

Original Article

**Planning the training process for the preparation of high-qualification gymnasts for the Olympic Games**

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**Abstract:**

Purposeful planning is at the heart of the entire training process, with days, weeks, months and years of training. It is very difficult to determine what and how you should do it. It is impossible to determine everything with mathematical accuracy. However, the degree of correctness of minute, daily, and especially promising scheduling issues can be greatly enhanced by the available data of sports training theory in this direction, the experience and talent of the coach and the individual ability of the athlete. Proper planning in the system of training high-skilled gymnasts plays a large role in achieving results in competitions. On the example of the Olympic champion gymnast - Oleg Vernyaev, the planning for the Games of the XXI Olympic Games and the performance of this load and the results of competitions at which this athlete acted were analyzed. The protocols of the finalists in all-round and main competitions are analyzed: international competitions, European Championships, World Cup, World Cups, Olympic Games in the period 2015-2016. The purpose of our work was to show how rational planning in O. Vernyaev training contributed to the high results in the competitions. Conclusions - In order to achieve great results in competitions, you need to plan the load and have a training system that includes periods, cycles and stages for many years to come.

**Keywords:** planning, training, process, gymnast.

**Introduction:**

Each trainer will primarily rely on the calendar of events for the coming year or the entire Olympic cycle when planning the training process for gymnasts. For a high-skill athlete, the main competitions will be the Olympics. Accordingly, it is necessary to build training planning so that the athlete shows the maximum result in the main competitions (Arkaev L. 2006, Haverdovsky Y.2014). Together with the trainer, the athlete plans time for mastering new elements and mastering new exercises, as well as control tasks for all types of training (Smolevsky V, Haverdovsky Y. 1999).

Taking into account the individual abilities of the gymnast, his qualifications make an individual plan for the volume of workload and participation in competitions. First of all, the trainer should strive to ensure the organization and maintenance of the training process, which would constantly put to the athlete the task of tangible improvement.

**The purpose of the study:**

Is to theoretically and experimentally substantiate the influence of planning the training process on the performance of competitive activity of high-skill gymnasts.

**Research methods:**

Analysis of scientific and methodological literature, analysis of scientific and methodological literature, analysis of protocols of international competitions of finalists in all-round: European Championships, World Cup, World Cups, Olympic Games 2015-2016; statistical methods of processing the results of the study.

**Results of the study and their discussion:**

Planning the training process with high-skill gymnasts should be divided into stages, periods, cycles, and so on. Therefore, when working with such athletes, it is necessary to have a plan for many years to come, at least for the «Olympic cycle» (Arkaev L. 2006). If we take the last year before the Olympics, then just in planning it will be directed to the construction of the training process with the participation of the Games of the Olympics. Thus, it makes sense to «paint» it in all cycles (Platonov V. 2015).

*Macrocycle* – the annual cycle consists of periods – «Preparatory», «Competitive» and «Transitional». The name shows what preparation, and in what period will be. The duration of stages and periods may vary (Arkaev L. 2006, Platonov V. 2015).

In the «Preparatory» period summarizes the past periods and stages, and focuses mainly on improving and stabilizing competitive programs.

The «racing» period is the realization of mastered competitive programs, participation in a number of scheduled competitions and the acquisition of ratings and experience of gymnasts. The «transition» period is the most relaxed in terms of load and competition. The main task of this period in the rest and recovery of the gymnast after training and competitive loads (Smolevsky V, Haverdovsky Y. 1999).

The duration of the stages and periods may be different. For example, in the «Preparatory» period may include a number of competitions, and this period will smoothly transition into the «Competition» period. Often, not many competitions are present in sports gymnastics, but a series (series) of competitions in a row, and the interval between them can be from a week to 1 month.

If you take the annual macrocycle as a basis, it will be divided into 8-12 mesocycles, that is, each mesocycle will consist of one or one and a half months, and each mesocycle will include a 4-6 week microcycle, everything will depend on the competition calendar (Arkaev L. 2006).

Using the structure of the construction of a macrocycle, you can build a model of training for both the individual gymnast and the whole team (Smolevsky V, Haverdovsky Y. 1999).

Having an understanding of the structure and construction of the training process, the trainer can plan training with gymnasts of any qualification, and calculate the required amount of training load in the quantitative indicator of the elements and exercises for the athlete is not difficult. Each competition composition consists of a set of specific elements, which in turn have difficulty according to the rules of the competition. If a gymnast is just mastering new elements or a whole program, then usually the necessary amount of workload will have to be specially technical and specially physical training. In this case, the bulk of the load will be performed by the gymnast at the expense of the elements and connections, not the competitive exercises (Marchenko Y. Salyamin Y. Tereshenko I. 2003).

Table 1 shows how many elements O.Vernyaev has in each competition composition. Therefore, when planning the amount of load, you can determine how much it takes to develop and stabilize the individual elements and connections, as well as to improve the competition programs.

Table 1. The number of elements in each type of gymnastic all-around in the compositions of O. Vernyaev

Apparatus	F E	P H	R	P B	H B
The number of elements in the composition	16	14	13	15	15

On five types of gymnastic all-rounder in O. Vernyaev in each composition more than 13 elements, it is caused by the fact that according to the rules of competitions in «Complexity estimation» it is necessary to collect 10 most difficult elements. Therefore, several additional or auxiliary elements have gymnasts in their arsenal. Often without these «light» - «basic» elements can not be made more complex, they serve to speed, for the amplitude of motion, for correction or additional training in front of complex elements.

Thus, if a gymnast is going to perform a track on a specific projectile, in addition to it, you need to perform a warm-up approach, which in turn has a load of several parts or half of the exercise. Take, for example, the competitive composition of O. Vernyaev on «Floor Exercises» – 16 elements in the whole composition, in the warm-up approach was performed from 8 to 10 elements. If the composition was performed at a high level, and it does not make sense for the gymnast to elaborate on this projectile, then it turns out that by performing only one good exercise, the gymnast does 24-26 elements. And if it is not one composition, and the necessary refinement, then accordingly the number of elements increases. That way, you can calculate how much load a gymnast should make on each type of gymnastics event.

The authors of the textbook «Artistic Gymnastics» V. Smolinsky and Y. Gaverdovsky suggest (see table 2) alternation of load depending on the day of the week and the type of all-round.

So, on the first training day, the first projectile of the gymnastic all-round is used – «medium» load, the next projectile – «high» load and on the third projectile – «low» load.

Table 2. Alternation of load depending on the type of all-round in the microcycle

All-around	Days of the week						
	1-й	2-й	3-й	4-й	5-й	6-й	7-й
First	Medium	Medium	Big	Small	Big	Medium	Vacation
Second	Big	Big	Medium	Small	Medium	Big	Restoration
Third	Small	Small	Big	Small	Big	Small	

As can be seen from Table 2, something like a wave is formed, with increasing and decreasing loads. If the training session involves the passage of three shells in one training session, then it is necessary to finish, and to continue on the second training session - on the fourth projectile there will be an «average» load, on the fifth projectile – «large» and on the sixth projectile, respectively completion of the training session of the main part – «small» load. Thus, using with break, pause or rest all six rounds of gymnastic all-round in one training day.

High-level gymnasts always train two or three training sessions a day and 6 times a week. Therefore, it is possible to schedule the required amount of workload and perform it in one training session or per day, in two training sessions.

If, in preparation for competitions in the «Competition» period, it is rational to take all six shells for one training session. In this case, the load is repeated when the fourth, fifth and sixth shells use the sequence of the first three. You can also use the fifth or sixth projectile, not the primary projectile, but an additional projectile. For example, according to the schedule, on that day, the gymnasts started their training session with the «Pommel-Horse», then they will finish with the «Floor Exercises» (Olympic system of gymnastic all-around). In this case, instead of the main projectile «Floor Exercises» you can use an acrobatic track with a foam pit or a more lightweight version –«Trampoline»(Haverdovsky Y.2014, Rules of competitions in Artistic gymnastics.2011, [http // www.fig-gymnastics.com](http://www.fig-gymnastics.com)).

Thus, in order to perform the planned load, it is necessary to «pass» six types of gymnastic all-around, possibly in a light version.

The next step in planning is to determine what day of the week will be high, medium or low load and identify «Involving», «major» or «Impact» days. As a rule, in gymnastics qualifying competitions take place on Wednesday, finals in the team championship or the finals of the all-around take place on Friday, and the finals of the shells on Saturday and Sunday. In the same direction, you can schedule a mesocycle and load for each week. Based on the schedule of competitions, determine the control and model training sessions.

Rational planning in the training system in the training process performs 80% of the successful performance of the athlete in the competition.

In this article we will look at the volume of load made by Oleg Verniayev in the seventh (final) mesocycle before the Games of the XXI Olympiad.

Each of the weeks had its own orientation in the workload, in which the place of one or another training of the athlete in the types of gymnastic all-around was given.

In Figure 1, the undulating load is very clearly visible. And we see in what week was the largest volume of load carried out by O. Verniayev in the seventh mesocycle.

From the figures in Figure 1 of the Seventh Mesocycle, you can see the trend of «Impact» days of the week: Monday, Wednesday, Friday. The wave load system is supported:

- Monday – «Big» load;
- Tuesday – «Medium» load;
- Wednesday – «Big» load;
- Thursday – «Small» load;
- Friday – «Big» load;
- Saturday – «Small» except «Shock» microcycle there – «Medium» load.

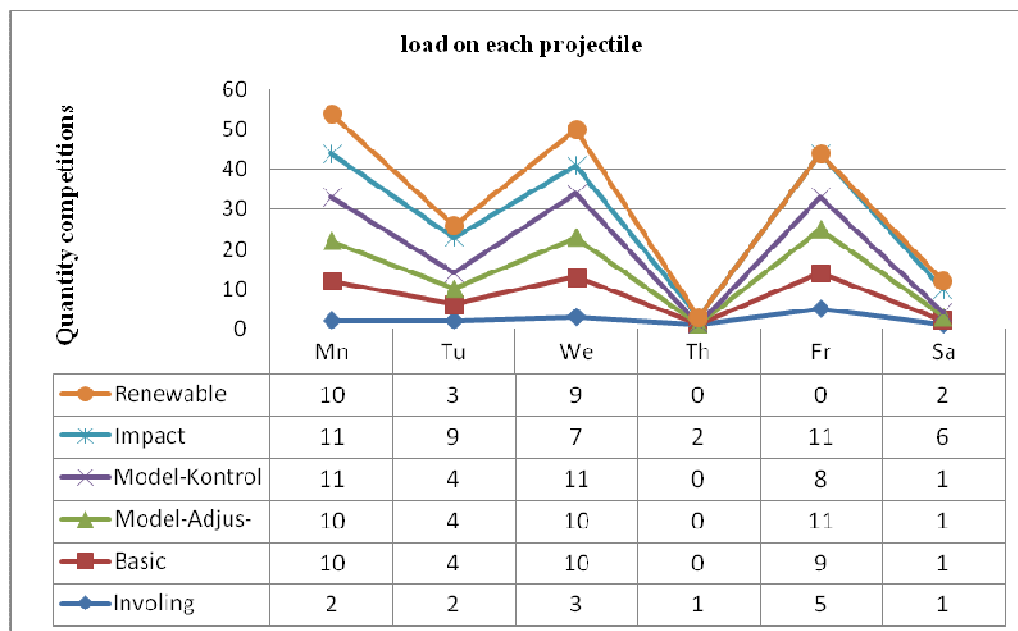


Figure 1. Load dynamics in the 7th mesocycle

Figure 1 shows the dynamics of loading performed by O. Verniayev on each type of gymnastic all-around in the seventh mesocycle.

During the first week – «Involving» of the seventh mesocycle 14 competing songs Exercises were performed. Figure 1 shows which days of the week how many competing Exercise were performed. So this week the entire volume of loading went on increasing, first on Monday and Tuesday on 2 compositions, on Wednesday already three, then there was a reduction to one. But on Friday, the maximum of 5 Exercises, and on Saturday again will load 1 Exercise. In total, 14 Exercises were performed in «Drawing» week.

The next microcycle – «Basic» is aimed at increasing the load. And just like the previous microcycle – to stabilize and improve the technical skills of competitive programs.

In view of the information in Figure 1, the second week was «Basic» and the total exercise load increased almost twice (from 14 compositions to 23 compositions). There was a «big wave» this week, and the load ranged from a «big» 10-9 Monday, Wednesday and Friday to a «small» 4-0-1 Tuesday, Thursday, Saturday, respectively.

In the third week, «Model-Adjusting», the load was increased by 9 more compositions than the previous microcycle, and more than 2,5 times compared to the «Involving» microcycle. And also, as in the previous cycle, Monday, Wednesday and Friday were " Impact" days.

The fourth microcycle is «Model-Control», which is identical to future competitions, starting from the dates (one month earlier at the same time of competitions on the same days of the week as the competitions), as well as most of the training process is aimed at simulating competitive situations. Starting from training time, warm-up, projection, to situations that can occur in competitions. If a gymnast knows what needs to be done in a particular situation, then competitions can help to achieve results. That is why it is so important for any athlete to take model training sessions.

According to Figure 1.in the «Model-control» microcycle of competitive Exercises was performed only 2 more than in the «Model-adjustable», microcycle. That is, the whole process was aimed at a model of competitive action.

Fifth Microcycle –«Impact». If in the previous week of «Model-Control» Microcycle the total load was performed according to the competition program, and the purpose was to detect errors and shortcomings, then this week the total load was maximum.

Competition compositions were performed 14-13 more compared to the third and fourth weeks of the 7th mesocycle. And if on Monday, Wednesday and Friday the trend of «high» load remains, then on Tuesday and Saturday is not «low» load, as in the previous weeks. And the «average».In total – 48 competitive compositions.

The final sixth week of the 7th Mesocycle is «Renewable». Unlike previous macrocycles, the overall load was reduced. The entire maximum load was passed, and this week served to support the gymnast's fitness. 32 compositions were performed in the competition tracks, which is less than the 16compositions percussion, but almost identical to the «Model-adjusting» and «Model-controlling» ones.

Thus, it can be seen from Figure 1 that the «Impact» Days are the first (Monday), third (Wednesday) and fifth (Friday), «low» load «Recovery» days on the fourth day of the week – Thursday. This construction of the training process applies to the «Transition» and «Preparatory» periods. However, such a sequence may vary and vary depending on the schedule and position of the competition.

During the «Racing» period, «Impact» and «Recovery» days can be offset. As a rule, during competitions gymnasts perform on Wednesday, Friday, and very often on Saturday and Sunday. Therefore, the trainer should plan the workload so that the "Shock" days or «Significant» are exactly on the competitive days, in which the gymnast will participate and will have to show their best results.

In the 7th microcycle, the maximum load was achieved. This is the most important training cycle in which the physical, psychological and technical fitness of Oleg Vernyaev before the main starts - XXXI of the Olympics was tested.

Together with the trainer, O. Vernyaev planned to participate in 10 competitions of different grades, but the gymnast did not have enough skills to master the new competition program and confidence in his abilities. Therefore, Oleg participated in additional competitions, in general, he competed in 19 competitions ([http // www.fig-gymnastics.com](http://www.fig-gymnastics.com), [http // www.Ueg-gimnastics.com](http://www.Ueg-gimnastics.com)).

Table 3.Participation of O. Vernyaev in competitions for a macrocycle

competition	Quantity of competitions	Quantity of medals
International competitions	13	Gold – 12, Silver – 4, Bronze - 1
World Cup	4	Gold – 6, Silver – 2, Bronze - 1
European Championship	1	Gold – 2, Silver – 1, Bronze - 0
Olympic Games	1	Gold – 1, Silver – 1, Bronze - 0

In all competitions of different grades O. Vernyaev won 31 medals:

- 21 gold medals;
- 8 silver medals

- 2 bronze medals

Thus, it is possible to reliably state the need for planning in the training process of high-skilled gymnasts all cycles, stages and periods for good results in competitions.

#### **Discussion:**

Experience of good sports practice convincingly shows that in the process of training of high qualification gymnasts it is necessary to rationally plan the construction of the training process. Of course, they go from «big to small»– Macrocycle, mesocycle, microcycle. Initially, a plan is made for the year, based on the calendar of competitions in Macrocycle. Then plan what load the gymnast will perform in a month – a mesocycle. And finally, what to do in a week is a microcycle, and also what international competitions to participate in to improve the results.

#### **Conclusions**

Studies have shown that, based on the experience of recognized experts in the field of gymnastics, it is necessary to plan work with athletes in advance for many years to come.

The rational planning of the workload in the training process and the implementation of the plan by the athlete, or exceeding this plan, is the key to a successful performance in competitions. However, one should not forget the individual abilities of the athlete.

The analysis of competition protocols showed that the experience gained at competitions of different levels not only improves the performance of the gymnast, but can also be the impetus and motivation to achieve the highest result in the sport of higher achievements.

**Conflict of interests.**The authors had no conflicts

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