



Boxing Training Technology Based on the Level of Physical Development of Children

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ABSTRACTS

It was researched to obtain sufficient information on the pedagogical technologies and methods used in the selection and training of young sportsmen among the students. In it, a deep comparative analysis of modern skills and methods of pedagogical technologies used in training boxers is suitable for the new competitive environment. According to it, accurate information is given about all stages of training boxers. Boxing is considered one of the most interesting sports, which we can see from the fact that it has become more and more popular in our Republic in recent years. Boxing, as one of the martial arts, is characterized by its one-on-one combat and clear rules. A variety of exercise systems are used in the process of training and teaching. This ensures special training of boxers and all-around physical development. In technical and tactical competitions, boxing is one of the most complex sports. To win the fight, the changing situation requires the boxer to be able to quickly and accurately stop and at the same time execute his plan. Therefore, a boxer must be agile, accurate, fast, and able to manage himself well, to be able to get out of any situation. This can be seen in the example of the participation of our athletes in one summer Olympic Games.

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1. INTRODUCTION

Decision PQ-5280 of the President of the Republic of Uzbekistan dated November 5, 2021 "On the program to develop the activities of sports and educational institutions until 2025" and PQ of the President of the Republic of Uzbekistan dated April 29, 2021 - Following the concept of development of Boxing until 2025 approved by the decision No. 5099, as well as training talented athletes as professional boxers, to widely promote the activities of our athletes who won and won prizes in the Olympic Games. Boxers Today, the world of Uzbekistan the sport that carries the flag in the sports arena and where we can see our flag flying high and our anthem playing around the world is boxing.

The involvement of boxers in sports training is one of the urgent tasks of today. In the training of boxers, focusing mainly on their physical development levels and aspects necessary for their selection, the methods of forming their knowledge, skills, and skills related to this sport are considered to be the most important aspects. The process of training and training of boxers, the development of their physical abilities plays an important role (Simpson & Wrisberg, 2013).

One of the main tasks of training a young athlete is the development of the physical qualities necessary for a boxer (speed, flexibility, agility, balance, special endurance, strength, etc.), as well as movement, striking, defensive movements, and counter-attacks. is the acquisition of exercise techniques that ensure the comprehensive development of technical skills? For this reason, it is necessary to pay great attention to these exercises and ask the participants to perform the movements accurately.

When training a young boxer, at the beginning of the course, for about 2-3 months, special attention is paid to studying the biomechanical foundations of boxing movements. A young boxer should acquire freedom of movement and a complex of special exercises. They are learned from facing and side-standing positions and are performed with opposite legs or with corresponding arms. When training on the leg opposite to the hand, the weight of the body falls on the right leg when the impact movement occurs with the left hand, and the body weight falls on the left leg when the impact is made with the right hand. When training on the right leg, the weight of the body falls on the left leg when hitting with the left hand and vice versa.

These actions are separate at first learned in which the boxer stands, then steps forwards, backward, and sideways and in a circle. When hitting, it is necessary to combine several movements. In this case, it is necessary to move from the movement on the legs opposite to the hands to the movement on the corresponding legs, and vice versa. It is advisable to follow a certain sequence to successfully master the technical tools provided in the training program for young practitioners.

First, attacks with long-distance movements, and direct blows to the head and body are studied and improved. Then, if the boxer is standing on the left side, a left-hand side kick to the head is taught, or if the boxer is standing on the right side, a side kick to the head is taught. Such strokes are performed first conditionally, then freely (Xalmuxamedov et al., 2021). Then, defenses using back and side steps, palm, shoulder, wrist blocks, returns, and deflections are studied. After training single shots and defenses (mainly at long range), move to two and three shots in a row, first conditional on the task, and then using defenses according to free choice must After a young boxer has sufficiently mastered the techniques of moving, attacking blows, defenses, he can begin to study counter-attacks in the form of a response.

Young boxers improve their physical and functional training during year-round training. Various means of physical and special training are used in it, rationally combining the size and

intensity of the loads and the means of recovery. It is necessary to use a wide range of general physical training to increase the level of physical and functional fitness of junior boxers. They make it possible to create a basis of general physical fitness to intensify special loads in training and to improve special physical fitness. The special physical training of senior boxers must have a narrow individual orientation, depending on the tasks of improving the individual fighting style ([Mansur, 2019](#)).

The general fitness of top-level boxers is highly specialized, and their specific training varies and is characterized by a high volume and intensity of loads. Raising the physical and functional fitness of low-skilled boxers to a certain level requires optimally combining general and special physical training, volume, and intensity of loads during different periods of training throughout the year ([Mansur, 2022](#)). The athlete must maintain his physical fitness by using general physical training tools (swimming, sports games, running in the forest, and stone-throwing exercises).

This allows him to rest, recover and maintain his athletic form during the training period. Strength training. Classes include a general warm-up and exercises with dumbbells, exercise balls, expanders, and barbells. In addition to exercises that affect the main muscle complex involved in close-range striking and defensive actions and forceful resistance, exercises that have a local effect on a separate group of muscles (for example, shoulder girdle muscles, leg muscles) that are actively involved in the movement of the boxer are used.

The exercises of the first group mainly include barbells (barbell push-ups, push-ups, handstands), exercise balls, and special weight training machines. The most effective weight for developing a boxer's overall strength is a barbell, whose weight is 70-80% of the maximum. The second group of exercises includes dumbbells, exercises with an expander, and specially directed exercises with a barbell (barbell squats, barbell jumps, etc.). Both groups of exercises are used alternately in training. Strength training can be done in different ways. Exercises where speed-strength training tools are used more often. Boxers play basketball, handball, and football with a small ball according to simplified rules after a standard warm-up exercise (10 minutes).

Then 2 rounds of "shadow fight" training (with separate 3-5 seconds of explosive acceleration) and more light projectiles (filler and air punches) and bag spurts are used - all 5-7 rounds. After 3 minutes of rest, boxers (for 30 minutes) perform barbells of various weights, including barbells with weights around the limit, and explosive exercises (2-3 attempts, weight jumps, gymnastic shells jumping and jumping from them), they perform exercises for tension. Speed and the method of its development.

A boxer's speed is his ability to perform certain actions and techniques in the shortest possible time ([Bakhriyev, 2021](#)). It is impossible to achieve high results in boxing without developing the quality of speed. A boxer who moves even a hundredth of a second faster than his opponent will have a significant advantage over him. A boxer's speed depends largely on the mobility of his nervous processes, the conditions, the degree to which he has developed sensitivity to noticing invisible changes in the opponent's actions, and the ability to instantly accept and correctly assess the situation that arises every time during the competition, depends on the skill of receiving, timely and accurate execution of tactical actions.

For example, performing the method with a partner in a smaller weight class, focusing on speed. Stimulates the performance of very fast movements that exceed the speed of performing exercises under normal conditions. The method of performing the exercise in aggravated conditions. Repetition of actions performed at a maximum speed many times in conditions that are much more difficult than those encountered by boxers in competitions.

For example, doing special exercises with a heavy-weight partner. Repetitive stress method. It is used in two ways:

- (i) Perform exercises at the speed of the limit and around the limit;
- (ii) Exercises should be performed in such a condition that maximum strength is provided by transferring a relatively light load from one place to another at high speed.

Game and competition methods are also of great importance, and their use can be an additional motivation (incentive) for the development of agility due to changes in the athlete's emotional environment, mental state, and sense of competition. Endurance and the method of its development. Boxer's endurance is the ability to perform movements at a high speed throughout the competition and to conduct several bouts with intensity throughout the competition.

A high level of endurance allows a boxer to absorb large training and competition loads, to fully realize his movement skills during competition activities. In boxing, general and special endurance are distinguished. General endurance refers to the athlete's ability to perform work at low intensity for a long time. Special endurance is characterized by the boxer's ability to perform various types of movements and actions with different tensions and in different body positions at a high speed during the competition. The variable method is that physical exercises are performed at different speeds. In this case, the time spent at a low speed decreases from training to training, and the time spent at a high-speed increase. It is advisable to follow the following sequence:

- (i) First alactate-anaerobic exercises (quick-and-rapid strength), then anaerobic glycolytic (for strength endurance) exercises;
- (ii) First lactate-anaerobic, then aerobic exercises (for general endurance);
- (iii) First anaerobic-glycolytic, then aerobic exercises.

If the sequence of exercises is reversed, the interaction effect of fast training will be negative and such training will provide little benefit.

2. METHODS

2.1. Data Source and Data Analysis

This scientific paper examines the means of technologies during the training of children in boxing. Up to date gadgets and technologies have been used to check heartbeats, movement of legs and hands, some interviews have been organized as well to enrich the research findings. In addition, available data sources have been analyzed and collected data for further proceeding. Thus, data for scientific paper was collected through the analyzing available data sources and individual research at boxing schools.

According to methodologists, the approach summarizes views on the content of educational science, is used as a general methodological basis for research in the field of concrete knowledge, determines the direction of the researcher's activity in the study of one or another phenomenon.

Those who practice boxing are associated with great physical activity, so they can participate in healthy people with normal physical development. No one can start boxing without a preliminary medical examination and medical report. The coach and the doctor should be in close contact with the boxer to get his opinion about the health status of the boxer. Boxers who have been injured, who have experienced illness and operations, as well as those who are on long-term rest, may be allowed to train only with the permission of a doctor.

The coach must select and distribute exercises in the training, taking into account the preparation. Before the training, the coach should determine the feelings of the trainees,

whether they are healthy, boxers who show any symptoms of illness are not allowed to train, they should be shown to a doctor immediately. The coach is obliged to check the shoes and suits of the boxers (in particular, to determine whether the boxer has bandages or swimming areas), and also requires that there are no objects in the suits of the participants, which can cause damage (metal clips, pins, etc.). During the training, the teacher carefully monitors how the training is carried out. is obliged to narrate (Mansur, 2019).

Medical supervision is important. However, from the first day of class, recommend that all novice athletes constantly monitor their health and physical development. Self-monitoring is an important adjunct to medical monitoring (Morris *et al.*, 2019). Self-control contributes to the fact that boxers are more aware of physical activity, exercise, and personal hygiene. Self-monitoring data is related to medical monitoring data, which helps the doctor and trainer to identify the specific types of the physical condition of the boxer (Tjonndal & Hovden, 2021).

Each boxer is recommended to keep a special diary of self-control (Zeina & Mabrouk, 2014); in which you should consider the following indicators: growth; weight; chest circumference at rest during inhalation and exhalation; vital capacity of the lungs; heart rate, boxer's height can be measured by placing his back against the wall; Heels, back, shoulders, and head should be pressed against the wall. Next, place the edge close to the wall on the head and note where the head is pressed by hand. After that, measure the height from the floor to the head - this will be equal to the height of the athlete.

The weight of a boxer is determined on any approved scale. The average weight of athletes was calculated according to the formula: $\text{weight} = \text{height} - (105-100)$. For example, if a boxer's height is 170 cm, then his weight is. It should be equal to $170 - (105-100) = 65-70$ kg. Some changes are possible, but they depend on the structure of the person and his age. As weight increases, one of the most important indicators of a boxer's health and fitness level, the weight stabilizes and decreases approximately the same for each class. Young athletes should never be allowed to lose weight artificially (Sangarapillai *et al.*, 2021).

Boxers need to be properly trained to use physical information without harming their health (Xalmuxamedov *et al.*, 2021). Accelerated steam baths, starvation diets, and weight loss before the competition with excess, restrictions on fluid intake can cause cardiovascular and nervous system, and digestive organs and lead to various diseases. Breast circumference is measured three times with a centimeter tape: 1) with the maximum position; 2) during maximal exhalation; 3) at rest. When measuring, the tape is applied from the back and in front of the nipples. The chest mobility index is measured by exhaling the difference between the maximum position and the maximum chest circumference.

3. RESULTS AND DISCUSSION

The vital capacity of the lungs is checked using a speedometer. The average vital capacity of light athletes is 4500-6000 cm. The vital capacity of the lungs can be estimated depending on their weight: 1 kg of weight has an average of 60 cm of air. Heart rate is one indicator of how the body copes with physical activity. Counting the pulse, the fingers are placed on the body or the wrist, and after eating, the heartbeat, the pulse is counted within 20 seconds. Then the obtained number is multiplied by three, the product gives the number of heart beats per minute. The pulse of a healthy educated person at rest should be 65-75 beats per minute. For athletes, a resting heart rate is not often found, and sometimes it is 32-40 beats per minute.

During physical activity, a boxer's heart rate can reach 180 beats per minute or more. However, after 8-12 minutes of training, it becomes normal. A softer and more trained athlete than a good one, the kick will return to its original value faster. How often the heart beats and how quickly it recovers after the end of the lesson. To better manage themselves, listeners are advised to consider their well-being. For this, you need to regularly monitor sleep, appetite, and take into account your desire to train, monitor your mood during and after training, etc. daily. Injuries in boxing are not that big.

The most common injuries are injuries to the hands and fingers, especially the thumb of the right hand. The reason for them is primarily the moment of impact in the wrong position of the fist and improper binding of the hands. To protect athletes with frequent hand injuries, the coach:

- (i) Show the listeners how to tie their hands correctly and require boxers to make sure to tie them before conditional and freestyle fights, as well as before training boxing shells (paw);
- (ii) To monitor the correct position of the fist during the impact;
- (iii) Monitor the health of shells and gloves;
- (iv) Forcing athletes to timely treat hand and finger injuries, even if they are insignificant did not happen;
- (v) Exclude striking exercises for the injured hand from the lesson, because it should not be injured, more skin damage in the eyebrow area usually occurs due to boxers' violation of the rules. A blow to the head, elbow, or inside of the glove can cause skin damage (connect).

For such actions, the boxer is severely punished up to disqualification. To protect the athlete's eyebrows from injury, the following is necessary.

- (i) Teach the boxer to correctly calculate the distance of the fight, so that the attack, counterattack, and defense,
- (ii) He did not allow the so-called dangerous movement of the head prohibited by the rules;
- (iii) Use a mask that protects the eyebrow from accidentally or carelessly hitting the head when exercising;
- (iv) Lubricate the eyebrow ridges with a special ointment (gel) to prevent friction.

During training and competitions, special rubber or plastic teeth protect the teeth and mucous membranes of the mouth from damage ([Kadam et al., 2022](#)). Facial injuries and nosebleeds are more common in novice boxers who have yet to compete, and it is reasonable to expect that they have mastered the defense.

Preventing knockouts in boxers is especially important to prevent injuries in boxing ([Zazryn et al., 2009](#)). Knockout, attention should be paid to the lower jaw, under the spoon (in the area of the solar plexus), and right and left defense ([Morris et al., 2019](#)). Most of the time, the knockout does not have any consequences. In any case, an athlete who has been knocked out must consult a doctor. If a boxer initially feels dizzy, nauseous, or vomiting after a fight with heavy blows, pay attention to consulting a doctor immediately if necessary.

4. CONCLUSION

The trainer must ensure that the ring, fighting gloves, equipment, etc. are suitable. The ring must fully meet the requirements of boxing rules. Bags and gloves should be old and round, not too tight. It is very important to control the fulfillment of the basic sanitary and hygiene requirements, provided to the workplace. It is strictly forbidden to work in a room

with a stone or cement floor. The room should be cleaned and ventilated before each lesson. The floor in the hall should be washed, not smooth, and rubbed with wax or mastic.

The room temperature should be 14-16 °C. After classes, all students must take a shower or wash with warm water. Properly delivered medical supervision, organization, and methodology of classes, a coach whose demands follow the rules of boxing, perfect condition of equipment and inventory, meets hygiene requirements of training conditions significantly reduce the number of sports injuries in boxers. It will cause a sharp improvement in the training process.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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