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**PERIODIZATION: FINALIZATION OF THE TRAINING UNITS**  
**AND OF THE LOAD'S ENTITY**

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*Abstract*

The article investigates the finalization of the training units in the light of current knowledge and modern trends in periodization of the training process in team sports. The aim to achieve, in the case of basketball periodization, is as follows: absolute consistency between training activity and increased performance during the competition period. The theoretical argumentative method is used to summarize the meaning and overall aspects of the finalization of the training units and of the load's entity through a linear bibliographic review of the specific literature. The factors that determine the training unit structure, how it is divided into a preparatory phase, a main phase and a final phase, and, of these phases, the contents and functions are described. The present study analyses some aspects of annual training periodization in team sports games, in particular in basketball, providing some information on the types of training and competitive workload in the training units. Then, it is illustrated how the training units can be classified according to their methodological finalization (selective and complex finalization), also proposing some practical examples of programs of training units with complex finalization during the preparatory period and the competition period for basketball teams' advanced athletes. And finally, we shall talk about the influence that the load's entity can exert on the body of an athlete.

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**Keywords:** Qualitative and quantitative aspects, sports performance, methodological finalization, training programs.



## 1. Introduction

Training planning is the structuring of the training process in long and short steps to achieve maximum sport performance; the latter represents the maximum achievable level of motor, energy, technical, tactical and psychological potential that an athlete can achieve in relation to his/her starting level (Bompa & Buzzichelli, 2016). The sports training is a formation process that has the aim to obtain the highest possible performance under two aspects: quantitative and qualitative.

Quantitative aspects are inherent to biomechanics and bioenergetics and both determine the improvement of muscular capacity of the body (Raiola & Tafuri, 2015a). Qualitative aspects concern the technical skills and individual and team tactics, as well as the strategies to be adopted in competition. Both aspects have to be covered in the planning of short-, medium- and long-term training activities, named microcycle, mesocycle and macrocycle, both in individual and team sports (Raiola & Tafuri, 2016), as in this article, which is structured for basketball. The microcycle commonly occurs within a week of training and is performed in the preparatory period, during the competition period and at the end of the competition period. The microcycle consists of several training units representing the training sessions or the smallest part within the hierarchical division of a training program.

The single training unit can be divided into three essential phases: preparatory phase; main phase; final phase.

During the preparatory phase, a series of special exercises are performed to prepare the player for the work that awaits him. In the main part, the core tasks of the training unit are achieved; one can do, for example, different types of work, ensuring the improvement of different physical, technical, tactical and psychological aspects useful in the basketball game. Its duration depends on the characteristics of the exercises used and the entity of the load. In the final part, the player's body must be brought to the conditions which support the intense development of recovery processes, gradually reducing the work intensity. A particularly valuable contribution to the development of the theory and practice of sport training periodization was made by Platonov, a Ukrainian specialist (Platonov, 2013).

The quantitative part is strongly characterized by the applications of the theory called periodization, which studies the correlations between workload in training and its results, including the highest performance (Raiola & Tafuri, 2015b). For an adequate planning of periodization for each sport, it has to predict the volume of the workload, the density of the workload and the intensity of the workload in training (Bompa, 1999).

In sports practice, training units are widely used to develop some qualities and abilities that determine the level of special preparation of the players: speed, strength, aerobic or anaerobic efficiency, special strength, etc. Training units are also designed for technical and tactical refinement, beyond the increase in psychological stability when managing the race stress and overcoming the feeling of fatigue, and include several educational strategies to improve the attractiveness of sport activity and justify the fatigue to enhance the performance.

## 2. Problem Statement

The problem is that periodization it is not made because there is no coherence between the training activities and the goal to be achieved. In this case, it regards the phase of the competition period.

## 3. Research Questions

The factors that determine the training unit structure, how it is divided into a preparatory phase, a main phase and a final phase, and, of these phases, the contents and functions are described.

## 4. Purpose of the Study

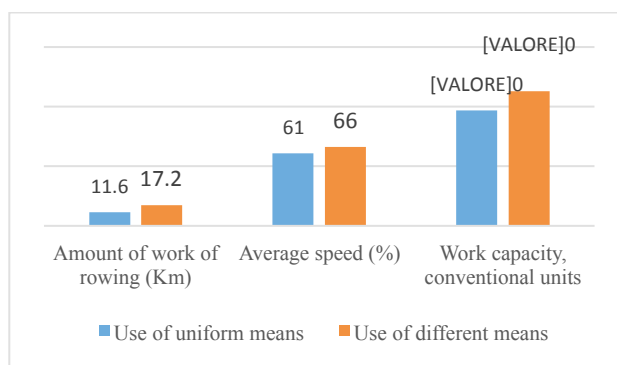
The aim to achieve, in the case of basketball periodization, is as follows: absolute consistency between training activity and increased performance during the competition period.

## 5. Research Methods

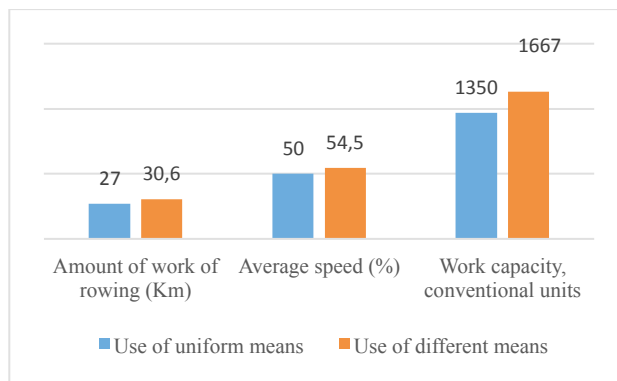
This is a theoretical argumentative study based on empirical research. Therefore, it will proceed with the review of the specific literature on periodization in sports games.

## 6. Findings

Most of the work to improve the technique must be carried out continuously during the development of different qualities and capabilities. It is good rule to remember that the highest level of coordination is that in which the athlete, in addition to performing the gesture correctly, keeps active the ability to modify it and adapt it to the “situation” while maintaining its effectiveness. Only in this way will the player acquire a variable technique that corresponds to the different motor tasks he will have to achieve in the match; the training structured in such a way greatly increases the degree of adaptation of players to different forms of unpredictability occurring in basketball and also stabilizes performance at a level of quality. The structure and setting of the programs of individual training units affect the effectiveness of the training process and therefore also the sport performance. It has been established that if these training units provide different types of exercises but with the same finalization, athletes exhibit greater work ability than when using exercises of the same type (Figures 01 and 02).



**Figure 01.** Work on special endurance



**Figure 02.** Work on general endurance

The programs of these training units have a greater influence on the athlete's body, therefore when using training units with different programs, his ability to work is much higher (Platonov, 2005). The athlete's preparation rate increases more if training unit workouts are used with selective finalization, where different training programs are expected, consisting of training exercises carried out according to different methods. On the contrary, the use of the same means for a long time is less effective, since even if the body quickly adapts to them, the increase in athletes' preparation level decreases and finally stops (Platonov, 1986). In the complex training units, the order of distribution of the means must be ensured by the realization of a rational method of improving different aspects of the preparation. The work on learning new movements, for example, should only be expected after the warm-up phase. Instead, when it comes to performing technical and tactical actions previously learned in the difficult conditions of the match and in conditions of increasing fatigue, the work must be planned at the end of the training unit, after a large workload has been achieved with other finalization (Verkoshansky, 1987). In the complex training units, during the first stage of the preparatory period, there are often used means to increase endurance through aerobic work. Subsequently, with the increase in the training level of players, it is possible to use means that increase the speed skills and special endurance. When using speed exercises in the first half of the training unit, immediately after the warm-up, their volume can reach up to 20-30% of the total volume of work. Instead, if these exercises are scheduled at the end of the training session, when the players are tired, their number should not be high and should not exceed 5-10% of the total work volume (Keller, 1995).

In the process of preparation, the most evident action on the athlete's body is exercised with selective finalization, which allows concentrating the means and methods and acting only in one direction (Serrato, 2008). However, the choice of a type of training unit or another depends on the specificity of each sport or sports discipline. For example, in sports games like basketball, characterized by a great diversity in expressing the technique and tactics, as well as physical and psychological abilities, complex training units are usually planned, in which parallel goals are achieved in succession. We provide below some examples of complex finalization of the training programs planned at the end of the preparatory period and during the match period for advanced basketball teams.

**Table 01.** Training units at the end of the preparatory period

Finalization of the training units	Preparatory phase	Main phase	Final phase	Total duration
Improvement of speed skills, coordination, special endurance, of the technique and tactics	Slow running, general and specific exercises from stops and while moving Accelerations (15-20 min) at a speed of 80-95% of the maximum with pauses of 30-60 sec. (30 min)	Running exercises without ball, with variations in rhythm and direction (10 min). Running exercises with ball, with variations in rhythm and direction (10 min). Slow running (8 min). Running exercises without ball (60 sec) and with ball (30 sec.), at maximum speed, with pauses of 30-60 sec. (15 min). Slow running (8 min). Improvement of the shot to basket (15 min.). 5vs5 on half field, with at least 3 passes before the shot to basket (30 min).	Stretching exercises Slow running (20 min) Free shots (10 min)	2 hours and 30 minutes about

**Table 02.** Training units during the match period

Finalization of the training units	Preparatory phase	Main phase	Final phase	Total duration
Improvement of the technique and tactics and development of special physical capabilities	General development exercises, slow running, stretching exercises, accelerations (20 min)	Exercises with the ball in pairs and thirds, passages, hand changes, 1vs1, 2vs1, 2vs2, etc. and shots to basket (45 min). Keep possession of the ball within 24 sec. On half field (5vs4) using only a dribble (10 min). Slow running (8 min). Shots to basket from various positions, receiving the ball from stops and while moving (15 min). Tactical improvement in small groups (3vs2, 3vs3, 4vs3, 4vs4, 5vs5) with handicap (20 min). Tactical simulations (defensive and offensive) on half field 5vs5 (20 min).	Stretching exercises and slow running (10 min).	2 hours and 30 minutes about

In sports games like basketball, the predominant use of training units with complex finalization does not exclude the use of those with selective finalization, focused, for example, on increasing aerobic capacity or developing strength abilities. Instead, in the cyclical sports and fast strength sports, the training units that produce the greatest effect on the body are those with high loads of selective finalization (Platonov, 1992). The main factor determining the influence of a training unit on the athlete's body is the entity of the load. The term "training load" refers to the quantitative measure of the work done. Usually, it involves external load (the amount of work done), internal load (the effect it has on the body) and psychological load (as it is experienced psychologically by the athlete), while the most used indexes for the training loads are volume and intensity (Matveev, 1990). Table 03 shows the characteristics of the main types of load used in the training of elite athletes.

**Table 03.** Characteristics of the various types of load (Suslow, 1995)

Loads	Criteria of load's size	Goal achieved
Scant	First phase of the stable working capacity period (15-20% of the work volume that is achieved before obvious fatigue occurs)	Maintaining the level of preparation achieved, acceleration of the recovery processes after the loads
Average	Second phase of the stable working capacity period (40-60% of the work volume that is achieved before obvious fatigue occurs).	Maintaining the level of preparation achieved, reaching particular objectives of the preparation
Considerable	Phase of compensated fatigue (60-70% of the work volume achieved before obvious fatigue occurs).	Stabilization and, subsequently, increased preparation
Elevated	Obvious fatigue	Further increment of preparation

In sports practice, in order to properly evaluate the load's entity of the training units, some simple, but objectively valid indexes can be used: skin redness, concentration of the athlete, the quality of performing technical and tactical movements, the mood and the physical state in general. Anxiety can therefore play a negative role, but it can also have a positive role. In fact, good mood and cheerfulness can be elements that facilitate creative thinking; in the same way, the hope of reaching an aim increases the likelihood of commitment.

It is appropriate to make a distinction at this point, namely that not all athletes respond identically to the training stimulus; there is a considerable methodological difference between the training of advanced athletes and that of young athletes. We highlight therefore some features that distinguish youth training from that of advanced athletes. The training of young people must be focused on the harmonious development of the widest range of capabilities. This is achieved by working on volume and paying close attention to the development of coordination skills (Cirillo et al., 2016). The preponderance of work (90%) is on the general and technical basis. Specific and special exercises will only be developed for 10% during various competitions: the match is stimulating and the young people's attachment to sport is given by the matches (they are fun), which will also shape their character. In advanced athletes, there is a significant increase in work related to sports discipline and specialization of the race, in which intensity (intensive loads) is/are privileged.

## 7. Conclusion

Programming is a perfected form of planning the content of the training process; such a need derives from the needs of modern sport that is in a constant search for performance, which allows sporting success. Each training process requires the development and solution of several methodological problems related to the arrangement of training loads in the various stages of preparation and the microcycle, the methods needed to bring together the contents of these microcycles into a single system in which one must take into account the specific nature of the sports discipline, the load, the period of preparation and the technical and tactical level of the players. Therefore, in planning sports activities, coaches have to control and modify, if needed, a range of variables throughout the training process, and to evaluate the obtained results through timely monitoring. Coaches should always have a critical and constructive relation with their own exercises, so that they can verify their effectiveness and, over time,

use certain exercises to highlight some issues and mark the bad habits. The proposal of training unit for basketball is just one example of practical achievement within an annual work programming, which obviously must observe all the variables that each sports discipline involves.

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