



ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING

KHOREZMSCIENCE.UZ





CONTENTS

Section 1. ACTUAL PROBLEMS OF NATURAL SCIENCES.....	4
ZIYADULLAYEV ANVAR EGAMBERDIYEVICH, NURIDDINOV JONIBEK FOZIL UGLI, NURMANOV SUVONQUL ERXONOVICH /// STRUCTURE AND CHEMICAL PROPERTIES OF PETROLEUM POLYMER RESINS DERIVED FROM SECONDARY PRODUCTS OF THE PYROLYSIS PROCESS.....	4
ISKANDAROV ABDULLA, KHOLMATOV BAKHTIYOR, ABDULLAEVA MAKHBUBA, OLLABERGANOVA MAVLUDA /// MATERIALS ON THE FAUNA OF SHIELD BUGS (PENTATOMIDAE) OF CENTRAL–EASTERN RESERVES OF THE REPUBLIC OF UZBEKISTAN.....	13
SHAXZODA MUXTOROVA /// CLIMATE DYNAMICS OF THE MIRZACHUL REGION: A KÖPPEN–GEIGER CLASSIFICATION ANALYSIS (1901–1930 VS. 2070–2090).....	17
SHAVKAT SHARIPOV, NAFISA SAMATOVA /// THE INTERNATIONAL PRACTICES OF LAND RESTORATION AND THEIR ADAPTATION TO THE CONDITIONS OF TASHKENT REGION.....	25
Section 2. MODERN PROBLEMS OF TOURISM AND ECONOMICS.....	34
DALIEV AKHTAM SHARAFUTDINOVICH /// THEORETICAL AND METHODOLOGICAL FOUNDATIONS FOR THE FORMATION OF MESO-LEVEL HOUSING INFRASTRUCTURE	34
DALIEV AKHTAM SHARAFUTDINOVICH /// INTERNATIONAL EXPERIENCE AND NATIONAL TASKS IN THE DEVELOPMENT OF SCIENTIFIC PLANNING OF HOUSING INFRASTRUCTURE.....	40
Section 3. ACTUAL PROBLEMS OF MATHEMATICS, PHYSICS AND MECHANICS.....	50
KULDASHOV OBBOZJON KHOKIMOVICH, NABIEV DAVRONBEK OLIMJON UGLI /// OPTOELECTRONIC DEVICE FOR INFORMATION PROTECTION IN FIBER-OPTIC COMMUNICATION LINES.....	50
OTAKHONOVA SEVINCHOY RUSLANBEK KIZI /// ANALYSIS OF CONDUCTION CURRENT AND DISPLACEMENT CURRENT IN THE CHARGING AND DISCHARGING PROCESS OF A CAPACITOR.....	55
Section 4. MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY....	61
OTAKULOVA DURDONA RAKHMONOVNA /// METHODS OF CREATING DIDACTIC MATERIALS USING INTERACTIVE EDUCATIONAL PLATFORMS IN THE EDUCATIONAL PROCESS	61
SHUKURLLAYEV JURABEK MAKSADBAYEVICH /// PYRAMID OF TRAINING FOR INTEGRATION OF THE SPORT OF MINI VOLLEYBALL INTO VOLLEYBALL.....	66



UDC: 37, 37.01/.09, 796

PYRAMID OF TRAINING FOR INTEGRATION OF THE SPORT OF MINI VOLLEYBALL INTO VOLLEYBALL

Shukurllayev Jurabek Maksadbayevich

Chirchik State Pedagogical University

Doctor of philosophy in Pedagogical

Sciences (PhD), docent

j.shukurllayev@gmail.com

Annotatsiya. Ushbu maqolada kichik voleybol sport turini voleybolga integratsiyalashda mashg'ulotlar piramidasi bo'yicha ko'rsatma va takliflar keltirilgan. Mazkur piramidada voleybol elementlarining mashg'ulotlarda birlashishi bilan bog'liq topshiriqlar berilgan bo'lib, mashqlar asosida piramidaning pastki qismidan to uning uchigacha "zinama-zina" tutash mashqlar orqali "Progres" holatiga erishilgan. Tadqiqot natijalari bu mashg'ulotlar piramidasini voleybol mashg'ulotlarida keng qo'llashni tavsiya etadi.

Kalit so'zlar: *Piramida, kichik voleybol, voleybol. integratsiya, sifat, mashg'ulot, natija.*

Аннотация. В данной статье содержатся рекомендации и предложения по тренировочной пирамиде при интеграции детского волейбола в обычный волейбол. В данной пирамиде заложены задания, связанные с интеграцией элементов волейбола в тренировку, а состояние "Прогресс" достигается за счет упражнений, которые выполняются "шаг за шагом" от основания пирамиды к ее вершине. Результаты исследования рекомендуют широкое использование данной тренировочной пирамиды в тренировках по волейболу.

Ключевые слова: *Пирамида, малый волейбол, волейбол. интеграция, качество, тренировка, результат.*

Abstract. This article provides guidelines and suggestions for a training pyramid when integrating the sport of mini volleyball into volleyball. This pyramid provides tasks related to the integration of volleyball elements in training, and the "Progress" state is achieved through exercises that are performed "step by step" from the bottom of the pyramid to its top. The results of the study recommend the widespread use of this training pyramid in volleyball training.

Keywords: *Pyramid, mini volleyball, volleyball. integration, quality, training, result.*

Introduction

In modern sports, particularly in volleyball, the intensification of competition necessitates the implementation of contemporary methods and the advancement of training practices with innovative approaches. In our study, we conducted research on integrating mini-volleyball into volleyball training within the framework of a training pyramid. Our article aligns to a certain extent with the Decree of the President of the Republic of Uzbekistan № PQ-421 dated December 4, 2024, titled "On Measures to

Develop Team Sports and Improve the System for Selecting Talented Youth,” and the Decree № PQ-274 dated July 19, 2024, by President Sh.M. Mirziyoyev, titled “On Measures to Further Develop Volleyball Sports” [1-3].

Literature Review

Issues related to the development of volleyball and sports, the role and significance of a healthy lifestyle in enhancing athletes’ physical abilities, have been explored by researchers such as Pulatov A.A., Ayraretyans L.R., Rakhimov V.Sh., Salamov R., Seytkhalilov E.A., Tulenova Kh.B., Shukurllayev J.M., and M.A. Qurbonova. Additionally, topics concerning the introduction of an acmeological approach into educational practice, the adoption of effective teaching methods, creative and critical approaches to educational practices, and the ability to analyze the outcomes of one’s efforts from a research perspective have been investigated by scholars including Ashurov N.R., Bekmurodov M., Mavlonov O‘., G‘oziyev E., Karimova V., Ma‘murov B.B., Saliyev A.Sh., Tillayeva G.H., Ernazarova G.O., and M.Sh. Islamova [2-6].

Research Methodology

The training pyramid forms the core content of the study, tailored to the specific requirements of volleyball parameters and transferable skills (see Figure 2). Through the integration of mini-volleyball into volleyball, a system of adaptive complex exercises aimed at developing skills has been developed to enhance the effectiveness of volleyball training.

Acmeology of the Training Pyramid. Here, “acme” refers to the “pinnacle,” signifying the achievement of the highest level. We represented the training stages in the form of a pyramid, termed the “Training Pyramid” (see Figure 1). This pyramid is designed based on the level of mastery of the exercises performed by trainees. It requires the implementation of exercises by generalizing aspects such as their content, structure, characteristics, classification, and execution.

For instance, in one of the pyramids, tasks are assigned related to general physical preparation exercises; in another, to the classification of specialized exercises; and in the third, to the integration of mini-volleyball and volleyball elements during training sessions. Based on the existing exercises, a progressive state is achieved through interconnected exercises, moving “step by step” from the base of the pyramid to its apex.

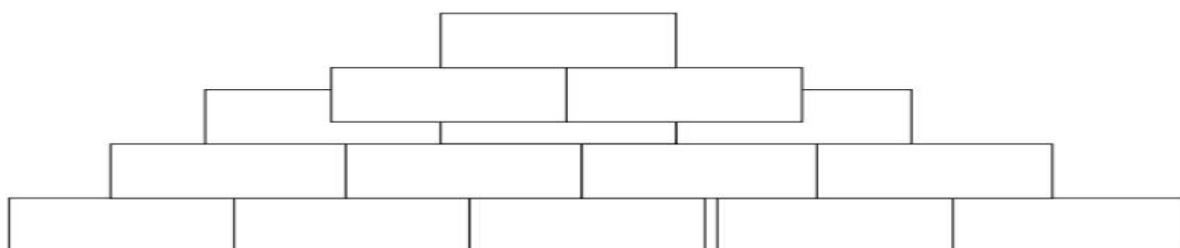


Figure 1. Skeleton of “step by step” exercises from the base of the pyramid.

For example, the “Pyramid Based on Mini-Volleyball Rules.” Through the training sessions of the first level of this pyramid, progression is made to the second level (step). From there, through specialized exercises, advancement is made to the third level. In

the same manner, progression continues to the fourth and fifth levels, ultimately conquering the pyramid.

In this pyramid, tasks related to the classification of mini-volleyball and volleyball trainees are implemented. To progress from the base to the apex of the pyramid, it is necessary to utilize mini-volleyball exercises.

During the research process, to integrate mini-volleyball into volleyball and enhance the effectiveness of the training pyramid, a methodological and programmatic framework for training was developed and defined as shown in Figure 2.

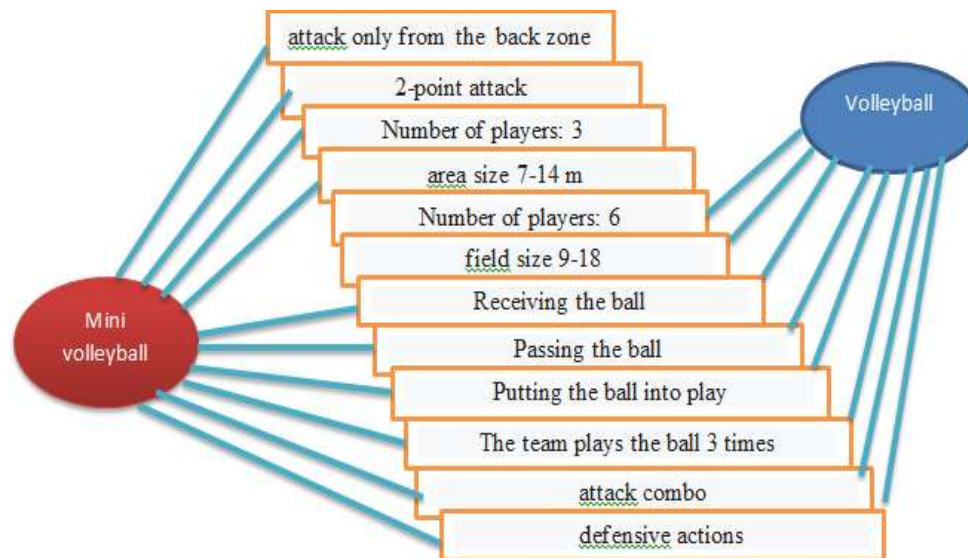
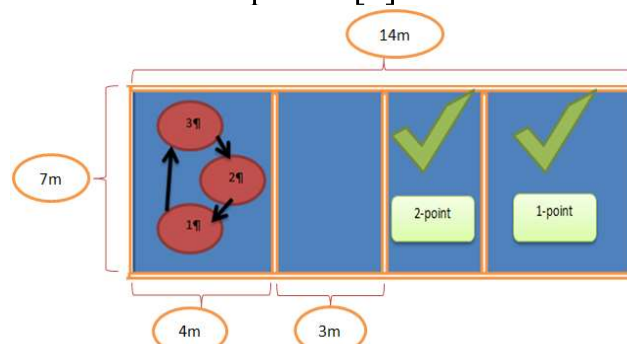


Figure 2. The methodological and programmatic framework for training enhancement.

During the research process, a methodological and programmatic framework for training was developed to enhance the effectiveness of offensive techniques in volleyball through the elements of mini-volleyball, and it was defined as follows:

The playing court was designated. The court is rectangular in shape, with a length of 14 meters and a width of 7 meters (see Figure 3). The smaller size of the court compared to standard volleyball, along with the reduced number of players, contributes to a certain extent to improving the individual physical, technical, and tactical preparation of trainees [7].

The positioning and movement patterns of players were developed (see Figure 3). During the game, three players participate. Offensive actions are performed exclusively from the back zone. This approach enhances the trainee's field of vision, improves attacking skills, agility, and ball reception and control abilities, thereby contributing to their overall development [7].



3- Figure

Figure 3. The playing court design.

Points and zones were distributed as follows: If the ball lands in the attack zone, 2 points are awarded; if it lands in the defensive zone, 1 point is awarded (see Figure 3). This approach increases the trainee's motivation to score points. Incorporating these exercises into the training process has facilitated the formation of a progressive pyramid for the technical and tactical preparation of volleyball players.

Analysis and Results

The analysis of the trainees' performance was conducted based on the following descriptions (see Table 1).

Table 1. The analysis of the trainees' performance.

Research Criteria	
1	Standing long jump
2	Accuracy and consistency in ball passing
3	Effectiveness of ball reception resulting from the application of the attack method from the back zone
4	Trainees' decision-making and ability to anticipate situations

1. The performance of the standing long jump, as applied in training sessions, demonstrated an improvement in leg strength and vertical jump performance, with the indicator rising from 71% to 87% over the course of an annual training cycle. The primary challenges for trainees were related to coordinating movements for jumping and striking the ball.

2. The accuracy and consistency of ball passing, as practiced in training, took an average of 6 weeks to master. The proportion of accurate and consistent targeted ball passing increased from 46% to 58%, and the number of errors in this method was reduced by 12%. The challenges in this regard were relatively complex, as the focus was on passing the ball to a precise point with consistent accuracy.

3. The effectiveness of ball reception resulting from the application of the attack method from the back zone, as practiced in training, required an average of 7 weeks to master. This method aims to complicate the opponent's ability to receive the ball. The effectiveness of ball reception increased from 41% to 69%, and the number of errors in this method was reduced by 28%.

4. Efforts to enhance trainees' decision-making and situational anticipation skills during a 7-week training period yielded positive results. Trainees achieved the ability to execute block-free attacks and improve the quality of deceptive movements based on the game situation. As a result, the effectiveness of decision-making and situational anticipation increased from 34% to 61%, with a 27% reduction in errors associated with this method. The main challenges in training were related to distracting and deceiving the opponent, maintaining consistency in scoring, and executing effective strikes.

The research process was conducted among student participants of volleyball clubs at Chirchiq State Pedagogical University and the Ajiniyoz Nukus State Pedagogical Institute.

Table 2. Indicators of Research Results.

	Criterion	Previous indicators	New indicators	Difference %
1	Standing Long Jump	71%	87%	16%
2	Accuracy and Consistency of Ball Passing	46%	58%	12%
3	Effectiveness of Ball Reception Resulting from the Application of the Attack Method from the Back Zone	41%	69%	28%
4	Trainees' Decision-Making and Situational Anticipation Ability	34%	61%	27%
Average Indicator		48%	68,75%	20,75%

Mathematical Expression of Results. The provided data were expressed in percentages using the following mathematical formula:

$$Kq \frac{J}{Q} \cdot 100\% \quad (1)$$

here,

J-the number of correct responses provided by students in the questionnaires during the experimental trials.

Q-the total number of students in the group whose results are being evaluated.

Mathematical-statistical analyses of the results were conducted based on the Student's t-test (Fisher's criterion).

Conclusion

Based on the research results, it was determined that the post-research performance improvement rate reached an effectiveness of 20.75%. We recommend utilizing the aforementioned exercise system in training sessions and for guiding volleyball players in preparation for competitions. Incorporating these exercises into the training process significantly enhanced the technical-tactical preparation of volleyball players. The research results advocate for the widespread application of this sport in physical education classes and volleyball training sessions.

References:

- [1] Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev № PQ–274 dated July 19, 2024, titled “On Measures to Further Develop Volleyball Sports.”
- [2] Shukurllayev J.M. “Methodological Features of Selecting Young Students for Volleyball,” *Academic Research in Educational Sciences*. № 1. October 2, 2020.
- [3] Shukurllayev J.M. “Improving Sports Skills (Volleyball),” Textbook. Chirchiq: City of Book, 2023, p. 240.
- [4] Shukurllayev J.M. “The Essence of the Acmeological Approach in Preparing Students for Scientific and Professional Activities,” *XALQ TA'LIMI Scientific-Methodological Journal*. № 5, 2023, pp. 28–30.
- [5] Shukurllayev J.M. “Methodological Features of Selecting 7–14-Year-Old School Students for Volleyball,” *Mug'allim*, № 2, 2019, pp. 153–156.
- [6] Shukurllayev J.M. “Didactic Foundations of the Acmeological Approach in Developing Physical Qualities in School Students (Based on the Example of Volleyball),” (*PhD*) *Dissertation*. Chirchiq, 2023.
- [7] “Mechanism of Integrating the Acmeology of Preparing for Mini-Volleyball into Volleyball,” Monograph. Tashkent: *Zebo Prints*, 2024, p. 120.