

METHODOLOGICAL EDUCATION CHARACTER OF COORDINATING MOVEMENTS IN 14 AND 15 YEAR OLD BOXERS

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Abstract

This article describes in detail the methodological education character of coordinating movements in boxers aged 14-15, this age being considered the most favorable and suitable for the education, development and training of all coordination skills. All possible components of these capabilities are outlined and the most relevant aspects are highlighted, for their inclusion in the training process with future boxing performers. Being presented in their algorithmic form, with concrete explanations on the content and essence of practical application of the coordinating components, this information can serve as a very useful teaching material for coaches and athletes in the multiannual process of training future champions in this difficult sport event.

Introduction

Modern boxing requires a much more efficient and more rational manifestation of the psycho-motor quality set demonstrated by athlete; these being provided to be developed at the highest levels. Among the qualities nominated as specific, the education of coordinating movements in boxers is among the most important aspects, and the age of 14-15 years-old is considered the most favorable and most suitable for the education, development and training of these skills [2, 9, 12, 20].

Specialists in the field [1, 5, 18, 21] concern the set of coordinative capacities in terms of their essential characteristics, forms / actions to execute any movement most correctly (adequate and precise), fast, rational (timely and economical) and able (skillful, clever and ingenious).

In the training of junior boxers (14-15 years-old) the coordination of movements is also manifested in the form of general coordination, which means the ability to perform rationally, economically and creatively various motor actions and specific coordination, meaning the ability to perform motor actions very easily and identical to the motor behaviour movements of the boxer athlete in the ring. Like

other qualities, obviously, the specific coordination in boxers manifests itself differently from one individual to another, from one body segment to another, the athlete being educated through a specific training, directly directed by the essence of this skill.

The aim of this study is to elucidate the methodological nature of educating the coordination of movements in 14–15-year-old boxers.

The main objectives pursued in this study reveal: the argumentation from theoretical and methodological positions of the coordinative capacity essence of the movements in the training of boxing athletes at the basic training stage of the training subject; description of the essence of the specific forms of educating the coordination of the movements in cadet boxers (14-15- year-old); the classification on specific forms of educating the coordination of the respective contents and the proposal for the work practice of the formulated recommendations.

Material-method

The achievement of the purpose, as well as of the established objectives, was achieved by applying the following approaches: analysis and generalization of the specialized literature data on the research topic; the analysis of the documentary spectrum that provides for the education of this quality within the specialized sports units; deductive method; the method of selection, systematization and textual interpretation of information.

As a result of the study, it is found that the work practice records several formulations of the significance and essence of this capacity. Thus, [11], for example, we propose the following systematization of coordination skills: general coordination skills, which means the formation of potential and real skills of the individual that determines his degree of training in order to direct and regulate motor actions, different in meaning and provenance: special coordination capacities represented by cyclic and acyclic motor actions; through movements related to the movement of the body in space; spatial manipulation movements with different parts of the body; movements in space of different objects; motor actions related to long-range and force throws; throwing movements (to precision); targeting movements; imitation and reproduction movements; offensive and defensive motor actions; offensive and defensive technical and technical-tactical motor actions as well. Also, through the ability to reproduce, differentiate, measure and appreciate the spatial, temporal and force parameters of movements; ability to orient in space; ability to maintain balance; sense of rhythm; capacity to restructure motor actions; static and kinetic stability; free muscle relaxation ability.

According to specialists [7, 10, 19] the characteristics of a coordinated movement are determined by: anticipatory reaction; impulse pathways that ensure the distribution of psychomotor innervation; correct dosing of the force parameters involved in the movement; precise change of direction, as an expression the ability

to quickly replace the movement with another movement; synchronization of movements; continuity, fluency in execution attributed to the ability to structure the motor chain; muscle elasticity.

According to the assessments of specialists in the field [4, 8, 13, 17], analyzing the structure of human skills, there are: "group factors aimed at either fine motor skills" fine motor skill ", highlighted in movements involving a small number of muscle fibers or muscles, or the general motor skill "gross motor skill", highlighted in movements resulting from the involvement of a large number of muscle fibers, or muscle groups.

Emphasizing the importance of coordination in life [10, p. 48], it considers the ability of general coordination as a result of "multipurpose motor learning that manifests itself in various areas of daily life and of the athlete, allowing the rational and intensive performance of motor tasks of all kinds ", and in terms of specific coordination capacity, this is characterized by "the possibility to vary gestural combinations of the respective sport discipline techniques ".

T. Bompa [3] proposed the following criteria for classifying coordination: according to the degree of difficulty, motor skills are of low complexity, which include cyclic movements and highly complex skills of acyclic skills; according to the precision of the execution, a skill can be executed with weight, slowly and without fluency, when it is not well mastered, or it can be executed with precision, with amplitude, speed and harmony when it is well mastered; according to the duration of acquiring a skill, duration that depends on the complexity, on the level of the mastered motor skills, on the predispositions of the subjects. An athlete who masters a large number of motor skills has a good coordination that shortens the time of acquiring other skills, having a great ability to adapt to unpredictable situations.

M. Epuran [7, p. 368] presents the following scheme regarding the forms of manifestation of the coordinative capacity and its components: capacity to combine (coupling) the movements; spatio-temporal orientation capacity; kinesthetic differentiation capacity; balance capacity; motor reaction capacity; the capacity to transform movements; rhythmic capacity.

J. Weineck [20] considers that the coordinative capacities are represented schematically as follows:

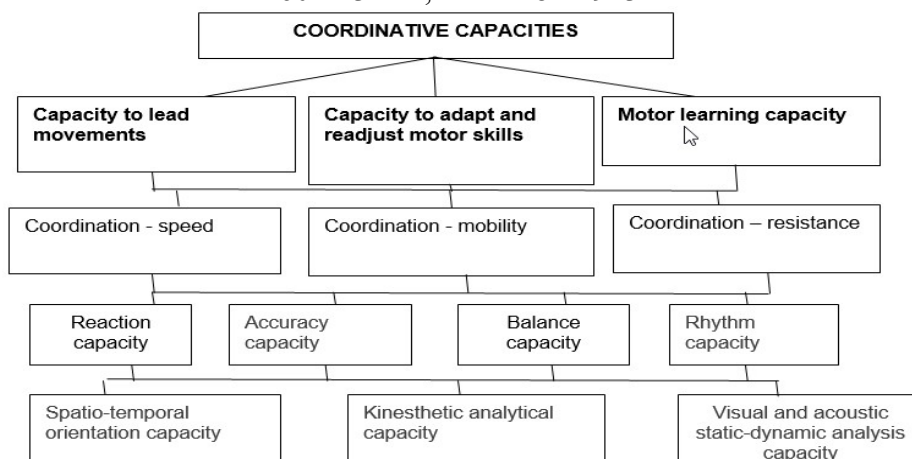


Fig. 1. Scheme of coordinative capacities (after J. Weineck, 1994, [20])

Coordinative capacities are divided here into three major subdivisions: those that determine the capacity to lead movements, the capacity to adapt and readjust motor skills, and the capacity to learn.

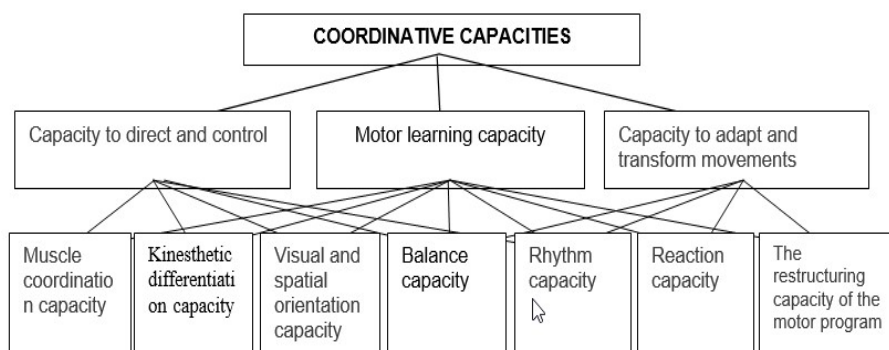


Fig. 2. The system for organizing coordinative capacities (D. Blume, 1982, [2])

These, in turn, branch into more specific features, such as: coordination - speed, coordination - mobility and coordination - resistance. In the distribution of the branch, we continue with other components of these particularities, such as: reaction capacity, precision capacity, balance capacity, rhythm sense capacity, spatio-temporal orientation capacity, kinesthetic analysis capacity and visual and acoustic static-dynamics analysis capacity.

Recently, specialists in the field [16, 19] have identified and specified 7 coordination skills:

- the capacity to combine and couple movements;
- the capacity of spatio-temporal orientation;
- kinesthetic differentiation capacity;
- static-dynamic balance capacity;
- motor reaction capacity;

- capacity to transform movement;
- sense of rhythm.

Results

This distribution represents the most appropriate and closest form of classification of the coordinating components for the efficient training of boxing athletes and together with the necessary modifications and completions they are described as follows:

The capacity to combine (coupling) movements, which is determined by the ability of capturing information by the sense organs, the boxer's ability to analyze and judge, the ability to write programs and transmit them to the peripheral level, the ability to execute (by muscles). The coupling of motor actions is influenced by the possibility to accurately evaluate the information and decide to perform the movement according to the objective pursued.

The capacity of spatio-temporal orientation, which is ensured mainly by the activity of the optical and acoustic analyzer. They collect information on the spatial development of the movement, perceiving data on direction, rhythm, tempo, proximity, distance, amplitude.

As stated, [13, p. 141], “two fundamental forms of orientation can be distinguished: in relation to moving objects, in relatively static conditions; body orientation in relation to fixed or mobile reference points”. The capacity to combine and couple movements allows the establishment of links between automated motor skills, involving a continuous succession of standardized elements, which is essential in combining technical sequences in boxing. The combination and coupling of movements involve the participation of all body segments sometimes in successive movements, but most often in concomitant movements.

Kinesthetic differentiation capacity. This capacity is determined by the activity of receptors located in the muscles, inside the tendons, ligaments and joints. These receptors are very fine receptors that collect and transmit information about the position of the body or its segments in space, as well as about the direction and acceleration of the body. The specific sensations collected show data on the position of verticality and inclination, rectilinear movement or rotation of the body. The sensory center is considered to be the striated muscle and is considered to be the most complex sense organ of man [13, p. 142].

Balance capacity consists in the action of maintaining the balance of the body by detecting and changing the position of the body or one of its parts depending on the situation. It is determined by the activity of the receptors located at the level of the middle ear, which collect information on: body position, space, rhythm, execution tempo. It is very important in all movements that involve disturbances of support, rotations, and turns.

The motor reaction capacity consists in the action of starting a movement in the shortest possible time, from the appearance of the starting signal or from the appearance of a new situation. It is determined by the ability to pay attention and focus, but also by the speed of analysis and decision making in predicted and unforeseen situations. It largely depends on the plasticity of the nervous system, but also on the baggage of knowledge and motor skills that each athlete has. The motor reaction is manifested in simple form at known signals and complex reactions to stimuli, unknown signals.

The capacity to transform movements involves a process of maturation of actions based on a rich baggage of knowledge, habits and motor skills, but also on a creative and imaginative thinking. It also involves adapting actions to some activities, movements and readjusting to the responses received from the environment. It is closely related to the large number of mastered motor skills, but also to the ability of creative analysis. In boxers, this ability is fully manifested when unforeseen situations arise.

Rhythmic capacity is manifested by the ability to perform a movement in a specific time sequence that could be resumed at will. It is a more demanding capacity, which depends on the acuity and finesse of the hearing aid, but also on will, attention and memory. Thus, it should be mentioned, the quality of coordination functions influences the speed and quality of learning sports technique in general and technical-tactical procedures in boxing in particular. The coordination capacities here have a relatively fast degree of adaptation to the conditions of change and they ensure their own conservation in the various motor situations created.

In this case, it should be noted that increasing the level of coordination of movements is based on the acquisition of a wide variety of skills, which are based on mental processes that ensure learning. There are a number of factors that promote the education of coordination, among which are: motor experience, the level of development of other skills, finesse and precision of the senses and, last but not least - motor intelligence.

The ability to coordinate, at the same time, is largely influenced by the motor experience of each athlete, by the large number of mastered motor skills. It is educated in parallel with the process of learning new skills and training specific motor skills. The level of development of the other skills (speed, strength, endurance and suppleness) influences, along with the motor experience, the coordination of movements. The fineness and precision of the sense organs activity, contribute together with the motor intelligence, to the direct manifestation of the coordination of movements.

On the other hand, the ways of solving complex movement actions, tactical actions, combinations, unforeseen motor actions, etc., require thinking and a high-pitched logic, an ability to analyze and select the information received

through analyzers, a synthesis and an execution decision as soon as possible. All these actions perform at the muscular level the contraction action coordination and muscle relaxation and an ordering of the muscle chain action succession, which in the end represents the coordination ability [6, 12].

In boxing, coordination is educated mainly through the repeated exercise of motor skills in various conditions, combinations and demands. The greater and more varied motor baggage the athlete masters, the more coordinated and efficient are his movements [1, 7, 14, 23, 24].

In the boxing training process this quality can be improved by: varied use of the initial execution positions; execution with the dexterous and the awkward part; alternating fast and slow execution rhythms; alternating and combining technical elements, motor skills; limiting the space and increasing the execution speed; combining old known skills with new ones that are in the learning stage; creating various and unknown courses of execution in which the athlete “chooses the most appropriate solutions, organizes action responses, structures the interventions within the actions of movements within the different combat situations.

Conclusions

Coordination is appreciated as a complex psychomotor skill; it can be highlighted by motor skills and abilities and other motor qualities. In turn, their improvement is conditioned by the value of skill / coordination. Since skill is the most psychomotor ability related to the shell, it is normal for it to be most closely related to thinking, intelligence. Thinking gives him expression and dynamism, while balance and suppleness ensure his speed and precision, and courage - victory in sports wrestling, always tense and unpredictable.

Thus, the application of these recommendations and descriptions in the process of sports training in boxing will facilitate the education of coordination skills and, certainly, the training of the cadet boxer will obtain a vector of higher growth of the sportsmanship degree. In this sense, the author [22] considers that psychomotor training during a training mesocycle is the basis of the concept of predicting sports activity.

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