

## **FEATURES OF THE METHODS OF TRAINING PHYSICAL EXERCISES**

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### **Abstract**

The modern sports industry is constantly increasing the requirements for the personality of the athlete. In order to obtain a high degree of mastery, all the requirements for the possibilities of development, education, training and special training of the athletes in all the forms of training are also increased. Therefore, the requirements for the optimization, rationalization and improvement of the methods, methodical procedures, specific means, and the instructive-educational and developmental character at all stages of athlete training are also increasing.

For this reason, new forms, methods and means appear in the training strategies of the athletes, whose purpose is to increase the efficiency of performances, notwithstanding the degree of difficulty of the exercise technique and many other motor actions provided in the competition programs.

The central motivation of the respective study is to elucidate and highlight the educational-instructive approaches by characterizing the essence and content of each method of training physical exercises. Obviously, it is very important now to know the most significant forms of learning the motor actions in all sports events, to understand their meaning and degree of application in the practice of coaching the athletes, students and all those interested in the practical performance of physical exercises. Thus, through this study, there are brought to the knowledge of the reader (coach, teacher, specialist Methodist, trainer, athlete, student, etc.) the methods and methodical approaches described, which can be used effectively in the work practice of Physical Education and Sports on correctness, accuracy, punctuality, efficiency, and clarity of learning the most diverse forms of physical exercise. Certainly, this information can lead to the selection of the most relevant methodological sequences, the correct application of which can contribute to streamlining the learning process of any technical structure and any content.

At the same time, it is noteworthy that the methodology of mastering specialized physical exercises is complex and integrative. Therefore, it becomes necessary to know the correlation between the established laws and the optimal ways to achieve the methodological objectives, which will condition the qualitative acquisition of knowledge, coherent training of special motor skills and abilities, harmonious development of the athlete's personality, strengthening health, achieving high sports performance, etc.

**Keywords:** physical exercise, motoric actions, learning methods, rationality, efficiency, set of skills

### **INTRODUCTION**

The methodology of training physical exercises reflects the aspect of training special motor skills directed by the requirements of certain performance techniques.

Obviously, the acquisition of physical exercises is subordinated to an established system, the particularities of which are mutually related and oriented to the achievement of the objectives

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regarding the theoretical, technical, tactical, physical, psychological, and other training of the studied subject. The interaction of these types of training defines the complex character of the way of movement in the most diverse forms of physical exercises, from the simplest to the most complicated ones [1, 5, 6, 21].

Appreciating the training of physical exercises as a complete pedagogical process in which the interaction of several factors takes place (physiological, anatomical, biological, kinematic, etc.) it is worth mentioning that each of them is conditioned by some legitimacy, the knowledge of which ensures the success of motor improvement [2, 7].

Of course, a special role in this regard belongs to the specialist in the field because the evolution of specific activities in order to train sportsmanship in students depends on him. Full knowledge of the basics of training exercises in terms of technology, methodology, interdisciplinary and other issues, as well as the legitimacy of the pedagogical process in general, directly contributes to achieving effective goals in terms of lessons, sports training and competitions organized in accordance with the major requirements of contemporary sports pedagogy [9, 12].

Depending on the fact that the modern sports industry increases year by year the requirements for the personality of the athlete, for his special abilities, also increases the requirements for the optimization, rationalization and improvement of forms, methods, methodical procedures, means and instructive-educational character and development at all the stages of preparation [3, 8].

Thus, the contribution of specialists in the field lately is particularly important in improving the methodology of training physical exercises.

Against the background of the training methodology of the exercise technique and many other motoric actions, new forms, methods and means appear, the purpose of which is to increase the efficiency of athletes' performances, notwithstanding the deficiencies that may appear depending on physiological, educational-instructional, moral-volitive differences and others. However, the phenomenon of "sports-pedagogical fashion" does not confirm that one method or another is absolute, uniquely effective, because each methodology has its advantages and disadvantages.

Currently, it is to be welcomed that in order to obtain the most effective results, not only the most dominant forms and instructive methods are selected and applied in practice, but also those that at first sight are meaningless, non-traditional, but which, in the end, have a considerable contribution in the centralized study of the material [3, 6, 10].

The method represents a set of programmed actions, which, from a structural and functional point of view, are organized and carried out according to a specialized manner of manifestation of some normative rules and legitimacies in order to accomplish a concrete task (lat. Methodus). Obviously, the components and approaches of programmed actions must be used procedurally, not only temporally, which can provide mutual influences and conditionings, thus determining the integrative side of the study process [8, 13, 21].

In this context, it is worth mentioning that its method or subdivisions (methodical procedures) are particularly intensively researched and applied in the theory and methodology of the training process in all existing sports events. The training of the technique of performing different movements, equivalent to motor learning, requires specific elaborations, the content and the succession of actions of which composes the program scheme and respectively the action methodology. Then it follows the execution (methodical application of the program) and its evaluation based on the inverse connection [1, 4, 11, 17].

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The specificity of the methods, as well as the immensity of their existence regarding the training of physical exercises, allows one to state that any attempt to classify the methods is as difficult as it is reckless. Despite some criteria of the most rigorous differentiation, there are always areas of interference, the possibility of the existence of a single cause, but with different effects [6, 15, 18].

The phenomenon of "pedagogical fashion" applied to the learning of physical exercises lately uses the immediate application of various methods (modalities) that can exceed the limit of theoretical-fundamental and conceptual aspects, just for that, to obtain the highest results. Obviously, the practice of training the physical exercises recognizes a series of groups of the most rational methods or their subdivisions, which, in fact, are not equal in size, and their succession in order of value is relative [21].

## METHODOLOGY

The aim of the study is to elucidate the essence of the most relevant approaches to physical exercise training under the basic sign: METHOD.

The **objectives** pursued to achieve the goal are:

1. Theoretical-methodological approach to the problems of training physical exercises.
2. Determining the essence, form and content of each of the investigated methods, in order to provide clarity of structure and specifics of use in the practice of performing various exercises.
3. Classification of methods according to contrast and interest and arguing the optimal ways to apply them in order to form the most advantageous motor skills.

## RESULTS AND DISCUSSIONS

Based on the undertaken study, a number of methods, methodical procedures and other methodological approaches can be highlighted, which can certainly promote and support the training process towards efficient achievements and new performances. These methods are described below.

**Forecasting method.** As many experts say, this method is an important feature of the coincidence of the theory with practice. It is necessary to make some predictions, preliminary imaginations on obtaining the final results, based on the most possible variants. For sports, forecasting is the basis of selection and is extremely important [3, 7, 18].

**Modelling** is characterized by studying the material with a high degree of difficulty with the help of simpler analog materials. It allows information to be obtained as a result of specially organized actions and under pre-established conditions. The informative model is drawn up according to the logical scheme in the form of indicative fragments. The model is further transformed into an activity mode that ensures the success of the activity.

**Extrapolation method**, widely used in sports, is an extension of legitimacy and trends from one basic range to another. Extrapolation provides previous data and results, which allows the establishment of possibilities to find analogous situations and to assume some results based on corrections and similar differences of the technique of the exercise studied by efficiently transferring its common features to another exercise [4].

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**Adaptive method.** This method is one of the most important solutions for organizing and conducting the training process [1, 3, 14]. All the aspects of mastering the technique of exercises are oriented to the need of facilitating their practice, thus determining the adaptive nature of training. The adaptive method is a necessary one, in order to form the correct systemic nuances of the exercise technique and to establish the relationships between teacher/coach, objectives and athlete/student. The most important aspects of the adaptation are:

a) the technical adaptation, which provides, first of all, the simplification at different levels of the complexity, the coordinating form of the exercise, and the further granting of the correct organizational help;

b) physical adaptation (a rather difficult side), which provides facilitation on the degree of difficulty level when performing a physical exercise, still providing physical assistance;

c) psychological adaptation, which provides realignments to the balanced emotional state of the body and its inner comfort;

d) the semantic adaptation that aims at simplifying the levels of exposure and perception of the components of the training technique.

**The informative method** arouses the interest of knowledge formation through the active-creative inclusion of thinking and perception. It is known that the learning process often foresees the mechanical memorization of knowledge. The application of this method also provides the removal of the existing habits and secondary information, and it represents a set of instructional essences that conditions a continuous learning process of the exact movements [6, 10].

**The problematic method** is the method that contributes to the realization of the contradictions that appeared within the training process between the student and the content. This method contains:

- particularities of analysis of the technique of performing the exercises;
- the agreement of different types of training (physical, technical, psychological, etc.) and their direct interconnection;

- studying the points of initiation and committing mistakes.

The realization of this method offers the obtaining of some corrections, convictions, recommendations, etc., precious in the optimal and rational arrangement of the development of the motor actions.

**The programmed method** puts in the foreground the program or the scenario of directing with the wide area of the movement actions. The program must reflect the importance and order of value regarding the succession of the instructive actions, the rationality of the selection of the most effective means, the urgent and directly correct reflection of the mistakes with the inclusion of necessary corrections on the exact acquisition of the technical details and so on.

A very important direction of physical training is the "Growder" type direction, in which the transfer from one fragment to another is done only by mastering the precedent [3]. The method allows the accessibility of direct investigations at a later stage.

The scheduled training is carried out based on a strictly determined and uninterrupted scheme for the operative exchange of information, thus intensifying the teaching/learning activity of both the pedagogue and the athlete.

**Algorithmic method.** Algorithmization is a component part of programmed training and an effective method not only for acquiring theoretical knowledge but especially for acquiring specific motor skills [1, 5, 16].

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Algorithmization presents a division of the components that form the whole technique of an exercise into subdivisions or details constituting them, which are to be mastered in a strictly regulated (established) succession.

The recommendations of the algorithmic method provide compliance with the following requirements:

- the exact indication of the character of each action and movement;
- the reference on a concrete movement or on a series of movements with common structural equivalents;
- the interconnection of all the instructive tasks and their successive distribution in increasing order of the degree of difficulty.

Making a brief feature of the instructional series (but they are basic structural instructional components) it is worth mentioning that the first series of instructional tasks refers to exercises and movements of development and education of those qualities, which directly condition the effective acquisition of motor action. The second series refers more to the performance of exercises that requires the acquisition of the initial and final positions of motor actions, as the possession of these dependencies in all sports events (but especially in technical sports) is mandatory. Another set of instructional tasks includes actions that ensure optimal conditions for performing the technique of the given exercise.

The fourth series provides actions characteristic for acquiring the skills of appreciation and differentiation of performing movements in space, time and depending on the degree of muscle effort. These features depend on the complexity of the coordination level of the exercise. Therefore, the most essential differentiations are usually oriented on the acquisition of the fundamental actions, which constitute the technical basis of the exercise.

**The method of classification and systematization** aims to create a well-thought-out and built system on the order and arrangement of instructional actions in which some imaginations, representations, suggestions, facts, movements, etc., are united by associative links, by analogy and contrast. The connections are formed following the relationship of some technical aspects with other technical aspects. It turns out that, in order to fully master the content of the technique of performing an exercise, one must go beyond its boundaries. However, sometimes the excess of information can influence the technique unsatisfactorily. Therefore, it is necessary to classify and systematize all the information in order to perform with accuracy and precision the technique of the whole exercise or a series of exercises. Unsystematized knowledge and skills, which eventually appear in the form of spontaneous portions or some amounts cause mechanical memorization which can lead to insufficiency and non-perspective [2, 15, 20].

**Integral method** (learning the whole exercise). According to this method, the technique of the exercise is fully mastered, completely without being divided. In the most frequent cases this method is applied to the acquisition of the technique of exercises considered relatively simple and to the acquisition of some exercises with a more complicated technique of execution, also performed entirely only in easier, more simplified conditions. The mentioned ones are applied only with the condition of preserving the structural integrity of the exercise technique. That is why it is necessary to highlight, however, the most important moments of the exercise, on which the maximum attention of the athlete should be directed, not losing sight of its auxiliary components.

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This method allows to master to a greater or lesser extent all the details of the technique, successively concentrating all efforts on different components of the skill.

**The method of auxiliary exercises** (it is like a variant of the integral method), the essence of which is characterized by the coincidence at the maximum level of the structure of the exercise with the actual technique. It should be mentioned that each of the auxiliary exercises represents by itself the independent performance of some fragments with a more simplified technique, or at most similar to the performance of the exercise to be mastered.

Obviously, the success of mastering any exercise depends on the correct selection and application of auxiliary actions. But it is necessary to consider the following:

- the auxiliary exercises must be similar in structure to some components of the basic movement that is acquired;
- the application of the auxiliary exercises must correspond to the successive order regarding the increase of the degree of difficulty of the action, both according to the character of the coordinative complexity, as well as according to one of the muscular efforts;
- the inclusion in the training system of some new auxiliary exercises is fulfilled with the condition of the qualitative performance of the previous exercises;
- the selection of this type of exercises must also provide the general motor level of training of the athlete, the individual differences, the conditions of the technical-material base, etc.

This method is also useful in the fact that in performing the auxiliary exercises there are developed those qualities and motor skills, which the athlete needs in the conditions of performing the basic exercise.

**The complex method of training the exercises.** It is characterized in particular by the corresponding application of various ways of studying and researching the technique of more complicated exercises. That said, the full study of motor activity is determined by the depth of knowledge of the dynamic structure of movements with the highlighting of interactive connections or the interaction of active, internal and external muscular efforts that contribute to deep understanding or perception of that picture, and what the movement looks like “from within” [1, 3].

Such an approach to element training provides the complex application of analytical and instrumental working methods. The complex character means recordings of the specific characteristics and particularities of the evaluation of the movements, analytical calculations regarding the kinematics and dynamics of the characteristics of the movements that can be obtained following the video recordings, etc.

**The method of the observation sheet** indicates: each athlete draws up a sheet in which some observations, indications, suggestions, etc. are recorded, that remains to be worked to a greater extent.

**The rigor method** emphasizes the precision of the movement, the clarity of the lines described by some conditions of the respective technique of the exercise, the accuracy, correctness, etc., taking into account the time allocated to a phase or the exercise as a whole [2, 7].

**The method of designing lessons.** Each member of the instructional process is required to have a well-thought-out curriculum, where the structure and content of the material can be found, systematized depending on objectives, evaluation criteria, purposes, etc., all known from the beginning, that is, at the beginning of the training period.

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**The method of binary, tertiary, or quaternary** structuring implies those parts or conventional stages of the lesson, among which the last one is devoted to some appreciations, estimates and evaluations [4].

**The scenario method** provides for the placement of all structural and content components in a sequence that is able to promote a balance in terms of the productive manifestation of the athlete at the level of demand, based on physical condition, technical training and others.

**The combinatorial method** provides a combination of objectives and tasks creating relationships at the level of positive transfer of motor skills and abilities.

The combinatorial method can also affect the schedule of lessons or training, placing the practical activities in a convenient (positive) alternation to preserve the effects obtained from motor activity.

**The visualization lesson method** provides the demonstration and visualization of structural schemes, basic designs, texts, videos and video prints, etc. prepared jointly with the subdivision laboratory. An important role is also played by graphic design, coloring, combining verbal and visual information, mastery and communication style of the teacher/coach with the student/athlete, etc. [2, 11, 16].

**The contingency contract method** provides for an agreement between the teacher and the student that includes categories of information regarding the specification of the appropriate behavior to be formed, the exposure of the inappropriate behavior, the assessments and penalties, etc.

**The prompting method** implies the use of a stimulus before or during the exercise in order to create a positive emotional state and other premises that can lead to the easier and more confident performance of different motor actions.

**The method of superficial integration** provides for the inclusion of the athlete with his levels of training in advanced practice while establishing a series of relationships, known as "layers" of higher subjects, becoming familiar with higher levels of sportsmanship, gradually entering the study of complicated content.

The method of rationalizing teaching time provides for the establishment of a system of calculations that designates the duration of a task, the period of recovery or rest, combining them with other efforts, etc. At the same time, in order to rationalize the time, some didactic grids, electronic tables, automatic warning devices, etc. can come handy.

**The method of diminishing or canceling** provides for the omission from the practice of obsolete, irrational "things", which are a surplus and which are not related to further progress. This refers both to the terminological, conceptual and ideational aspect, and to the practical aspect of performing the movements.

**The exploratory method** means the exploration of all possible characteristics in the study of a problem (movements, actions, exercise, technical procedure, etc.) from all angles. In the centralized study of physical exercise, theoretical, kinetic, biomechanical, anatomical-physiological, psychological, morpho-functional, etc. dimensions can be explored.

**The personalized method** provides for the study of the personal problems of each student or athlete. It is known that each student acquires the practical side (especially of physical exercise) in a different way from others, obviously arising from their own, personal reasons. It is contraindicated

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to make a judgment or to accuse the student of failure until the personal problems are studied exactly.

**The method of intradisciplinary relations** provides for the interaction and interconnection of information of various forms of training: theoretical, practical, individual, competitive, etc.

The method of interdisciplinary relations provides for the establishment of relations with some similar, profile, practical disciplines that directly or tangentially describe some information regarding the study of a movement, exercise, motor actions [3, 11].

Along with the most essential methods described above in instructional practice, a number of other methods are used, the nature of which also contributes to the completion of the training methodology on mastering the technique of different exercises: speech method, moral education method, semantic differentiation method, exercise method, organizational method, psychological therapy method, etc.

The methodical procedures for training the physical exercises, along with the main training methods, are the means of solving the particular training objectives. Depending on the specifics of these objectives, the methodical training procedures are divided into several groups [4, 7]:

- methodical procedures that ensure the previous representations about the execution technique (storytelling, explanation, demonstration, presentation of the schemes, photographs, films, fixing of different positions, comparison of the representations with the basic execution technique);
- procedures for carrying out the succession method (mastering different phases, component parts, dynamic holding, fixing the positions in the limit points, etc.);
- procedures for ensuring full execution (aid, fair insurance, change of conditions, etc.);
- procedures for complicating the execution conditions (use of additional weights, multiple repetitions of the exercise, modeling of the competition conditions);
- procedures for improving the assessment of the main parameters of the movements (use of current media, various signals, video, auditory, etc.);
- control and self-control procedures in the formation of motor skills (self-assessment after each execution, registration of different characteristics, components, technical parameters, use of video technique, etc.);
- paradoxical procedures, which are used only if those described above do not give the expected results. Sometimes it is necessary to perform more complicated exercises than planned so that the intended exercise to be easily learned later.

Also, in the study of physical exercises, there can be applied other methods such as: *heuristic method, dialogue, role play, modular method, analytical spirit, lesson-challenge, staggered design of motor actions, by exposure, by demonstration, method of individual practice activities, role play method, brainstorming, consolidation, application, evaluation and others.*

## CONCLUSIONS

The general value of these methods and approaches to teaching and training physical exercises is relative, but their validity is not denied. At the same time, the methodology of acquiring physical exercises is complex and integrative. Therefore, knowing the correlation between the established laws and the optimal ways to achieve the objectives will be able to condition the qualitative acquisition of knowledge, coherent training of special motor skills and abilities, harmonious development of the athlete's personality, strengthening health, achieving high sports performance



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and a range of other competencies and values that must be combined by the representatives of all forms of physical activity.

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