

Module 4. The structured micro-cycle

This module will thoroughly develop the structured micro-cycle. To start with, we will share a brief description regarding the physical demands involved in a sport such as basketball. In this sense, modern basketball games comprise about a thousand actions (Ben Abdelkrim, El Fazaa and El Ati, 2007), of which 11.5% require maximum intensity (Ben Abdelkrim et al., 2010). The duration of high-intensity actions ranges from two to five seconds (Hoffman and Maresch, 2000), with an average work ratio and rest of 1:10 when considering maximum effort actions (Ben Abdelkrim, et al.,2010; Hoffman and Maresch, 2010; McInnes, Carlson, Jones, McKenna, 1995). Thus, explosive lower body actions are required for sprinting, jumping, acceleration and deceleration (Ben Abdelkrim, El Fazaa and El Ati, 2007).

Therefore, basketball can be defined as an intermittent, dynamic and complex team sport, in which multi directional explosive movements are combined. In relation to the above, during the game there are biomechanical, neuromuscular and physiological demands comprising about 115 actions that require maximum intensity. The needs of basketball as a team sport, together with the large number of competitions that are played throughout an entire season, have led us to seek a type of training in which the different demands that arise from it are optimised. In this case, from the point of view of structured training, there are different objectives to be taken into account, which are listed below.

1. Controlling training workload.
2. Having a good performance even with few training sessions.
3. Varying training to present players with attractive stimulus.
4. Fast assimilation (due to the proximity of competitions).
5. Maintaining a steady physical condition throughout the whole season.

This is achieved through guidelines and conditions that are designed in the planning, at the beginning of the off-season. This means that a series of requirements must be met during the off-season which should be appropriate to prepare the human sports person who plays basketball (HSPB). The aim at this stage is to ensure that the athlete is in a good physical condition so as to compete in the next phase. Therefore, the planning process is relevant, since it establishes certain conditions that also include the season, based on micro-structuring.

In addition to the two conditions presented above, in the planning (pre-season and in-season) there are relevant aspects to be taken into account when designing the training sessions and the systems to be implemented. The sessions are based on the construction of tasks called preferential simulation situations (PSS). Each one of these elements is based on the needs of the human sportsperson, that is, on all the aspects that affect the player throughout his or her developmental process.

Planning a sporting activity involving interaction in a shared space, such as basketball, entails drawing up a plan to achieve the objectives of the sport itself. Therefore, it requires carrying out a series of predictions based on the knowledge and experience of both the coach and the physical trainer. Because of this, the objectives agreed upon by both of them must include, fundamentally, the sportsperson, considering not only the tactical, technical or conditional needs, but also the socio-affective, coordinative and emotive-volitional needs, among others. Each of these structures will provide a better understanding among the parties, which will allow for the optimization of the human sportsperson engaged in the game.

Along the same lines, other aspects that should be kept in mind are the identity and culture of the institution to which the members of the team belong. This means that the priority in any sports project is that the subjects involved have a sense of belonging, which generates a collective synergy in the pursuit of common objectives. All of the above must be included in the team's sports planning, since it represents the link between the different parties. For this reason, the coach and the physical trainer must set common objectives that the club as well as the players and the technical staff consider essential to the project.

The planning drawn up as a team should meet both the needs of the team in question and the requirements of the game as well as its competition models, whether it is a regular league with or without a play-off, a Super Cup-style format such as the ACB League, or competitions with another format, such as the Euroleague or the Final Four.

Once these series of aspects has been identified, it is important to provide a definition that encompasses what has been said so far. In this sense, authors such as Seirul-lo and Solé (2017) indicate that planning is the set of theoretical assumptions made by the coach and that it includes the description, anticipation, organization and design of each of the training episodes that the players will later carry out at the specific moment in their sports life in which they belong to the team. The coach also needs to have the means to analyse and control in order to modify these episodes to provide a training process that is increasingly appropriate to achieve the optimization of players, which in turn will enable achieving the desired results in an uninterrupted way throughout the competition in which they are involved.

The authors also develop the different concepts that have been mentioned in this definition. They have defined the theoretical assumptions which indicate the nature of what is described in the planning to pre-set the conditions of subsequent practice in training. An *episode* is each part of the training, which not only contemplates the practical exercises, but it also incorporates any other training actions that simulate the conditions of the competition, as well as other aspects that may be included in the training, such as tests, meetings, scouting videos to prepare following games, among others. As for the sports life, it refers to all the experiences that are part of the experiences undergone by each of the human sportspeople who play basketball. That is, it is the cumulus of experiences that the athlete has incorporated. The last of the concepts refers to the ability to remain in a state of high performance without interruption, which implies being able to perform at the highest level during each of the competitions that occur throughout the season. This concept is therefore closely related to an absence of injury. This includes not only the season, but also the entire career - the athlete's sports life.

Planning is also defined by a series of characteristics outlined below:

Planning has to be unique. It has to be made up from the contributions of all the members of the technical staff (Seirul-lo, 1998). In institutions with limited budgetary possibilities, the technical staff should be made up of the coach and the physical trainer. In contrast, in elite teams, the technical staff is formed by around six or more specialists who accompany the coach. Each specialist contributes with his/her knowledge, which must be considered by the others so that there is a unification of criteria as regards all the ideas put forward by each professional in their area of expertise. This leads to unified training proposals with common characteristics, which have been previously agreed upon by the members of the staff.

Therefore, terminological unity is necessary; that is to say, that the terms to describe and identify the specific contents needed to design the training tasks are equal for all the technical staff, which facilitates the development of the tasks and the sessions. On the other hand, there is an important characteristic to take into account regarding planning which is called *specific* (Seirul-lo, 1998). Specific planning focuses on the need to specifically attend to the consequences that the different rules of the game and the basketball competition itself have on the macroscopic manifestation of the internal processes that take place in the structures of human sportspeople. This has been pointed out by Seirul-lo in his reflections on planning.

In addition, according to the author (Seirul-lo, 1998), there are personalized planning criteria, which must be adapted to three relevant aspects:

1. The sports talent of each human sportsperson.
2. Sports life.
3. Differentiated integration.

Planning becomes personalized when it attends to these three elements.

The planning must respect the precise time for the formation of the inter systemic connections that form all the structures that make up the athlete. These evolve during the time when the athlete gets sufficient and significant basketball practice, that is, the athlete's sports life.

Paraphrasing Seirul-lo and Solé (2017), all experiences in certain environments make up what we could qualify as traces of access to their present moment by optimizing the different systems more or less involved in lived practices. This creates interconnectedness with the HSPB talent. Thus, one of the factors that will determine the player's talent is, obviously, his genetic information. It is important to remind, at this point, that epigenetics has shown that the experiences that the human sportsperson incorporates in his curriculum will also facilitate their sports talent. In this way, the coach, the physical trainer and/or the technical staff are in charge of planning strategies in which talents can emerge from a series of points that will be discussed below.

- Efficiency should be discussed in relation to the training session or task, and not concerning the opportunities that the future may hold.
- The player's ideas and independent thinking have to be respected.
- The creative development of the human sportsperson will be favoured.
- During training sessions, aspects such as variability, variety, availability and effort, which are values capable of modifying the competitive scenarios that the coach considers favourable for the team, will be promoted.
- The leadership of the coach will be optimised by proposing changes in the organization of the team without the players knowing it and thus forcing them to perform to the top of their capacities.
- The coach will try to match the talent of the human sportsperson who plays basketball with that of the team.
- Pride, shyness, and a lack of effort due to relying too much on own talent will be expelled.

- Finally, for planning to be personalized, we must attend to the level of integration of the subject in the competitive environment in which his team is immersed, and to the athlete's level of understanding of the basketball game, that is, of basketball itself. This will enable training and competition to reach the requirement level that the coach considers necessary at a given moment in the athlete's sports life and socio-affective capacity.

For planning to be effective and efficient, both the coach and the technical staff must follow a series of guidelines. According to Seirul-lo and Solé (2017), planning should aim at identifying and eliminating, as far as possible, the negative aspects and deficits of the team. It encompasses the following:

- Being able to adapt to changing and unexpected situations that may appear throughout the competitive season.
- Getting the necessary means to measure the effectiveness and validity when identifying the objectives that have been reached up to a greater or lesser extent.
- Being self-critical and having opportunities to implement new ideas or procedures both in training and in the competition itself.
- Keeping in mind that the purpose of planning is the optimization of the human sportsperson who plays basketball, since they are the ones that achieve the club's objectives. For this reason, the planning must fulfil the expectations that each subject has about the development of their game, showing them that they will only achieve them with the team.

It is also important to emphasize the physical condition of the athlete as part of performance optimization. This physical condition is the main objective of the pre-season and must be observed from the perspective of the individual athlete, from the perspective of the opposing players, from the perspective of the team mates and from the perspective of the moment of the season being played, as well as the type of competition being held. The combination of these perspectives will give us a more exact and approximate vision of the concept of sport condition or physical condition for basketball, which is a central objective within the high performance phase (Seirul-lo, 1998).

Physical Conditions

The following section briefly presents each of the aspects related to physical condition.

From an individual perspective, attending to individual needs, a player's physical condition is achieved through the continuous self-optimisation of all the structures that make up the sportsperson in each moment of his or her sports life. And it manifests itself with a continuous and uninterrupted improvement of his performance within the team (Seirul-lo, 1998).

As for the physical condition with respect to the opponents, in elite basketball, one competes every year against about 30 different teams that are different, among other aspects, because the human sportspeople that constitute them are different. For this reason, the qualification of each individual is determined by his or her level of performance in specific actions during the game. It is important to understand that such level is the result of the optimization achieved by their different structures, that is, the moment they are within their personal project of sports life (Seirul-lo, 1998).

In relation to this aspect, it is important to emphasize that when two players at similar moments of their sports life and hypothetically with the same talent are playing against each other, the one who has benefited from a better planning, equipped with the most appropriate experiences and training contents will have more possibilities of success (Seirul-lo, 1998).

As regards the physical condition in relation to one's team mates, it is fundamental for the basketball coach to achieve homogeneity in the current physical condition of all the members of the team. This facilitates the specific interactions needed among the different team members, who must carry out the playing systems by executing individual tasks that require a certain degree of physical condition. This physical condition may not be the ideal one for everyone, but it must be the necessary condition for all of them to collaborate individually in the realization of the collective tactical systems. In many cases, this difference between the chosen playing system and the physical condition for its implementation can lead to collective failure as well as individual success (Seirul-lo, 1998).

In terms of physical condition in relation to the moment of the season, elite basketball takes place in a season that lasts around nine to ten months, during which several competitions take place. These may be the ACB League, the Euroleague, the King's Cup, the Super Cup, each with different formats. In relation to this calendar, the physical demands are different and determine the objectives that each team has in each of the competitions in which they participate. In this way, structured training develops a form of training organisation called *structured micro-cycle* (SMC), which becomes the smallest unit in our schedules. This proposal considers the competition as a load that modifies and conditions the different structures of the training period that ranges from one competition to another. *Structured micro-cycles* are the time that goes by from one competition to

another, and *structured training cycle* (STC) is the period of three weeks of training planning.

The structured micro-cycle seeks to achieve the best possible training and considers competition loads within the dynamics of the weekly load, which means that they are the most relevant element influencing the rest of the sessions.

Different elements of the game are related to the structures of the HSPB. The description of the elements of the game and training from a conditional structure perspective includes the following basic components or capacities: strength, speed, resistance and facilitating capacities, such as range of motion and coordination capacities (Tous Fajardo, 2004).

So, how are these components expressed? Through the specific qualities of team sports, such as basketball. These include motor variables such as jumping, duels, movements and actions with the ball. For this reason, it is essential to be familiar with the organization of the elements that make up basketball performance.

The first organizational criterion in basketball is based on temporal aspects. That is, a year of sports practice in any stage of life is made up of a phase called preparatory period, followed by a competition and a transition period. In basketball, due to the predominance of the competitive aspect, these phases are referred to as pre-season, season and active rest. The pre-season can last from 4 to 8 weeks. Moreover, the season comprises between 40 and 44 weeks, and the active rest ranges from 3 to 6 weeks, also depending on the context, since players, in certain circumstances, also compete within their national teams (Seirul-lo, 1998).

A second organizational criterion refers to the intra-thematic organization of each element in relation to similarity, that is, with its specificity in relation to competition. Thus, there are four levels of organization before reaching the competitive level: general or generic, directed, special and competitive (Seirul-lo, 1998).

A third organizational criterion is the inter-thematic one, which attends to the synergic conjecture. According to this conjecture, which is specific to team sports, the mixing and sequence of certain elements causes a synergic action on the systems to which they are directed, increasing their collective effects over those that each of them would produce separately (Seirul-lo, 1998).

At this point, it is important to mention two distinguished figures in sports training. Selye and Matveev. Dr. Selye wrote about stress syndrome in *Nature* in 1936. This is one of the basic elements of the adaptation principle on which traditional training theory is based. Later, Matveev was the first to apply the basis of the phases of adaptation syndrome

described by Selye to develop the concept of periodization in sports training. This theory distinguishes a preparatory period involving working on 50% to 60% of the macro cycle. This preparatory period, at the same time, is usually divided into two stages. The first, also known as general stage, is oriented towards work aimed at the basic training of physical capacities, in which volume will prevail over intensity. The second, also known as special stage, is characterized by more intense work and a more direct relationship with the sport itself. In this case, intensity will be greater than volume.

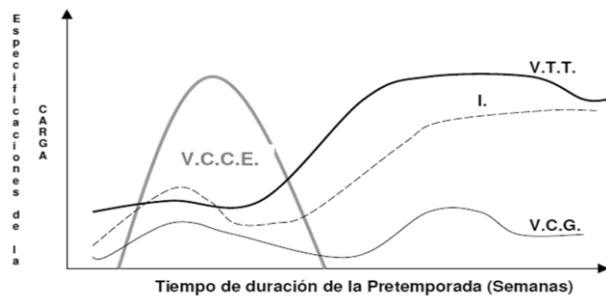
The next period, known as the competitive period, covers work on 20% to 30% of the entire macro cycle. This competitive period encompasses the most specific work in sport, since it comprises all the competitions that the sportsperson participates in. These are usually very intense periods with relatively low volume. Likewise, it is divided into two stages: the pre-competitive and the competitive ones. The competitive stage refers to the competition itself. Lastly, the transitional period covers 10% of the total work, that is, of the macro cycle, and it may be either active or passive.

Matveev's proposals were the first on these issues, although the research was orientated towards individual sports. On that basis, a new proposal emerged, based on blocks which were later included within the demands of basketball.

Volume and intensity of training stimuli, i.e. physical demands, are commonly accepted as workload values. The internal workload is understood as the effect that these elements produce in the organism. The organism is seen as a hyper-complex structure, made up of very different and closely related functional systems. Therefore, the workload associated to volume and intensity needs to have a differentiated orientation that acts selectively on a group of systems, and the sequence of selective workloads on that group of systems in particular will lead to its optimization, causing a certain configuration of the human sportsperson's performance (Seirul-lo, 1998).

In line with the above, the planning of workloads aims at accurately sequencing their selective action on the different functional systems, establishing a given priority or preference. To do so, it is necessary to follow a qualitative training theory specific to basketball. Thus, the inclusion of a series of conditions in the pre-season is one of the important components in order to achieve the objectives of the structured training. Figure 1 shows how the workload dynamics in the pre-season are applied to basketball, in particular within the team sports perspective (Seirul-lo, 1998).

Figure 1: Physical Condition. Workload control. Pre-season



Source: Seirul·lo, 1998, p. 22.

Especificaciones de la carga	Load dynamics
Tiempo de duración de la Pretemporada (Semanas)	Duration of the pre-season (in terms of weeks)
V.C.C.E.	C. V. S. C.
V.T.T.	T.T.V.
V.C.G.	V. G. C.

Consequently, a separate, concentrated condition-specific block is distinguished; that is, one that is based on the conditional structure, a technical-tactical volume and a generic condition volume. Therefore, the three basic pieces of our proposal are observed within the structured training for the planning of the pre-season: concentrated volume of specific condition (C. V. S. C.) based on the physical capacities of the conditional structure, technical volume, tactical basketball volume and volume of generic condition (V. G. C.), all of them having a certain intensity (I.) (Seirul·lo, 1998).

If the player has adhered to his or her sports life project, when they reach the high performance phase they can carry out this pre-season model. The duration of the concentrated block of specific condition involves 45% to 50% of the overall pre-season time. Then, although a certain technical-tactical volume (T.T.V.) has already begun during the block, there is a high increase of this time dedicated to its development. The slope of this curve always has to be tailored to personal needs. The intensity curve initially increases until the concentrated condition-specific block reaches its highest point. From that point on, it decreases until the block ends; that is, the concentrated condition-specific driving volume. At this point, the increase of the technical-tactical volume can be faced with sufficient guarantees to obtain the technical-tactical level required at this moment of the pre-season. The rest of the outline of this curve is a consequence of the theory of concentrated loads, which supports the proposal of structured training (Seirul·lo, 1998).

According to Seirul·lo (1998), the design of the generic load volume curve addresses some requirements of high competition and there are increases in this generic condition that are not specific; the exercises are the most different tasks from the practice of five against five at times when mainly biological and motor systems undergo sudden changes

in load. This generic condition has a "buffer" effect on the traumatic consequences that functional systems can experience as a result of the load, without detracting in any way from their specific nature. Because of this and of the basic requirements of the training methodology, a certain level of volume of generic condition is maintained throughout the rest of the pre-season.

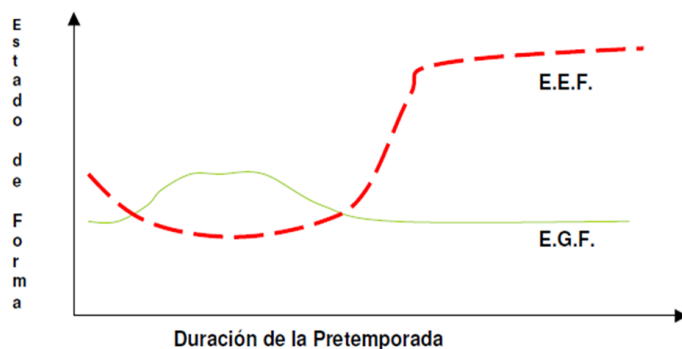
This load design can include pre-season competitions and tournaments that are considered as technical and tactical volume, and that replace a certain volume of sessions aimed at achieving that goal. In contrast, during the time of concentrated volume of specific condition it is not advisable to engage in competitions, since this would alter the intensity curve, clearly affecting the physical condition during the final part of the pre-season (Seirul · lo, 1998).

Only in the last third of the concentrated block of specific condition, at the moment when the technical tactical volume is increased, if the team we are competing with is significantly inferior to ours, can we face a competition, as long as it is allowed by regulations to introduce changes that cause modifications in the load and, in this way, adjust them to the indicated curve of intensity (Seirul · lo, 1998).

For example, we could decide to play three eight-minute periods instead of four ten-minute periods or establish longer breaks in between each of the periods. Also, at the team management level, the load could be reduced by making longer rotations during the simulation of the game.

During the pre-season, Seirul · lo (1998) distinguishes two types of physical condition: the specific condition (S.C.) and the general condition. The general condition (G. C.) is the one that allows the player to best perform non-specific tasks or tasks that are not related to basketball. For example, in a test of generic condition, improvements will be seen in the first moments of the pre-season, while during the course of the season and especially at the end, these levels would remain without increase, or they could even decrease.

Figure 2: Physical condition in the pre-season



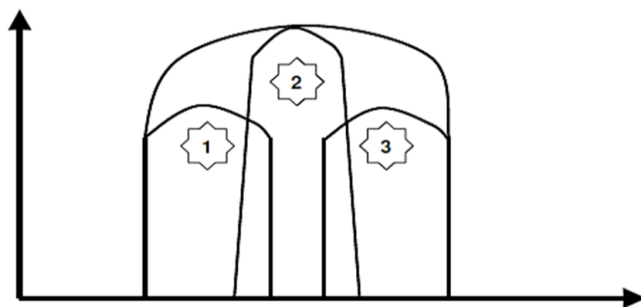
Source: Seirul · lo, 1998, p. 23.

Estado de formas	Physical conditions
Duración de la pretemporada	Duration of the pre-season
E.E.F.	S.C.
E.G.F.	G.C.

The opposite occurs in relation to the specific physical condition with this load design and this approach to training. For example, a test of a vertical jump with a basketball-specific preliminary movement and simple decision making can be a valuable measurement of a quality closer to the specific and corresponding state of this specific condition, so that this capacity will increase during the pre-season due to its increased specificity.

Within the block of concentrated volume of specific condition, Figure 3 should be highlighted. It shows that there are three blocks that interact with one another.

Figure 3: Block of concentrated volume of specific condition



Source: Seirul·lo, 1998, p. 24.

According to Seirul·lo (1998), the blocks can be described as follows:

1. They include elements of general strength.
2. They include elements of directed resistance.
3. They include elements of directed strength.

These blocks correspond to a certain orientation, to a task of strength, for example, with a certain preference. This means that the first block refers to the elements of general strength; block 2 contains elements of directed resistance, and block 3 includes elements of directed strength. This whole block represents the pre-season-specific condition concentrated volume block. In this way, the interaction between each of these blocks allows the interaction of the systems with the objective of favouring the self-optimization of the human sportsperson who plays basketball, mainly focusing on the conditional structure and, specifically, on strength.

In these cases the interconnection surfaces are essential, as it can be appreciated in Figure 4. To pass from one element to another with different orientation. The efficiency of

the training systems designed towards achieving these goals is the key to the player's performance (Seirul-lo, 1998).

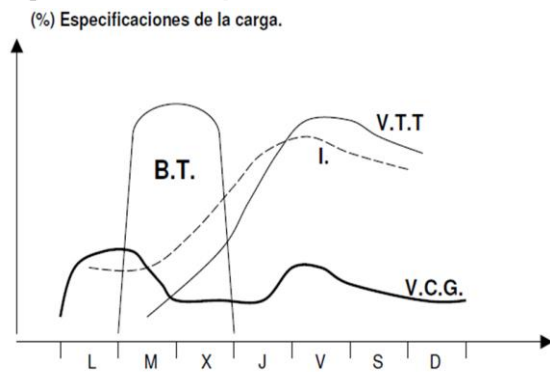
According to the author (Seirul-lo, 1998), the pre-season block is divided into five moments. Moment one, which is the block 1 itself. The intersection between block 1 and 2 is moment 2. Then comes block 2 - the intersection of blocks 2 and 3 - and block 3, which can coincide with training days, for example, during the first week of pre-season. This correspondence depends on the number of weeks the pre-season lasts, which in the worst case scenario would be three, for this type of planning to be applied. Twice that number may be an even more recommended duration (Seirul-lo, 1998).

With this load design, during the pre-season we accelerate its application and assimilation by the athletes who play high performance basketball. In other words, this design favours the athlete's capacity to absorb training loads. We also achieve the biological inertia of the different organic functional systems that is expressed through an increase in the specific conditional capacity of the human sportsperson who plays basketball. This implies a capacity of adaptation to those stimuli that has received sufficient interaction among all the systems. In addition, a certain defined configuration of performance is initiated, and monotonous tasks that are difficult to transfer to the practised speciality are avoided. Finally, a load volume is achieved; it enables the desired condition to be maintained throughout the competition season (Seirul-lo, 1998).

So far, we have analysed the pre-season block; in the following section we will concentrate on the next phase of the season. According to Seirul-lo (1998), at this stage of the competition, the design of the load during the competition season depends entirely on the conditions of the competition. This means that the format of the competition conditions the design of the load dynamics of the training stimuli. Usually, the competition consists of two games per week over the course of the season. Therefore, the design of the load must be adjusted to this exceptional circumstance called micro structure.

We propose a self-structured micro-cycle, with its own functional unit, integrated into the season, which is composed of as many micro structures as necessary to complete the entire time that the competition lasts. In turn, each of these micro structures depends on the others that make up the season and, at the same time, it contemplates the elements and the load dynamics that enable the athletes to be in the desired physical condition at the most important moment of the micro structure, that is, the game itself so as to compete at the highest possible level. By using the reactive inertia of the functional systems designed and influenced during the pre-season, the load of the micro structure is planned along the same dimensions (Seirul-lo, 1998). Figure 4 shows the dynamics designed for the micro-cycle during the season.

Figure 4: Load dynamics, micro structure and competitive season



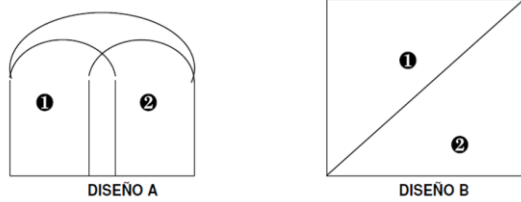
Source: Seirul-lo, 1998, p. 26.

Especificaciones de la carga	Load dynamics
B.T.	B.T.
V.T.T.	T.T.V.
V.C.G.	V. G. C.

Figure 4 shows a concentrated block that belongs to the season block (S. B.). The technical-tactical volume, the volume of generic quality and also the dynamics of intensity throughout the week can be observed. The outline of the curves is similar to the one designed in the pre-season, in order to achieve that biological adaptation to very fast and intense dynamic loads. The proposal of technical-tactical volume is very similar in content and design to that of the pre-season. Its initial slope is greater, so that during the season block we can include more technical-tactical content. There is a greater variation in the intensity curve, which is swifter and more upfront in both the season's volume and the technical-tactical volume, which causes a high concentration of load on the central days of the micro-cycle, ensuring with its subsequent descent a sufficient condition during the weekend so as to be able to face the competition with confidence (Seirul-lo, 1998).

The generic quality volume curve meets the same objectives as its pre-season predecessor. The only thing to note is that on Monday the increase in the level of this curve is due to restoration training, if this is done at all (which is recommended). Major modifications and alternatives occur in the season block, which is why we have changed its name to the pre-season specific conditions concentrated volume block (C. C. B. V.). It can be designed in two ways: both are initially different from the condition-specific concentrated volume, since they consist of only two components. These can include successive, complementary or synergistic actions. In the successive action the components derive from the same basic quality and operate at similar levels to the ones in competition. For example, directed strength and special strength (Seirul-lo, 1998).

Figure 5: Complementary activity



Source: Seirul·lo, 1998, p. 27.

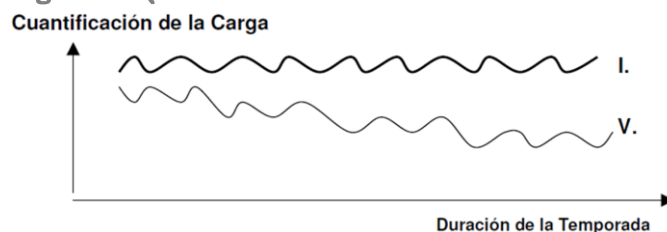
Diseño A: Option A

Diseño B: Option B

The complementary activity involves the connection of two different conditional capacities that, due to their characteristics or their expression in basketball, must be trained together focusing on competitive performance. For example, the elastic-reactive force could be one of the components, and the time or speed of discrimination could be the other. Another important element is the synergic activity; it depends on the knowledge of this phenomenon and it is usually related to the technical-tactical volume curve or to capabilities of another category. As for its morphology, we have to take into account that option A appears successively in three moments: only in the middle are the two qualities of this option related. The two qualities are developed simultaneously in option B during the course of the whole block. For all that, option A can be mostly used at the beginning of the season. It is easier to perform option B in the micro-cycle, which includes two competitions (Seirul·lo, 1998).

The reason why this form of planning is called micro structure is because it entails a certain invariable load structure, although non-structural modifications do exist, and also because each micro structural unit is related to the others that make up the entire competitive season. In Figure 6 we can see what it consists of (Seirul·lo, 1998).

Figure 6: Quantification of the volume and intensity load



Source: Seirul·lo, 1998, p. 27.

Cuantificación de la carga: Load quantification

Duración de la temporada: Duration of the Season

The quantification of the load undergoes small oscillations, both in intensity and volume. Therefore, with very small oscillations, the intensity is maintained at a high level throughout the season. Volume, in turn, decreases intermittently during the competitions. This is the reason why option B of the season block structure is mostly used towards the end of the season, in addition to the reasons indicated above (Seirul-lo, 1998).

The intensity has to be kept high so that the variations in volume are more significant and can achieve the dynamic effects of the desired load. According to Shein's theories, since it is very risky to lower the intensity of the load with successive and close competitions, the indicated oscillations must be adjusted to the moments in which the competition schedule is less compromised for the aims of the team. That is to say, it is necessary to carefully select the moments in which to establish these oscillations according to the opponents we will face. The progressive and intermittent decrease in volume throughout the season responds to the need to maintain the desired physical condition in all the competitions of the year. In this way, the decrease in volume leads to a positive response from the athlete's organism, which is able to acquire a new physical condition - together with the corresponding increase in intensity - and remain it throughout the season (Seirul-lo, 1998).

Therefore, it is necessary to design these curves with the competition calendar as a reference, so that they are reflected in the micro-cycle, which is where the exact quantification of the training load is expressed, and thus structured in relation to the rest of the closest micro-cycles. For this to occur, each and every successive micro-cycle has to establish a certain relationship between the conditional elements of the block and the elements of the technical-tactical volume curve, as well as with all the other training contents belonging to any other system. In general terms, there should be direct relationship indexes between all of them, between resistance elements such as tactics, strength, speed and technique (Seirul-lo, 1998).

The load dynamics in the structured micro-cycle allows the human sportsperson who plays basketball to perform at an optimal level for one, two or three games during the structured micro-cycle. At the same time, the structured training cycle includes three weeks. Thus, different types of sessions are distinguished according to their objectives.

1- Restoration. The aim is to restore the body from the physical and mental effort made during the competition. Volume and intensity are low. The objective is to facilitate the upcoming preparation. The preparation of the next game, mainly focused on the introduction of new concepts, either defence or attack, produces a greater overload on the organism of the human sportsperson who plays basketball, which ensures the activation of the adaptive process. These new concepts can be added based on the team's own needs (looking at the strengths and weaknesses from the previous game) or on our

preparation for the following game. The volume is high; the intensity, medium to high; and the density is high or similar to that of the game.

2- Optimization. The aim is to facilitate the preparation of the following game, focusing mainly on the introduction of already assimilated playing concepts, either in attack and/or in defence. These concepts are typical of our playing model, of our way of playing, of those particular situations that distinguish us as a team and that give a sense of belonging to a certain style. The characteristics are: medium volume, high intensity and medium-high density.

3- Activation. The aim is also to facilitate the preparation of the following game, by linking all the work done during the micro-cycle. All the fundamental situations for us in the micro-cycle have to be associated and activated sufficiently and effectively enough for the players to recognise the situations that are efficient in the competition. The volume is low, the intensity is medium and the density is medium-low.

Joan Solé Fortó (2006) establishes different types of micro-cycles depending on the load dynamics of each one. Among them, we find the preparatory micro-cycle, in which there is a predominance of sessions of a generic and general nature. This micro-cycle is more commonly used at the beginning of the pre-season and with some adaptations in the regenerative period, which is quite difficult in elite basketball, especially when concerning the current Euroleague and ACB League calendars, for example. In this regard, Figure 7 shows a preparatory micro-cycle option in which there are basically double sessions, and only three rest sessions.

Figure 7: Preparatory micro-cycle

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Mañana						
Générico	Gene/General	Gen/Dir	Gen/Dir	Dirigido	Descanso	Regeneración
Tarde						
Générico	General	Descanso	Dirigido	Especial	Competitivo	Descanso

Source: Solé Fortó, 2006.

Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday
Mañana	Morning
Tarde	Afternoon
Genérico	Generic

General	General
Dirigido	Directed
Descanso	Rest
Especial	Special
Competitivo	Competitive
Regeneración	Restoration

Another type of micro-cycle is that of directed transformation, in which the predominance of general and directed sessions is more common in the last weeks of pre-season or if the competition is interrupted by selections (Figure 8).

Figure 8: Directed transformation micro-cycle

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Mañana						
Générico	General/Dir	Dirigido	Dirigido	Dirigido/Especial	Descanso	Regeneración
Tarde						
General	General/Dir	Descanso	Dirigido	Especial	Competitivo	Descanso

Source: Solé Fortó, 2006.

Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday
Mañana	Morning
Tarde	Afternoon
Genérico	Generic
General	General
Dirigido	Directed
Descanso	Rest
Especial	Special
Competitivo	Competitive
Regeneración	Restoration

Another type is the special transformation micro-cycle. In this type of micro-cycle, the sessions are mainly directed and those of a special nature begin to be accentuated. It is recommended to be used at the beginning of the competitive phase or at times when the opponent presents a very low or superior level of performance (Figure 9).

Figure 9: Special transformation micro-cycle

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Mañana						
General	Dirigido	Dirigido/Especial	Dirigido/Especial	Especial	Descanso	Regeneración
Tarde						
General	Dirigido	Descanso	Especial	Competitivo	Competitivo	Descanso

Source: Solé Fortó, 2006.

Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday
Mañana	Morning
Tarde	Afternoon
Genérico	Generic
General	General
Dirigido	Directed
Descanso	Rest
Especial	Special
Competitivo	Competitive
Regeneración	Restoration

Maintenance micro-cycle. There is a balance of directed and special sessions. It is mostly implemented during the season (Figure 10).

Figure 10: Maintenance micro-cycle

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Mañana						
General	Dirigido	Especial	Especial	Competitivo	Descanso	Regeneración
Tarde						
Dirigido	Dirigido/Especial	Descanso	Especial/Competitivo	Descanso	Competitivo	Descanso

Source: Solé Fortó, 2006.

Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday

Mañana	Morning
Tarde	Aftenoorn
Genérico	Generic
General	General
Dirigido	Directed
Descanso	Rest
Especial	Special
Competitivo	Competitive
Regeneración	Restoration

Competition micro-cycle. There is a clear preference for special and competitive sessions on micro-cycles containing major games, or when our team plays several games during the week (Figure 11).

Figure 11: Competition micro-cycle

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Mañana						
Regenerativo	Competitivo	Dirigido*	Regenerativo	Especial	Competitivo	Descanso
Tarde						
Descanso	Descanso	Partido	Descanso	Competitivo	Descanso	Partido

Source: Solé Fortó, 2006.

Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday
Mañana	Morning
Tarde	Aftenoorn
Genérico	Generic
General	General
Dirigido	Directed
Descanso	Rest
Especial	Special
Competitivo	Competitive
Regeneración	Restoration

The orientation of each session will depend on the preferential simulator situations we propose, that is, depending on the contents. Thus, the session is generic if generic-orientation tasks predominate, and general if general-orientation tasks predominate. And so on. The sessions' orientation can be special-competitive or regenerative, if there is

predominance of generic exercises and recovery means to restore the organism after an effort.

According to Solé Fortó (2006), the process for programming training is as follows. First, the objectives must be established. Then, the main contents that will be part of the tasks that help the team to reach these objectives must be determined. Then, it is necessary to classify them according to the aforementioned taxonomy. Then, the volume required for each task to achieve the objectives must be proposed according to the type of micro-cycle and its objectives. It is necessary to calculate the volume, intensity and load, and contrast them with the load dynamics forecast carried out in the previous phase. Finally, it is necessary to calculate the percentage of volume carried out by category - generic, general or directed - and to verify that it is in line with the established type of micro-cycle. We can see an example in the following Figure, which is based on Solé Fortó's (2006) proposal.

Figure 12: Guidelines for programming training

Microciclo	Preparatorio	Transformación dirigido	Transformación especial	Mantenimiento	Competitivo
Regenerativo	20-25	20-25	20-30	20-30	30-50
General	30-40	20-30	15-20	5-10	0-5
Dirigido	20-30	25-35	20-30	10-15	5-10
Especial	10-15	10-15	15-20	20-25	15-20
Competitivo	0-5	3-5	5-15	15-20	30-40

Source: Solé Fortó, 2006.

Microciclo	Micro-cycle
Regenerativo	Restorative
General	General
Dirigido	Directed
Especial	Special
Competitivo	Competitive
Preparatorio	Preparatory
Transformación dirigido	Directed transformation
Transformación especial	Special transformation
Mantenimiento	Maintenance
Competitivo	Competitive

Different types of micro-cycles can be distinguished according to the percentage of the sessions' orientation. For example, the preparatory micro-cycle includes 20 to 25% regenerative work, 30% to 40% general work, 20% to 30% directed work, 10% to 15% special work and 0% to 5% competitive work. To achieve this, it is essential to rely on the following factors when designing the micro-cycle.

- The following match (analyse opponent).

- The previous match (analyse what happened, physically, mentally, etc.).
- The athletes' characteristics (age and time spent training).
- The number and magnitude of the load of the sessions.
- The recovery processes of each session.
- The role of the session in the season.



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