



MONITORING OF TECHNICAL-TACTICAL TRAINING SESSIONS IN BASKETBALL

Introduction

Dynamic complex systems theories will provide us the best theoretical basis to construct a specific training science for team sports in which this specific athlete is able to achieve his/her auto-structuring by differential optimization / 1 /. Training monitoring, a necessity to help coach in training guide, is based on recording changes in an athlete during various stages of training or under the influence of main elements of sport activities (training session, competition, microcycle) / 2 /. In team sports the monitoring of technical-tactical training sessions is highly relevant in order to achieve an integrated control of the training load / 3 /.

The Objective

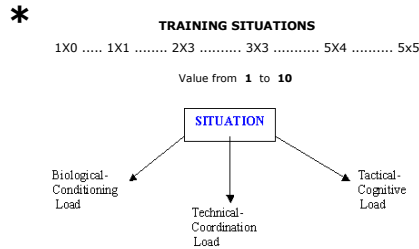
The aim of this work is to suggest a method for monitoring technical-tactical training sessions as a complex system in basketball. This proposal has been experienced in different basketball teams since 2000.

Methodology

- a) Recording data from technical-tactical training sessions.
- b) Analysis of data.
- c) Make effective changes in training design.

It involves evaluating the following training load components of every technical-tactical training session:

- total duration of every exercise;
- total rest time in between exercises;
- approximate number of execution-participations and its duration for a reference player in each exercise;
- the biological-conditioning load, the technical-coordination load and the tactical-cognitive load of every exercise and of the training session;
- the volume of each group of exercises classified depending on the type of content and quality level;
- the biological-conditioning training load structure, the technical-coordination training load structure and the tactical-cognitive training load structure of the training session;
- relevant individual or group information pointed out by the coaches related to any of the basic training components (biological-conditioning, technical-coordination, tactical-cognitive, social-affective, emotional-volitive, creative-expressive, mental).



*** Typical Values**

Situation / Load	Technical-Coordination	Tactical-Cognitive	Biological-Conditioning
General Strength/Endurance	1-2	0-1	8-10
Directed Strength/Endurance	3-5	1-3	7-10
Special Strength/Endurance	5-7	4-5	6-10
5x5 / 5x4	5-6-7	7-10	1-8
3x3	7-8	5-6	1-9
1x1	9-10	3-4	1-10

Value 1-10 / Based on subjective experience

*** BIOLOGICAL-CONDITIONING TRAINING LOAD (EXERCISE)**

a) General experience.
 b) Based on:
 - Technical-coordination load (1-10)
 - Effort / Rest periods (10', 20', 30',...)
 - Total duration of exercise (3', 5', 10', 15',...)
 it must be defined what is value 9 / 8 //
 EXAMPLE
 2x2/Technical-coordination load:8/Effort 10' Rest 50' ...Biological-Conditioning load = 4
 2x2/Technical-coordination load:8/Effort 30' Rest 30' ...Biological-Conditioning load = 8

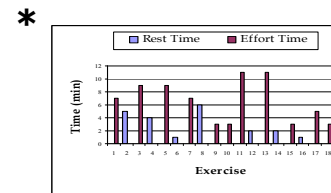
*** Control Sheet (2001)**

Find this poster at:
<http://www.humannovement.com> (Sport Training)

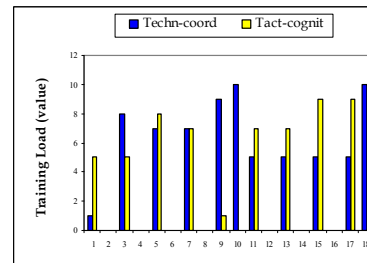
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<http://www.sporttraining.org>

*** Selected Data**

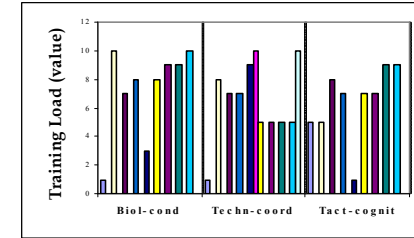
Exercise	n° player	Rest Time	Effort Time	Biol-load	Techn-load	Tact-cognit
1	17	5	7	11	11	5
2	18	4	9	10	8	5
3	18	4	9	7	7	8
4	18	4	9	7	7	8
5	18	4	9	7	7	8
6	14	1	7	8	7	7
7	14	6	7	8	7	7
8	12	3	3	9	1	
9	12	3	3	9	1	
10	4	3	10	5	7	
11	15	11	8	5	7	
12	2	11	9	5	7	
13	20	2	11	9	5	7
14	2	11	9	5	7	
15	6	3	9	5	9	
16	8	1	5	10	5	9
17	8	1	5	10	5	9
18	2	3	10			
19						
20						
Total	137	21	71	72	61	6,4



*** Structure of Technical-Tactical Load**



*** Structure of Biological and Technical-Tactical Load**

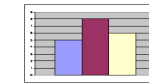


*** TOTAL TRAINING SESSION**

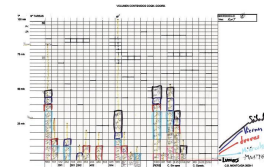
t.c. / T.C. ----- mean of exercises
 B.C. ----- 10 = 1h30' exercise with 8-10 B.C. load
 it must be defined what is value 9 / 8 //

TOTAL DAY and TOTAL MICRO-CYCLE

t.c. / T.C. ----- mean of training sessions or days
 B.C. it must be defined what is 10 / 9 / 8 //
 Example: 10 = 3 sessions/day with 8-10 B.C. load (for total day)
 Example: 10 = 12 sessions/week with 8-10 B.C. load (for total micro-cycle)



*** Volume of each group of exercises**
 (classified on type of content and quality level)



Conclusion

- a) The proposed monitoring of technical-tactical training sessions in basketball as a part of the integrated monitoring of training load will provide useful information for making effective changes in training design, mainly on the following:
 - (1) structure of technical-tactical training sessions,
 - (2) structure of microcycles,
 - (3) planning of training loads,
 - (4) planning of selective technical-tactical and physical conditioning capacities.
- b) The evaluation of technical-tactical training sessions is the most relevant factor for an efficient training monitoring in basketball.
- c) The performance observation/systems proposed, based on qualitative criteria, though it's based on subjective experience, it's extremely practical and effective.
- d) The method is applicable not only to different sports, but for professional and beginners alike.

References

- 1. Seirul-lo Vargas, F. (2003). Dynamic systems and performance in team sports. *1st meeting of complex systems and sport*. Barcelona.
- 2. Viru, A., Viru, M. and Volver A (2004). Monitoring. *7th International Sports Science Conference*. Vilnius.
- 3. Ribera-Nebot, D. (2005). Integrated monitoring of training load in team sports. *8th International Sports Science Conference*. Vilnius.

