# IMPORTANCE OF USING PERIODIZATION IN BLOCKS IN QUALITY DEVELOPMENT IN KAYAK BIOMOTRICE

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**Abstract**

*Traditional periodization of training, defined as dividing the whole season in shorter periods of time and training units. This periodization plan was repeated frequently, thus becoming a universal and monopolistic approach to training planning and analysis. Positive experiences over time led to alternative training concepts and, finally, to reconstruction, training reinvention approach, resulting in block periodization.*

**Keywords**: *periodization, programming, kayak, biomotric abilities*

**JEL classification:** *I 20, I 21*

## Introduction

Periodization is one of the most important concepts of planning and preparation. Period is a time slicing or splitting into smaller segments, easily controlled, called training phase.

Periodization refers to two important aspects:

**1**. annual periodization plan - is divided into smaller phases

**2**. periodization training biomotoric abilities refers to structure the training phase leading to the highest level of education quality (their ) base of that branch of sports.

## Research motivation

**Traditional periodization of training**, defined as dividing the whole season in shorter periods of time and training units. This periodization plan was repeated frequently, thus becoming a universal and monopolistic approach to training planning and analysis.

Positive experiences over time led to alternative training concepts and, finally, to reconstruction, training reinvention approach, resulting in **Block Periodization.** Generaly, it involves the use and sequence of specialized blocks of mezocycle where high concentrated loads training, focuses on the **minimum number of driving and technical skills**, unlike traditional periodization, where **simultaneous**

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**development of multiple skills** is prevalent. Periodization block uses three types of specialized units: storage, for technical skills and basic driving (mainly aerobic capacity and muscle strength and basic technical characteristics) transfer to specific skills event (in particular, anaerobic capacity and / or aerobic capacity type - anaerobic and specialist technical skills) and performance for speed, race tactics and adapting specific proof of evidence of competition completely before the next (this block is similar to narrow). Any act or action is carried out by motor nerve and muscle power consumption. When the consumer is more specific fatigue phenomenon occurs can be reduced or eliminated by rest or other support measures.

The kayak relationship effort (force-velocity resistance booked) - intensity (frequency paddling) - Skill sports industry as specific effort is conducted under conditions specific to human posture (balance water) with a number of limiting factors (wind, waves) - rest is essential in the training.

**Research has shown**

a) the first three links, dynamic effort recorded continuously ascending curve, it goes into the effort, the heart rate values of 70-80 beats per minute and respiratory frequency of 16-18 breaths per minute, reaching to 120-130 beats per minute and 20-22 breaths per minute.

b) fundamental lesson in the training intensity increases further effort, effort curve recorded a plateau with oscillations depending on the issues of training and specific operational objectives to reach values under-maximum dedicated athletes, and the thematic links, one recorded effort curve plateau with oscillations according number of issues and specific operational objectives (growth when developing motor skills or reinforce skills and / or the skills driving, especially when using dynamic games, relay, passes applied, mostly in sports games these bilateral training cadets and juniors.

c) in the final, recorded a decrease in the curve of effort, the rule is not never HEART RATE and respiratory frequency values at the beginning of training. The study looked exemplified quality biomotoric periodization of strength by the method specified kayak.

**Subjects and methods**

The experiment was conducted on two groups of seniors and youth sports:

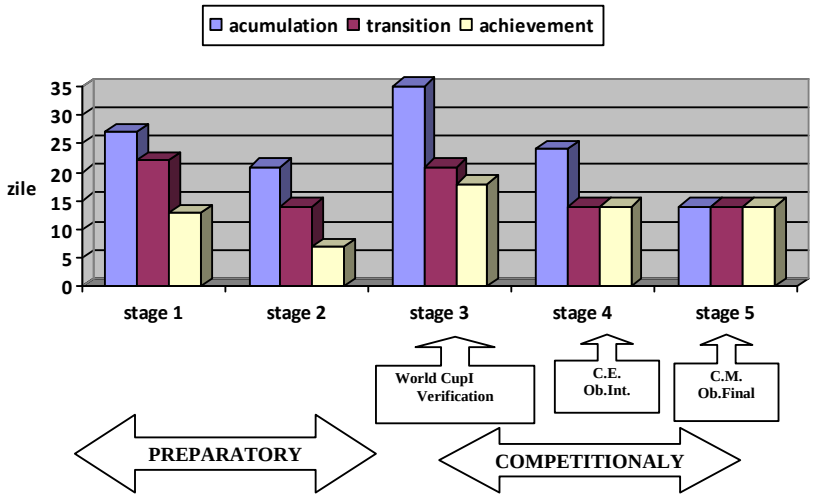
- block periodization in the kayak boys senior national team.
- The traditional periodization of kayak boys youth national team.

Macrocycle preparatory stage in 2008-2009 compared to block storage preparation phase accumulation in macrocycle 2007-2008

- Macrocycle Duration: October 2008-August 2009
- Number of stages: 5
- Features

Stage1 - preparatory training internship specifically
Stage 2 - nonspecific preparatory training (training mountain)
Stage 3 - internship specific preparatory training
Stage 4 - competitive (intermediate target) Internship
Stage 5 - competitive (final goal)
Structure: - Block accumulation - Transitional Block - Block realization

Graphic representation of the stages and blocks macrocycle:




Content -internship-III Block accumulation 2008-2009

Basic driving skills developed in this period of 4 weeks maximum strength and aerobic endurance.

The microcycle structure is 5 trainings + 1 free = 10 trainings/microcycle

**Methods of training used in an effort to specifically block accumulation - Flight of effort, methods, means, amount, intensity, speed.**
**Model time K1.B.sen kayak. x 1000m = 3'28 "**

Percentage values in each stage are determined by the specific test or 3x2000m 1x6000m maximum. - 1 knot = 1.852 km / h - control sample 1x6000m

**Step R5. RESISTANCE aerobes - O2 stable**

- 50-55% of maximum value of the athlete who is determined at each stage the maximal specific assay.
- Pulse 140 10 b / min, 55-60 stroc lov / min speed, 6.0 knots
- speed = 6.0. nodes x1, 852km / h = 11.112 km / h (5.40 / 1000m)
- 2 mM / L milk - 80 -110 min - water 14-18 miles - running, water skiing
- parameters constant turnover, long endurance

**Step R5 +. Aerobes RESISTANCE - O2 stable**

- 65-70% of maximum value of the athlete who is determined at each stage by the specific test pulse maximum
- 155 + 5 b / min, 60-65 stroc lov / min, 7.0 speed.
- knots speed = 7.0 knots x 1.852 km / h = 12.964 km / h (5.03 / 1000m)
- 4 mM / L milk - 45 - 80 min - water 10-14 miles - running, water skiing
- turnover parameters constant, the long endurance

**Step R4. Aerobic- Anaerobic resistance o2 relative (aerobic-anaerobic threshold)**

- 75-80% of the maximum value of the athlete who is determined at each stage by the specific test pulse maximum
- 160 + 5 b / min, 80 stroc lov / min speed of 7,8-8,0.
- knots speed = 8.0 knots x 1.852 km / h = 14.816 km / h (4.30 / 1000m)
- 5-6 mM / L milk - 30-45 minutes - water 6-8 km (4x2000, 2x4000, 1x8000)
- lengthy repetitions, the average endurance

**Stage R3. Aerobic power - vo2 maximum**

- 85% of the maximum value of the athlete who is determined at each stage by the specific test pulse maximum
- 170 + 5 b / min, 85-90 stroc lov / min speed of 8,0-8,5.
- knots speed = 8.5 knots x 1.852 = 15.742 km / h (3.42 / 1000m)
- 7-9 mM / L milk - 2-6 km 8-30 min
- water, repetition (8x500, 6x1000) (3x2000 , 2x3000, 1x6000,)
- long periods 1'-2'-3'-2'-1 ') - Power repetitions
- medium and long endurance, endurance brief

Following the same method above own training;

**Synthesis of quantitative and qualitative indicators Internship III accumulation block**

| **Quantitative indicators** | |
|---|---|
| Weekly cycles number | 4 |
| Number of calendar days | 28 |
| Number of training days | 24 |
| Number of competition days | 0 |
| Number of free days | 4 |
| Number of travel days | 0 |
| Number of SPECIFIC training | 40 |
| Number of NONSPECIFIC training | 14 |
| Number of TOTAL training | 54 |
| Rowed km on the water | 592 |
| Rowed km sim+Fs | 16 |
| Total rowed km | 608 |
| Number of specific hours | 50.30 |

| **Row on the water effort stages** | | **accumulation block** | |
|---|---|---|---|
| R5km | O2stable | 182 | 29.9% |
| R5+ | O2stable | 320 | 52.6% |
| R4km | Treshold anaerobic -air | 86 | 14,14% |
| R3km | Aerobic power | 18 | 2.96% |
| R3+ | Aerobic power + | 0 | 0 |
| R2km | Milk tolerance | 0 | 0 |
| R2+ | Milk oxygen | 0 | 0 |
| R1km | Oxygen milk | 0 | 0 |
| R1+ | Anaerobic alactacid | 0 | 0 |

**Synthesis of quantitative and qualitative indicators of the stage V macrocycle 2007-2008 similar with the Stage III accumulation block macrocycle 2008-2009**

| **Quantitative indicators** | |
|---|---|
| Weekly cycles number | 4 |
| Number of calendar days | 28 |
| Number of training days | 24 |
| Number of competition days | 0 |
| Number of free days | 4 |
| Number of travel days | 0 |
| Number of SPECIFIC training | 40 |
| Number of NONSPECIFIC training | 12 |
| Number of TOTAL training | 52 |
| Rowed km on the water | 510 |
| Rowed km sim+Fs | 16 |
| Total rowed km | 526 |
| Number of specific hours | 40.30 |

| **Row on the water effort stages** | | **Accumulation block** | |
|---|---|---|---|
| R5km | O2stable | 196 | 37.2% |
| R5+ | O2stable | 238 | 45.2% |
| R4km | Treshold anaerobic -air | 48 | 9,12% |
| R3km | Aerobic power | 18 | 3.42% |
| R3+ | Aerobic power + | 12 | 2,28% |
| R2km | Milk tolerance | 10 | 1,90% |
| R2+ | Milk oxygen | 3 | 0,57% |
| R1km | Oxygen milk | 0 | 0 |
| R1+ | Anaerobic alactacid | 0 | 0 |

From the analysis two ways periodization (have about the same quantitative indicators) that targeted a period of accumulation and quality education biomotoric strength-endurance, we detach the following conclusions:

1. We see in periodization that if the block was used and specific steps directed effort that aimed to develop resistance (in the specific effort),

long endurance, medium and short to end the weight is represented by the long (R5RAO2stb, R5 + RAO2stb; R4PAAO2rel; R3PA-VO2max)

R5RAO2stb; R5 + RAO2stb; R4PAAO2rel; R3PA- where the VO2max brings the following:

**Step R3 + POWER aerobes - VO2 max**

- 90% of the maximum value of the athlete who is determined at each stage by the specific test pulse maximum
- 175 + 5 b / min stroc 100lov/min, speed 8 .8 to 9, 0.
- knots speed = 8.8 knots x 1.852 km / h = 16.297 km / h (3.38 / 1000m)
- 10-12 mM / L milk water 8-30 minutes 2-6 km (6x500, 4x1000) (2x2000, 1x3000 ) medium-long intervals 1'-2'-3'-2'-1 ')
- force power medium and long repetition, endurance brief

**Step R2. TOLERANCE TO MILK**

- 95% of the maximum value of the athlete who is determined at each stage by the specific test pulse maximum
- 180 + 5 b / min stroc 100lov/min, 9,0-9,5 speed
- knots speed = 9.0 knots x 1.852 km / h = 16.668 km / h (3.36 / 1000m
- 12-14 mM / L milk water 8-25 minutes 2-6 km (4x500, 3x1000)
- average intervals 1'-2'-1 ') average repetition power output, shorten endurance

**Step R2 +. OXYGEN – MILK**

- effort level - 100%, 120-130 stroc lov / min speed of 10.0
- node speed = 10 knots x 1.852 km / h = 18.52 km / h (3.26 / 1000m)
- 16-18mm / L milk pulse 185 + 5 b / min race the 1000m and 500m
- control sample, race 1000m and 500 m

**Conclusions and discussions**

1. Number of driving targeted quality was minimized in order to conduct a highly focused training.

2. Increased workload and total exercise training can be significantly reduced.

3. Monitoring can be done more efficiently by reducing substantially the number of driving skills assessed during each mezocycle.

4. Diet and recovery program can be modified appropriately in relation to the predominant type of training.

5. Annual multi-phase plan creates more favorable conditions for achieving peak form in time for the main competition of the season.

6. Design training with multiple peaks form allows and facilitates successful participation in several competitions throughout the season.

7. Times in the aerobic test, improving the 1x6000m about 10%. the senior national team against the best individual results.

8. If traditional periodization step is part of a preparatory period macrocycle consists of 9 stages, characterized by 4 microcycles: 1 entry effort (accommodation), 2 storage, 1 output, just if the time periods were used multistage. The effort is aimed to developing more quality bio-motor abilities.

9. Energy is directed to several targets while main objective is not given due attention and necessary.

10. Athletes become fatigued and are unable to concentrate full capacity effort towards achieving key objectives.

11. Undertake specific tasks eliminate or reduce the effect of prior or subsequent items.

12. Focus dissipates, and exercises are conducted with an alert level and low motivation.

13. Stimulate development of more complex skills do not provide sufficient improvement in high performance athletes.

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