

CASE STUDY ON MONITORING AND DIRECTING THE SPECIFIC EFFORT OF CROSS-COUNTRY RUNNING

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Abstract

Within the framework of the theory and methodology of athletics, a wide range of issues are addressed, which concern both the performance and the aspects of high performance. Therefore, at the level of all the actors involved, there is a constant concern for identifying those efficient ways, means and methodologies that ensure the fulfillment of the specific educational objectives and tasks of each echelon.

As a mean of physical education, athletics is a harmonious blend between natural movements - the jogging, jumping, throwing and motor skills specific to this sport, accessible and attractive. The fact that this is also practiced on a background of intense psychical solicitation entitles us to reveal, once again, its educational character.

The present paper, through its content and its approach, aims to highlight the main aspects of the specific effort recorded in the training, especially during the competition, the subject being the quadruple university champion in the cross-country running, Olteanu Simion (Crosul Universitatii din Bucuresti Cora Lujerului). The data obtained is based on objective, efficient and modern monitoring, used for the first time in this university competition.

Effective monitoring was achieved by using the SUUNTO electronic device during the training and during the competition. The obtained results provide an overview of the demands of this type of effort, while at the same time solid milestones in the programming of the future training strategies both at this level and at the level of other types of effort specific to the different sports disciplines.

Keywords: effort, cross-country, monitoring.

Introduction

The athletic performance is defined as a „bio-psycho-social value achieved during an official competition, as a result of a multiple determined and evaluated capacity based on rigorously established criteria or rating”. It can represent either an individual or a collective valuable result, achieved during a sporting competition and expressed in absolute numbers, by referring to official ratings or by the obtained rankings. This “defines the process as well as the result of a specific action from which a normative perspective represents the mastery, accomplishing a task at the best possible level, being dependent on the inter-relationship between the endogenic factors (predisposition, abilities) and the exogenic factors (ambiental), expressed within the quality of the training process, motion and assimilation conditions, level of motricity and influence of social factors”(Dragnea, 1996).

WORKING METHOD AND INTERPRETING THE DATA PROVIDED BY THE SUUNTO – SYSTEM

In 1933 the company's founder, Tuomas Vohlonen, a surveyor by profession, applied for a patent for a unique method of filling and sealing a lightweight compass housing made entirely of celluloid and filled with liquid to dampen the needle and to protect it from shock and wear due to excessive motion.



The screenshot displays the 'Heart rate' summary page in the Garmin Connect app. The top section features a line graph of heart rate over a 30-minute period, with a peak of 187 bpm and a current reading of 170 bpm. Below the graph is a navigation bar with tabs for Heart rate, Pace, Speed, Altitude, Cadence, Temperature, EPOC, Energy Consumption, and Respiration rate. The 'Heart rate' tab is selected. A 'More' link is visible below the navigation bar.

The bottom section is titled 'BAR CHART AND CURVE' and shows a bar chart of heart rate zones. The y-axis represents minutes (min) and the x-axis represents heart rate zones. The zones are defined by heart rate ranges and durations:

Heart Rate Zone	Duration (min)
< 112 bpm	0:00:27
112 - 129 bpm	0:06:14
130 - 148 bpm	0:03:35
149 - 167 bpm	0:23:10
≥ 168 bpm	0:00:00

To the right of the bar chart is a line graph showing the heart rate curve over time, with the y-axis representing heart rate in bpm (169 to 183) and the x-axis representing time (3s to 1h).

Fig. 2. Subject's parameters in training

METHODOLOGICAL AND OPERATIONAL FRAMEWORK OF RESEARCH

Objectives

Developing a physical training model, adapted to the cross-examination, based on modern means, which essentially contributes to the increase of the performance capacity.

The goal

The purpose of our scientific endeavor is to point out the importance of monitoring the effort within the general strategy of training the athletes practicing this event. Moreover, the paper proposes the objectification and the opportunity to implement a training model for UB students, based on modern means, which takes into account the particularities of the test and the physical possibilities of the students from the UB faculties.

Tasks

- applying the training model and analyzing its efficiency;
- formulation of conclusions.

Research Methods

Observation method - through its content and many forms of presentation, observation is one of the most appropriate methods to explore the natural environment. As a scientific method of research, it consists in “tracking deliberately, carefully and methodically the aspects of facts, processes, events and the accurate and systematic recording of their various manifestations, as they behave in natural, normal conditions, in order to present them in their essential aspects in an existing situational context”(Niculescu, 2002, p. 316).

Results

At the end of the 2018 competition, student Olteanu Simion took the first position, the parameters recorded being exemplified in figure 3.

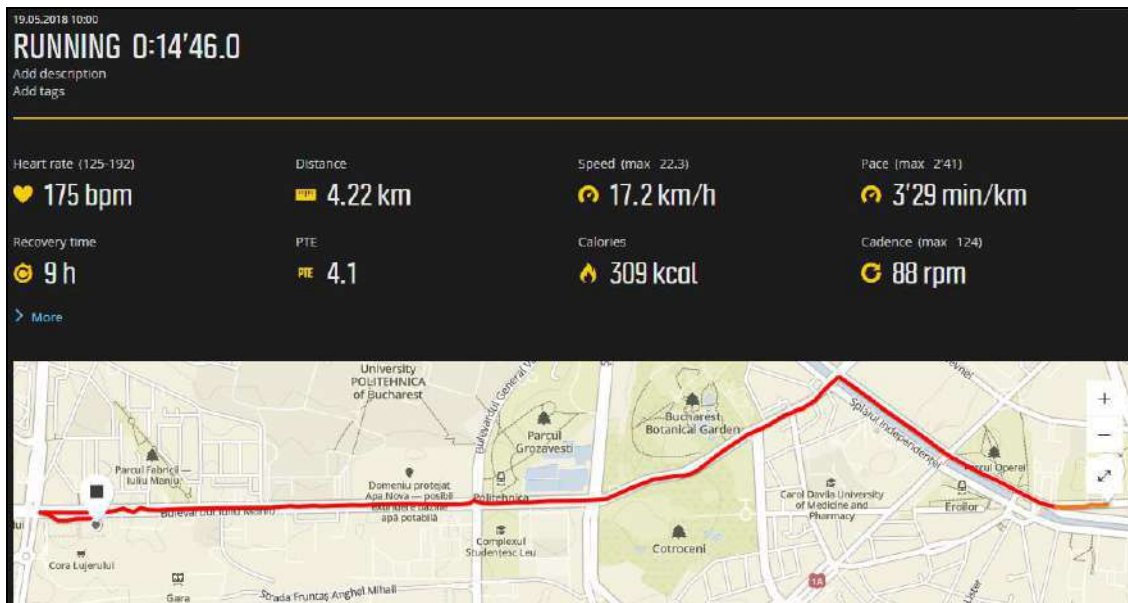


Fig. 3. Effort parameters and route map (2018 edition)

Conclusions

The scientific approach developed and analyzed highlights original aspects regarding the importance and the opportunity to use modern and efficient means of monitoring the parameters of the effort specific to the cross sample. Moreover, the information provided by the device used in this research contributes to the optimization of the strategy of planning and programming of the practical activity of the students enrolled in the athletics discipline, taking into account both the specific characteristics of the effort, as well as their morpho-functional particularities.

The conclusion from my point of view, as a teacher-coach, responsible for the training of the Oltenu Simion sports student in the period 2015-2018, is that, besides the technical aspects, necessary for the permanent improvement of the technical elements specific to the sample, the electronic monitoring device of SUUNTO trainings, offers a series of internal and external parameters of the effort, especially important, in the design, application, direction and monitoring of the training. Thus, the data provided in conjunction with a rationalization and a standardization of the specific means, create the favorable framework for the elaboration of an individualized training strategy with outstanding results in the performance plan.

References

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