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WAYS OF USING SPECIAL EXERCISES FOR RAPIDLY TEACHING VOLLEYBALL TECHNIQUES TO SCHOOL STUDENTS

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ABOUT ARTICLE

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Abstract: This article examines effective ways of using special exercises for rapidly teaching volleyball techniques to school students. The study focuses on improving students' technical skills through specially selected exercises aimed at developing coordination, agility, speed, and accuracy during volleyball lessons. The research highlights the importance of using simplified and game-oriented exercises in the initial stage of training, which helps students quickly master basic volleyball techniques such as serving, passing, setting, and attacking.

Introduction. In global sports practice, volleyball competitions are becoming increasingly intense and highly competitive, resulting in continuous improvement in performance outcomes from year to year. In turn, this requires a further increase in the volume and intensity of training, strengthening athletes' reserves of physical capabilities, expanding the range of technical and tactical actions, and developing playing skills in young athletes.

In volleyball, the use of active and movement-based games is considered essential for developing playing skills, teaching technical and tactical actions, and improving them. At the same time, considerable attention is being paid to the issue of organizing the educational and training process for young volleyball players. Organizing training sessions on the basis of

modern technologies has become highly important. However, there is still insufficient research devoted to the use of innovative equipment and exercises aimed at improving ball reception, passing, serving, and overall game skills at the initial stage of training. A number of well-known scholars, such as V.M. Filin, L.P. Matveyev, L.P. Volkov, V.N. Platonov, M.A. Godik, Yu.D. Jeleznyak, Yu.P. Syromyatnikov, and A.V. Chachin, emphasize the importance of physical preparation that ensures the effective mobilization of technical and tactical abilities during training and competition periods in volleyball practice. They also highlight the necessity of developing the athlete preparation system throughout all stages of long-term sports training. However, these researchers did not provide clear answers regarding which methods, approaches, or tools should be applied in practice.

Materials and Methods. Research on the influence of training methods, means, workload volume, and intensity on athletes' bodies has been carried out by scholars such as Whitney Bartiuk, O.V. Osadchii, Steve Knight, and Cora Delmonico. Their studies focused on physical preparation that ensures the effective mobilization of technical and tactical abilities in volleyball training practice. However, these studies did not provide methods for monitoring how the applied techniques and approaches influence the training process, particularly in developing the direct sense and perception of the ball.

The initial level of development of the main physical qualities and their dynamics are of great importance for correctly evaluating the existing potential of beginner volleyball players. This is especially important when not only the athlete's chronological age but also their biological age is taken into account. Even a very high level of one physical quality alone cannot be considered a definite indicator of outstanding ability, since in other sports it is possible to find athletes who are stronger (weightlifting, wrestling), faster (sprinting), or more agile (acrobatics). There is also an opinion that preference should be given to talents who demonstrate speed, accuracy, and stability in game actions, as these qualities contribute to the effective formation of game combinations and volleyball playing skills. It is emphasized that when such talents are identified, it becomes necessary to conduct assessments aimed at determining the level of development of the student's physical qualities. These evaluations should be carried out within a sufficiently professional environment and with confidence in the athlete's future potential. The assessment process is usually conducted over a relatively long period of time and in a specific sequence.

The authors note that, in young volleyball players, successful movement in small-sided games, participation in relay competitions, and performance during game situations are

important criteria for evaluation. Repeated selection is then conducted among the candidates who were initially selected.

Coaches' opinions regarding the candidates are clarified on the basis of the results obtained from control tests and assessment trials conducted to evaluate character traits and various personal qualities. At the third stage of selection, the coach takes into account how young athletes demonstrate their learning abilities during the training process, as well as their mobility, diligence, and level of understanding. At this stage, more comprehensive and in-depth testing programs are conducted in order to avoid mistakes when evaluating children who already have initial volleyball experience and those who do not.

Based on expert evaluations of the most important qualities and abilities required for playing volleyball, a specific hierarchy of qualities is established. Psychophysiological indicators that contribute to the formation of tactical abilities are considered especially important in sports games. Therefore, sensorimotor reactions, operational thinking, attention characteristics, and model indicators are of particular significance in team sports [50; p. 24].

The content of training young volleyball players throughout the long-term preparation process should be determined on the basis of three main factors: the specific characteristics of volleyball, the model requirements typical of highly qualified volleyball players, and the age-related characteristics and capabilities of young athletes.

During the process of long-term training, it is necessary and important to implement educational measures aimed at preventing negative consequences such as unfair exclusion from training groups during selection, the use of excessive training loads focused only on achieving rapid results, and the development of the so-called "star syndrome" among young athletes. At the initial stage, it is considered appropriate to use movement-based and active games as the foundation of volleyball training sessions.

The long-term training process consists of several stages, the names and descriptions of which are presented in the previous and subsequent tables.

It is recommended to follow a number of stages and to use standard methods, tools, and principles in the processes of developing physical qualities, teaching technical-tactical movements, and improving them. It should be particularly emphasized that, even today, both in the theory and practice of physical education and sports, it is difficult to state that such concepts as "physical preparation," "physical qualities," "physical capabilities" or "motor abilities," and "physical working capacity" have been fully explained through unified interpretations of their internal and external essence and psychophysiological mechanisms.

In particular, it is emphasized that the concepts of “physical preparation” and “physical education” are often understood as having nearly the same meaning. According to this view, “physical education” refers to the process of teaching movement skills and abilities, as well as developing physical qualities. The concept of “physical preparation,” in turn, represents the practical application of physical education directed toward social, professional, and sports activities. (See Table 1.2) [45; pp. 320–325; 48; pp. 211–215].

Based on the above considerations, one of the urgent scientific problems is the substantiation of methods for developing students’ volleyball playing skills through the use of special exercises, the innovative “Moving Ball” device, the selection of volleyball-specific exercises, and the development and practical application of specialized exercise complexes.

The technique of volleyball consists of a set of movement methods necessary for conducting the game effectively. The effectiveness of movement techniques is evaluated according to the player’s ability to act purposefully and efficiently in various game situations. Each technical action performed during the game is based on a system of interconnected movements. The technique of movement includes the dynamic and kinematic characteristics of actions that are necessary and sufficient for solving specific motor tasks in a particular way, such as the sequence of applied forces, coordination between different body parts, and other biomechanical features.

The main part of technique is the most important and decisive component of the basic mechanism of a particular movement. The execution of the main part of the technique is characterized by the application of significant force within a relatively short period of time. The details of technique are secondary features that do not disrupt the main mechanism of movement. These technical details may differ among athletes depending on their morphological and functional capabilities.

When performing technical movements, certain time-related phases of motion are distinguished. Usually, three phases of movement can be identified: the preparatory phase, the main phase, and the final phase.

The importance of the preparatory phase lies in creating favorable conditions for the effective execution of the movement in the main phase. Such conditions are created through actions such as approach running, jumping, and rotational movements performed during blocking, serving, and attacking hits. The movements carried out in the main phase are directly aimed at solving the primary motor tasks. From a biodynamic point of view, the most important aspect of this phase is the effective use of driving forces in the appropriate situation and direction.

In the final phase, movements gradually decrease or are sharply stopped in order to maintain body balance. Since volleyball is a highly dynamic game, a volleyball player must master various technical techniques, be able to select them according to the game situation, and execute them quickly and accurately. This, in turn, determines the player's technical skill level.

The indicators of high technical mastery are expressed through the following characteristics:

- accurate and effective execution of movement techniques;

- stability of movements in the presence of disturbing factors such as fatigue or unfavorable external conditions;

- the ability to choose and reorganize response actions according to the opponent's movements while effectively controlling the elements of motion;

-reliability in the execution of technical techniques.

At different stages of volleyball development, the methods, requirements, forms, and content of technical actions have continuously changed and improved. The main reasons for changes in technical methods include modifications in game rules, the improvement of tactical actions, and the increasing level of players' physical preparedness. The growth of game dynamics in both offense and defense, the increase in movement potential, and the expansion of offensive and defensive combinations also encourage the modernization and restructuring of technical techniques.

Nevertheless, it cannot be claimed that the techniques currently used in volleyball have reached the absolute limit of effectiveness. The functional and physical capabilities of highly skilled athletes create opportunities for introducing and implementing new and advanced technical methods into the game.

The classification of game techniques refers to dividing them into specific groups and categories according to their form, content, purpose of application, interrelation of movements, and the kinematic and dynamic structure of actions.

Volleyball technique is generally divided into two major sections: offensive and defensive techniques. In turn, each of these sections is further subdivided into several groups based on the form and content of technical actions. Every group includes its own specific methods for performing technical movements.

Results and Discussion. "Physical qualities" refer to a set of psychobiological characteristics directed toward socially significant needs, reflecting the degree to which an individual is physically prepared for a specific type of motor activity.

“Physical qualities” are expressed through innate and hereditary morphofunctional characteristics that ensure human physical activity and are manifested in purposeful movement activities. The term “human physical quality” also refers to a person’s specific ability. The mechanical aspect of this ability is distinguished by certain objective qualitative indicators.

“Physical qualities” represent the essential fundamental aspects of movement (human motor activity). Each quality is measured by its own specific unit of measurement. However, evaluating a particular quality only on the basis of the result of a single simple movement test does not provide an objective conclusion, because every quality is a multifaceted and integrated physical ability or physical capability.

Furthermore, based on his own research, the author interprets the essence of such terms as “physical capabilities,” “motor capabilities,” and “movement abilities,” emphasizing that each of them carries a distinct meaning and that it is not appropriate to use them as synonyms. According to the author, the concept of “capability” refers to the maximum level of motor (physical) activity that can be demonstrated on the basis of a person’s psychofunctional and bioenergetic resources.

The concept of “ability” (physical working ability), however, is considered closer in meaning to the concept of “mastery,” expressing the “art” of effectively performing a specific activity and achieving beneficial results within the limits of those available resources.

Dynamics of Teaching Volleyball Techniques to Students Through Special Exercises (Experimental Group)

№	Ko‘rsatkichlar	metr	Tadqiqot boshida (n=12)			Tadqiqot yakunida (n=12)			t_{ct}	P
			$\overline{X}$	σ	V%	$\overline{X}$	σ	V%		
1	**Running and Hitting the Ball**	9	3,84	0,42	10,94	3,11	0,32	10,29	4,79	<0,01
2	**Running Over Obstacles and Hitting the Ball**	9	4,85	0,57	11,75	4,08	0,45	11,03	3,67	<0,01
3	**Moving to Hit a Moving Ball**	9	3,9	0,5	12,82	3,22	0,39	12,11	3,71	<0,01
4	**Hitting a Moving Ball Over Obstacles**	9	4,76	0,56	11,76	4,18	0,47	11,24	2,75	<0,05
5	**Moving Around Obstacles and**	9	4,81	0,52	10,81	4,09	0,42	10,27	3,73	<0,01

	Running to Hit the Ball									
6	**Passing Through Obstacles and Hitting the Ball (10/36 meters)**	36	11,41	1,36	11,92	9,53	1,09	11,44	3,74	<0,01
7	**Passing Through Obstacles and Hitting a Moving Ball (Covering 10/36 meters) "Who is Faster?" Game**	36	12,47	1,61	12,91	10,81	1,34	12,40	2,75	<0,05
8	**Running from the Sideline of the Court and Hitting the Ball**	9	3,48	0,38	10,92	2,95	0,31	10,51	3,74	<0,01
9	**Running from the Sideline of the Court and Hitting a Moving Ball**	9	3,31	0,43	12,99	2,87	0,36	12,54	2,72	<0,05
10	**Running Over Obstacles and Accurately Hitting the Ball**	9	7,52	0,82	10,90	6,66	0,7	10,51	2,76	<0,05

Overall, the results of the experimental group indicate that the use of specially designed exercises had a positive effect on the development of technical volleyball skills among students. The observed improvements confirm the effectiveness of the experimental training methodology in enhancing speed, coordination, movement accuracy, and technical performance during volleyball activities.

Dynamics of Teaching Volleyball Techniques to Students Through Special Exercises (Control Group)

№	Ko'rsatkichlar	metr	Tadqiqot boshida(n=12)			Tadqiqot yakunida(n=12)			T_{ct}	P
			$\overline{X}$	σ	V%	$\overline{X}$	σ	V%		

1	**Running and Hitting the Ball**	9	3,73	0,39	10,46	3,41	0,35	10,26	2,12	<0,05
2	**Running Over Obstacles and Hitting the Ball**	9	4,96	0,57	11,49	4,5	0,5	11,11	2,10	<0,05
3	**Moving to Hit a Moving Ball**	9	3,76	0,46	12,23	3,44	0,41	11,92	1,80	>0,05
4	**Hitting a Moving Ball Over Obstacles**	9	4,65	0,53	11,40	4,37	0,48	10,98	1,36	>0,1
5	**Moving Around Obstacles and Running to Hit the Ball**	9	4,96	0,52	10,48	4,54	0,46	10,13	2,10	<0,05
6	**Passing Through Obstacles and Hitting the Ball (10/36 meters)**	36	11,08	1,28	11,55	10,21	1,13	11,07	1,77	>0,05
7	**Passing Through Obstacles and Hitting a Moving Ball (Covering 10/36 meters) “Who is Faster?” Game**	36	12,32	1,48	12,01	11,55	1,32	11,43	1,35	>0,1
8	**Maydonning yon tomon chizig‘dan yugurib to‘pga zarba berish**	9	3,62	0,38	10,50	3,31	0,33	9,97	2,13	<0,05
9	**Running from the Sideline of the Court and Hitting the Ball**	9	3,23	0,37	11,46	2,97	0,33	11,11	1,82	>0,05
10	**Running Over Obstacles and Accurately Hitting the Ball**	9	7,71	0,81	10,51	7,23	0,73	10,10	1,52	>0,1

Conclusion. Based on the conducted research, the following conclusions were drawn:

1. Traditional approaches to increasing the physical activity of female students are becoming less effective. Therefore, the introduction of modern innovative methodologies is highly relevant and necessary.

2. Training sessions organized using mobile applications, video analysis, QR codes, and gamification elements allow for a 1.5–2 times faster improvement in physical fitness indicators.

3. Innovative methodologies significantly increase female students' interest and motivation toward physical education classes (from 42% to 78% in the experimental group).

4. Such an approach helps maintain physical activity not only during classes but also outside the classroom environment, ensuring continuous engagement in physical exercises.

The following practical recommendations were developed:

-To introduce mobile applications into physical education classes for female student groups, initially using free applications such as Nike Training Club, Adidas Running, and Google Fit;

-To establish a system of providing 5–7 minute homework assignments through QR codes at the end of each lesson;

-To introduce the practice of recording training sessions on video and analyzing them together with students at least once a month;

-To implement a rating system in which points are awarded for activity, task completion, and participation in competitions;

-To organize a university-wide "Most Active Female Student" competition and reward the winners;

-To organize professional development courses for physical education teachers on innovative methodologies.

In addition, conducting broader-scale research involving female students from different universities and regions is considered one of the most promising directions for future studies.

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