

MONITORING PROCESS IN SPORT OF PERFORMANCE

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Abstract: *Monitoring refers to a periodic review of the parameters investigated in the conduct of sporting events. This monitoring is based on a coherent way, which requires data collection, compiling reports, analyzes and hence the development of indicators. This is a systemic analysis mechanism which is able to evaluate analytically possibility that allows collection, analysis, implementation and reporting of information obtained from research.*

Keywords: *training process, monitoring, athletic performance.*

1. Peculiarities monitoring in sports training

For a better understanding of the concept we compare dynamic monitoring system based on a regular analysis of the factors investigated observing and recording the sporting activity.

Monitoring by definition is "activity monitoring" activity systematic collection of information on the conduct of the results of certain activities. Is an indispensable step for evaluating sports activities [4].

We define monitoring as "a description of the situation at a time" [7]. Monitoring is mainly because it is based on establishing a collaborative relationship "with applicants / recipients" to ensure that information management in terms of effectiveness and efficiency. The purpose of monitoring is to ensure the correct implementation of research objectives in compliance with the requirements stipulated in the inter-disciplinary research collaboration [14]. According to the author Phil Bartle, quoted in [1] monitoring is defined as: "monitoring is the regular observation and recording of activities

within a project or program. This process involves routine collection of information on all aspects of a project. A monitor is to monitor the activities included in a project. This requires systematic observation of on going processes. Monitoring also involves periodic information of donors, those directly involved as well as to conduct research beneficiaries". Centralization of data collected allow decisions that improve performance research.

Another definition of the concept of monitoring is emphasized as a "process of tracking, monitoring and systematic recording of certain values, results, events in various areas of human activity or natural phenomena" [13].

Monitoring concept as "an act of gathering, recording and reporting of information about the progress of the project" [8]. Mentioned author states that monitoring aims to "provide the data necessary for the safe control" and that on the whole "system monitoring reveals procedures applicable throughout the project, starting with the lowest, sets priorities to be addressed to the resources and activities they perform".

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2. Peculiarities concept sports performance monitoring

Starting from the idea that monitoring and athletic training are two complex systems consist of a large number of components inside a particular organization and function in order to guide them towards a definite end to be objectified [12].

Monitoring is a feature of great importance in sports training because it is a well-defined support as a system collecting information from using certain advanced mechatronic systems.

The particularity of sports performance monitoring system contributes to objectivity in practice through the use of various tools video. After using these tools to pass data storage in the calculation of parameters involved in sports and default correlation technique that can yield results, "qualitative and quantitative indicators, against which judgments can be objective" [12].

Monitoring is an important feature in the sports training process because it is based on the collection of information.

Peculiarities monitoring [7] in athletic performance are:

- ensuring the collection of information that will in turn generate additional information on the proposed objectives;
 - is a beneficial source of information stored in preparation for the next period and beyond and other specialists from various fields;
 - allows the researcher teacher coach to compare or identify problems in terms of potential technical faults before they arise or immediately there after;
 - offers the possibility to implement corrective measures to help improve sporting technique and contribute to the work in accordance with the objectives set, featuring experts monitoring instruments.
- Monitoring tools [7] that can be used are:

a) *Develop preparedness sports include:*

- preparation of sports training and tracking chart each stage in its development;

- before each stage of developing a training program that provides all the objectives terms;
- comparing the training early provided by the model in literature and composition at the end of each stage of preparing a performance report that includes suggestions for program planning and accomplishments.

b) *Follow strictly all the components involved in athletic training:*

- the emphasis on rigorous verification of structure plan preparation, especially on the strengths, assessing technical training;
- to ensure the athletic training program by reminding athletes while training components;
- feed-back subjects providing specific information of the experience and technical training;
- permanent notification of subjects involved in shaping the sports training of parameter values determined and gathering / storing information in monitoring reports.

c) *Active participation in the preparation monitoring reports and investigation parameter values:*

- check regularly conduct technical training plan;
- keeping close relation ship with athletes involved in sports training on technical modeling;
- collect all reports immediately after determining the parameter athletes;
- schematization preventive monitoring report containing all necessary information and tabular presentation of data recorded under each stage.

d) *Preparation of models for reporting on research conducted monitoring:*

- for each stage of the research will prepare a report indicating the degree objectives namely: what are the parameters involved in research, when these parameters were determined, who is responsible for determining the investigated parameter values, what

kind of material resources, human financial, etc. were used, which conducted the research objectives detailed description of the measures taken during the research, the effect on stakeholders, implementation of research assessment and recommendations on the conduct of research.

3. Monitoring of performance in sport at all levels formative

Seen as a continuous process monitoring in professional sports at all levels is based on a strict formative assessment and accountability. Assessing, recording and monitoring are important in the process of designing sports performance.

Designing sports performance is a "necessary and obligatory step for the purpose of constant activity, systemic and realistic, an activity that requires planned and not accidental deployment. Even though forecasters character design is looking to the future, we must be realistic scheduling and planning objective and accessible means appropriate to the time that work echelon characteristics, level of morpho-functional development and its motor and basic material conditions and logistics at hand. Any design is based on the facts as result evaluation processes and monitoring carried out on several levels [13].

The authors state that "assessing, recording and monitoring are three steps closely intertwined, their separation being incomprehensible logic of constant activity, continuous and systematic, performance-oriented.

Sports activity monitoring means more than the pursuit of evidence based on documents and data recorded by the evaluation results or developments to benefit the athletes. Monitoring is in addition an analysis and comparison on synthetic and sports phenomenon, reasoning induce monitoring, optimization and decision "[13].

Sports training is a complex process which acts on a multilateral level athlete, determining its effects on development, learning, training, effects that induce functional changes, morphological, etc.. These effects can be assessed by various measurements, tests, and so on and monitoring process involved will follow the dynamics of these indices for athletes, "major progress being quantify margin of sport and its ratio itself first and Second only to model and others. For this it is necessary to know the initial state of development and the initial stage of athlete training and monitor progress rhythm and rate "[13].

The highlights sports performance monitoring procedures applicable during sports sample research, from the lowest level, then set priorities to be considered and the resources to be involved in activities [8].

Monitoring of sports training in each factor: physical, technical, tactical, psychological, biological, etc. We offer a variety of complex structures specific motor sports sample. This shows us how to link these to define drill or motor action, the dynamic elements that change continually, which need to be monitored because they ultimately determine progress sports sample [13].

In terms of physical factor in the process of seeking a significant increase training to improve specific motor qualities such proof.

The authors mentioned above certain sports classified as dominated by physical factors. Thus, samples sprint as otherwise fund and evidence based and "natural motor structure - running and technical aspects involved for example, is insignificant background and samples. Within this factor - physical - will pursue education velocities and factors favoring it (strength, joint mobility, muscle flexibility, coordination, etc.), the speed endurance. In conclusion, these issues will be monitored

based on developments rhythmic athletes and their evaluations.

Technical factors generally combine physical factor and their resultant will be the performance obtained. Technical level of execution in certain athletic events affecting "high performance conditioning and overwhelmingly by the development of specific motor qualities [13].

Process monitoring technique in these sporting events allows us a choice based on objective data provided by the control samples or in our case through advanced technologies - video, what are the deficiencies of athletes and how they should be oriented training in future.

Monitoring the joint training of all stakeholders in a complex sporting events is very difficult due to the many contributing factors that intervene in the activity.

Monitoring during the formative stages highlights the following aspects, namely:

I formative stage of athletic training is the initial stage of preparation. The sports that will monitor very closely the development of motor ability, qualities or skills development driver, start in learning key techniques of athletes.

Formative stage II are early specialization that focuses on: further development of somatic-functional indices of body, specific sport test driving skills development, including the preparation of various technical and tactical actions through modern technology, etc. In this stage it is very important to focus on the ability of contracting muscle tension and athletes and to keep a healthy balance between the development of specific qualities and techniques that sample.

You can say something very important to include the preparation of a program for the preparation of modern sports technology, this will lead to the proper execution of motor acts early, thereby

achieving a rational and efficient executions superior athlete.

Introduction in this formative stage of the latest research and use advanced mechatronic systems of technical development sports gives us critical to optimize.. It is very important for the juniors to work in this direction "technology" as this might get a faulty level and thus low yield.

The third stage is formative stage depth specialization that makes the transition from stage II to stage specialized training and thus obtain a yield internationally. Depth specialization is based on achieving outstanding sports performance, important as technical and tactical business acquired earlier stage.

Last highlights the formative stage high performance training with a focus on achieving maximum performance. Here we will focus on individualization of sports training with the landmark goal setting with athletes.

4. Evaluation component monitoring

Monitoring and evaluation in sports training are two mutually reinforcing processes.

Evaluation is "an essential element in any human activity, which has well-defined objectives to be achieved" [2]. The author points out that the evaluation is done with "rigor required only under goals that can be useful benchmarks for self".

Importance of evaluation can be found in various specialized works, works that emphasize a well-designed evaluation [9], [5] and [6].

"Assessment is an opportunity for validation of the correctness of educational sequences, the teaching component and a means of separation, attachment and intervention content and learning objectives" [3].

Another view of the action evaluation refers to the fact that the assessment is so important when they performed functions in the instructive educational process as its constitutive act, intended to provide information on the process and the results, in order improvement of [11]. Thus, evaluation is a necessary act, seen through the relationship process-product and product-evaluated, learned about decision making activity, for this to take place under conditions of continuous improvement.

General assessment is a complex activity and as objective [10]. Reporting that in sports training evaluation is an approach which seeks an objective assessment of the objectives of its direct or indirect. Such training evaluation approach will be episodic, rhythmic, with an active character, concrete actions for measuring, testing, comparison and reference to certain standards [13].

5. Objectivity process tracking techniques, assessment tests and samples

Monitoring activity brings data in addition to the evaluation, offering a suite comparing the results and rankings.

Context and scope of sports training provides us with additional information on the value of sports results. Means, methods of preparation, how they were conducted on sport test and test results are landmarks value that guides us to composition of calculating the value of the results

Monitoring these issues shows that the results obtained on a scale of values may differ depending on their intrinsic value.

Prescorniță and Tohanean the intrinsic value of sport results "of prime importance in sports and measurable and quantifiable evidence." These tests resulted in achieving outstanding records that become benchmarks against which to judge the results. These records after approval and record route are monitored by authorized bodies become valuable benchmarks for athletes.

The importance of sports performance monitoring process is different in the training process as training approach will be conducted according to a number of peculiarities and specific features athletic events.

Highlight the main landmarks of the sample preparation process will be based on marks fences monitored based on kinematics parameter values investigated in the sample of 110 meter hurdles. This monitoring may be the result of a dynamic record pace runner fences.

Thus we present benchmarks to be monitored:

- number of parameters involved in that motor action;
- evolution of the results of each trait;
- development results in competitions.

Above mentioned authors define monitoring as "a continuous approach, tracking, monitoring, recording and comparing, it is not practical and effective intervention for the athlete, team or monitoring material".

The monitoring process can not be achieved without means of assessment and recording of values. Athletic performance and its evolution over time is monitored based on documents of record kept at different levels (from the coach, researcher or professional federation level).

Monitoring means analyzing and comparing, and induce reasoning, and decision optimization. This process requires time tracking the dynamics of technology evolution through athletic sample quality indices (measuring, testing, control samples) of major importance because quantification margin athlete's progress is reflected in her report itself, then the reference model and finally to another. Important in preparing the athlete is preparedness knowledge and monitoring of the rate and amount of progress.

Monitoring the 110-meter hurdles sample of kinematics parameters is a complex process monitoring and systematic registration of parameter values involved.

This process is closely related to the assessment of the degree of optimization of the technique step over the fence.

In addition to the number of parameters to take into account the precision and accuracy of values and especially the margins of progress made in the period of the research.

Objectivity of the monitoring depends on the classification criteria of kinematics parameters investigated. Therefore the first step to be made is that of identifying these default parameters and criteria that can be achieved offs and classifications. Obtain the values of these parameters enables us to closely monitor developments in the sample, so an objectivity in the assessment and interpretation, representing an important step for process monitoring.

Quantitative values obtained are implying a specific measurement parameters involved.

Conclusions

In conclusion monitor all factors favoring the formative stages would significantly increase performance in sports, but this is very complex and difficult.

References

1. Bartle, Phil: *Caracteristicile de bază ale monitorizării și evaluării: Definiție și obiective* [online]. Trad. by Ioana Ciobotea. [accessed at: 2010-06-23]. Available on Internet: www.scn.org/cmp/.
2. Cârstea, Gh.: *Educație Fizică – fundamente teoretice și metodice*. Casa de Editură Petru Maior, 1999, p. 179.
3. Cucoş, C.: *Teoria și metodologia evaluării*. Iași. Polirom, 2008, p. 34,73,77.
4. DEX, *Dicționarul Explicativ al Limbii Române*. Ediția a II-a. Academia Română Institutul de Lingvistică „Iorgu Iordan”. București: Univers Enciclopedic, 1998, p.649.
5. Ezechil, L., Soare, E., Coman, P.: Aspecte criteriale ale evaluării componentelor psiho-pedagogice ale viitorilor profesori. In: *Buletin Științific Educație Fizică și Sport, nr.10, 1/2006*, Universitatea din Pitești, Pitești. 51-55.
6. Firea, E.: Unele coordonate privind formarea specialiștilor în educație fizică și sport. *Noi coordonate de calitate și eficiență în educație fizică și sport în perspectiva integrării europene* (5) -6 mai -București: C.S.S.R, 2005.
7. *Fonduri structurale europene* [online]. Accessed at: 2010-25-06. Available on Internet: <http://www.fonduri-structurale-europene.ro/stiri/monitorizarea-proiectelor-posdru.html>
8. Iacob, A.: *Implementare, monitorizare, evaluare internă*. [online]. [accessed at: 2010-03-13]. Available on Internet: [http://www.scribd.com/doc/24994529/ implementare-monitorizare-evaluare-intern%C4%82](http://www.scribd.com/doc/24994529/implementare-monitorizare-evaluare-intern%C4%82), 2009.
9. Lisievici, P.: *Evaluarea în învățământ – teorie, practică, instrumente*. București. Editura Aramis, 2001, p.63-69.
10. Merni, F.: Evaluarea tehnicilor sportive. In: *Scuola della Sport, Sportul de performanță*, nr.315, Bucuresti, 1991. 41-60.
11. Moldovan, E.: *Aspecte cognitive și de evaluare multicriterială în educația fizică și sport*. Braşov. Editura Universității Transilvania din Brasov, 2009.
12. Nicu, A.: *Antrenamentul sportiv modern*. București. Editis, 1993.
13. Prescorniță, A. and Tohănean, D.: *Tehnici de monitorizare a performanței sportive*. Braşov. Editura Universității Transilvania, 2008, p. 4, 9-13, 15, 19, 27, 29, 105-109,111;
14. www.anpcdefp.ro. Accessed at: 2010.