

## **REVIEW**

by prof. Dimitar Petrov Mihailov, Ph.D.

of the dissertation for conferring the scientific degree “Doctor of Science”

Topic: Complex system for control and assessment of physical development and specific working ability of adolescent basketball players“

Professional field: 7.6. Sport

Author: ass. prof. Mariana Aleksieva Borukova, Ph.D.

Ass. prof. Mariana Borukova's dissertation is a comprehensive and purposeful research on educational-training activities in basketball. Increasing the efficiency of the training process through much more perfected methods, based on correctly structured management is the key to achieving success in contemporary sport. One of the crucial issues for achieving this success is the control of sports preparation. Sports preparation control has become an inevitable part of the training process in modern sports. When this issue is addressed to adolescent athletes- basketball players- in this case – it gains certain topicality. Building and control – this is the foundation of sports success.

In this relation, I believe the topic is entirely scientific, and the approach to its realization has an emphasized scientifically practical and theoretical aspect.

The dissertation shows a good knowledge of the researched issue by the author.

The dissertation comprises 214 pages which include the following chapters:

- Theoretical base of control in basketball;
- Research design;
- System for control of sports preparation of adolescent basketball players;
- Main conclusions and scientific contributions for basketball theory and practice.

Decides these chapters; the dissertation includes an introduction, reference list, and appendixes where we can find the created valuable normative base.

The dissertation includes 37 figures and 34 tables, which add to the text and help its better understanding.

The reference list includes 230 books, scientific publications, and dissertations, 7 of which are in electronic format. It should be pointed out that 82 of the literary sources are in English.

The dissertation starts with a short introduction, where Mariana Borukova draws attention to the nature of the dissertation – the control in sports preparation, and to the importance of making the test batteries for exerting this control standard for everyone.

Chapter One of the dissertation is named “Theoretical base of control in Basketball”. It consists of 4 subchapters, namely:

1. Nature of control.
2. Scientific management and control in sports preparation.
3. Scientific methods in basketball.
4. Systems for control in basketball.

The overall conclusion of the whole chapter we can make is the following:

Mariana Borukova, in a logical sequence, introduces us to the nature of scientific control in sport and in basketball in particular. The issue of the scientific control in basketball is viewed in age aspect, too, by emphasizing the control of adolescent players. Subchapters 3 and 4 are of great scientifically theoretical value. Here, on the basis of a good content analysis (citing a lot of literary sources), the author introduces us to the scientific achievements in this field by leading powers in basketball. Mariana Borukova’s views on the researched issue can be seen in the analyses based on numerous facts. At the end of Chapter One, the author outlines the central concept of the dissertation and formulates the research thesis. I think that the whole first chapter of the dissertation significantly contributes to the basketball theory.

Chapter Two, named “Research Design” comprises six subchapters.

The first subchapter is “Aim and tasks of the research”. The aim of the research is well formulated.

The approaches for fulfilling the aim are organized into seven tasks.

The second subchapter includes the subject and object of the research. The research was done among 351 individuals, of whom 41 basketball coaches and 310 male and female athletes who were divided into three age groups. The author of the dissertation took part in the testing procedure with all researched individuals. The research design specifies the names of all the coaches and student-volunteers who assisted in the testing. All these give an accurate idea of the reliability of the obtained results.

Subchapter 4 “Research methods and indicators” and subchapter 5 “Test battery for all age groups” are very well written and organized. The indicators taken from the researched individuals are 23, of which seven are for physical development, and the rest seven indicators are for physical preparation and nine indicators for technical skills. A description of the tests which helped take the indicators is also provided.

Mariana Borukova used math-statistical methods, which helped her solve the research tasks to make a good analysis of the data. The statistical methods used are 10. They themselves guarantee high reliability in their analysis.

The third chapter is named “Systems for control of sports preparation of adolescent athletes” and comprises 134 pages and five main chapters.

In the first subchapter, there is a short overall analysis of the questionnaire survey of the coaches about the systems for control in Bulgaria. The complete analysis of the questionnaire research can be found in an appendix.

In my opinion, the chosen approach is the right one.

In the second subchapter, consecutively, through the use of variation analysis, the values of physical development of the adolescent basketball players are calculated in the three age groups, along both genders. The analyzed dynamics of the level of physical development have the most outstanding scientific value; it is analyzed for all ages and genders. The conclusions drawn at the end of each subchapter make the analyses complete.

In the following third subchapter, the indicators for physical preparation are calculated through the same math analysis. The analyzed “Comparative analysis of the level of physical preparation” is of high scientifically practical value.

Subchapter 4 has the same sequence and analyzes the indicators of technical preparation. Here, the conclusions are of great practical value, especially those about 16-year-old boys.

Subchapter 5 is named “Reliability and content validity of the comprehensive test battery”. The author described extremely accurately and competently the applied factor analysis. She is sure to know the specifics. All the principles for applying factor analysis are obeyed. The factor analysis is made for each gender and each age group, and the author seeks the practical application of the different components.

The conclusions made after each analysis prove that the author has an excellent knowledge of the topic, and they can be considered a scientific novelty. I think the appendix, including “Methodological guidelines for the use of the normative base for control of specific efficiency” should have been placed at the end of this subchapter (without the tables).

In chapter 4, there are some general conclusions and eight main conclusions. They are based entirely on the analyses of the obtained results. I think there should be at least two recommendations to practice, especially to the Bulgarian Basketball federation and to basketball coaches who work with adolescent players.

I agree with the “Evaluation of contributions” made by Mariana Borukova at the end of the dissertation.

At the end of my dissertation analysis, I consider that based on the used suitable statistical methods, well-made analyses, and interpretation of the data, the dissertation contains general conclusions and decisions with scientifically practical contribution and application.

**Conclusion: Having in mind the above-mentioned, I assess positively ass. Prof. Mariana Borukova’s dissertation and suggest that the Scientific Jury grants her the scientific degree “Doctor of Science” in professional field 7.6. Sport.**

Reviewer:

(prof. D. Mihailov, Ph.D.)