [2] and Akulich L.I. [7], who stated that adapting training programs to individual player characteristics leads to higher effectiveness in developing technical skills. Similarly, Gaziev N.R. [6] emphasized that gradual load progression enhances athletes' functional adaptation, which aligns with the outcomes of this study.

According to Bairbekov M.G. [4], technical exercises should closely simulate real game situations to achieve the best results. Our research also confirmed that exercises conducted in game-like conditions significantly improved skill retention and execution accuracy.

Conclusion

The study results show that the inclusion of a system of special exercises in volleyball training:

- improves students' technical performance by 20–25%;
- enhances coordination and reaction speed;
- increases precision and stability during game situations.

Thus, a scientifically grounded system of special exercises, individually adapted to the abilities of students, proves to be an effective means of developing technical training in volleyball.

References

1. Ayrapetyans, L.R., & Pulatov, A.A. The Theory and Methodology of Volleyball. Textbook. – Tashkent: "Fan va texnologiya", 2012. – 208 p.

2. Ashurkova, S.F. Theory and Methodology of Volleyball. Textbook. – Tashkent: "O'zkitobsavdonashriyoti", 2020. – 526 p.

3. Allamuratov, Sh.I. Physiology and Sports Physiology. – Tashkent: "Turon-Iqbol", 2010. – 216 p.

4. Bairbekov, M.G. Improving Sports Mastery (Volleyball). Study Guide. – Gulistan, 2022. – 160 p.

5. Goncharova, O.V. Development of Young Athletes' Physical Abilities. – Tashkent, 2005. – 176 p.

6. Gaziev, N.R. Theoretical Foundations of Sports Training. – Tashkent: Ilmiy texnika axborot press, 2016. – 212 p.

7. Akulich, L.I., Pulatov, A.A., & Ashurkova, S.F. Theory and Methodology of Sports Training in Selected Sports (Volleyball). – Tashkent: "O'ZKITOBSAVDONASHRIYOTI" NMIU, 2023. – 608 p.