

REVIEW

On the qualities of the dissertation work on the topic:

"Complex system for control and assessment of physical development and specific working ability of adolescent basketball players"

For awarding the scientific degree ***"Doctor of Sciences"***

In the field of higher education: ***7. Health and sports,***

Professional direction: ***7.6 Sport,***

Specialty: ***Sports (Basketball),***

on ***Associate Professor Mariana Alexieva Borukova, Ph.D.,***
teacher in the ***"Basketball, Volleyball, Handball"*** department
of the NSA ***"Vassil Levski"***

Contest data

By an order № ZP - 544/17.05.2022 of the Rector of the National Sports Academy "Vassil Levski", based on Article 12 (6) of the Law on the Development of the Academic Staff in the Republic of Bulgaria and in connection with Article 18 and Article 19 of the Regulations for the acquisition of scientific degrees and holding academic positions in the National Sports Academy "Vassil Levski", the procedure for acquiring the scientific degree "Doctor of Sciences" by Assoc. Prof. Mariana Alexieva Borukova - Ph.D. has been opened.

All activities, related to the specified procedure, were correctly performed - no omissions or violations were registered.

In the report on the fulfillment of the minimum state scientometric requirements for awarding the scientific degree "Doctor of Sciences", Assoc. Prof. Mariana Borukova noted that she presented evidence for 388 points, with the minimum required 350 points. However, I believe that the candidate incorrectly calculated according to Г.8. (Publications and reports, published in non-refereed

peer-reviewed journals or published in edited collective volumes) 138 points, instead of 166 points. So, I take a total of 416 points as proven.

Candidate details

Assoc. Prof. Mariana Borukova conducts lectures and practical exercises with students from all faculties and forms of education at the Bachelor's and Master's degrees of Education, as well as with specialists in courses for basketball coaches and physical education teachers at the Postgraduate training center of the National Sports Academy "Vassil Levski".

Assoc. Prof. Mariana Borukova participates in curriculum development, as well as in a number of research and educational projects. She is responsible for the scientific work of the professors and students of the "Basketball, Volleyball, Handball" department and organizes all scientific conferences of the department. She is a member of the NSA Expert Council on scientific and project activities and is the editor-in-chief of the scientific journal "NSA "Vassil Levski" Yearbook". Assoc. Prof. M. Borukova is also a member of the Coaching Commission at BF Basketball and is the national basketball coordinator of Special Olympics (Bulgaria).

Assoc. Prof. Borukova's scientific interests are mainly related to the problems of the high sportsmanship, the competitive efficiency in basketball, the control of sports training of adolescent basketball players, the adapted basketball.

Data on peer-reviewed dissertation work

The topic of the dissertation is in line with scientific research in the field of theory and methodology of sports training, as well as with the requirements of the Rules of the National Sports Academy "Vassil Levski" for the acquisition of scientific degrees and holding academic positions.

The development is an attempt to enrich the theory and practice of basketball sports training by optimizing the control and assessment of the physical development and specific working ability of adolescent basketball players.

The peer-reviewed doctoral work was developed in a volume of 255 pages, incl. 44 tables, 65 figures, some of which, in my opinion, are unjustifiably labeled diagrams or nomograms, and 3 appendices. It is structured as required and written in good language and style. It's very well illustrated.

The development has qualities that are of a contributing nature:

- ***A serious theoretical study*** was carried out (with the help of 230 literary sources, of which 140 are in Cyrillic), on the basis of which the candidate formulated her main methodological concept.

- ***Appropriate methodological approaches and mathematical-statistical tools are used***, which make it possible to solve the set goals and tasks of the development.

- The volume of ***the research material is sufficiently representative*** and reveals the characteristics of the populations that are the subject of the study. It covers a total of 351 persons, including 41 licensed coaches working with adolescents across the country and 310 young basketball players from three age groups – 12-, 14- and 16-year-old boys and girls.

- ***Average levels and variability, existing dependencies, as well as factor structures*** of each of the aggregates ***are revealed***.

- On the basis of a sufficient amount of information, ***normative tables have been developed to assess the physical development and specific working ability*** of 12-, 14- and 16-year-old basketball players of both sexes.

In the spirit of correctness, I believe that it is necessary to make some notes, which I hope will help Assoc. Prof. Borukova in her future path as a researcher in the field of physical education and sports training. In general, ***they boil down to***:

- *The title* is too pretentiously worded - in reality, the study covers only 3 age groups, and these are only 6 years of the overall biological and sports development of adolescents, and it is correct to state this in the title. And also - the title does not need to have the term "assessment". Assessment, according to J. Broglie, is one of the subsystems of control (measurement, assessment and optimization). In fact, further in the theoretical part, the author correctly speaks mainly of control.

- *In the Introduction*, it is claimed that in Bulgaria "there are no specified and uniform measurement tests". Yes, it is right now. But, developed in 1990 (Gyosheva, K. et al.) three Systems for control, evaluation and optimization of the sports training of adolescent basketball players, were officially introduced into the work of the BF Basketball and were valid for all teams in Bulgaria. A sufficient number of test exercises, applied in them, are the same for all groups, but adapted to the characteristics relevant for each of the age groups between 13 and 19 years old. Normative tables are presented by age groups and gender and, something which is very important, criteria have been developed to optimize the sports preparation. It is clear that these systems are no longer relevant, but the methodology of their development fully meets modern requirements and can be of assistance to current researchers, and this, in my opinion, was not taken into account by the candidate.

- The creation of a Normative System, based on a "*larger test battery*", as the author summarizes the opinion of the coaches and, as if she agrees with them, is, in my opinion, an advantage. This allows all aspects of sports training to be objectively and more fully evaluated. Indeed, no coach wants to invest training time in conducting testing. This problem can be solved by applying the multiple correlations, which allows the indicators included in the test battery to be arranged according to the contribution of each of them to the level of sports preparedness of

the young basketball players from the relevant population, and also to determine the corresponding coefficients for each of them, which characterize the weight of each indicator. For practical use, each coach can choose and apply a different number of test exercises, depending on the time available, respecting the order in which they are arranged in the multiple equations. *This is already an activity related to the process of optimization.*

- Regarding the *Main Research Thesis* of the doctoral work, during the internal discussion in the department, I proposed my version. During her defense, Assoc. Prof. Borukova gratefully and readily accepted my opinion, but I can see that she did not comply with the proposed option. It can be assumed that this is her right, but I believe that the version presented on page 60 for a basic methodological concept, *sounds more like a title.*

- Again, I draw attention, as during the internal discussion, to the fact that the place of the *Methodological Guidelines for using the normative basis for control* over the specific working ability is *in the main presentation*, not in the Appendix. They are an important requirement for this kind of scientific development and give completeness to the System.

- As the results of the conducted survey with basketball coaches show, "the information received does not give them a clear direction for the necessary adjustments in the training process." This means, that before the presentation for implementation in the practice, *the optimization criteria should be added* to the developed Complex Control System, which will allow coaches to easily determine the highlights of work with each of their graduates and will encourage them not to underestimate testing in their future training work.

- I believe that it is necessary *to correct the normative tables for indicators 17 and 20* - taking away only 1 s in the case of a successful shooting in the basket, under the current norms, means adding only 2 points (out of a total of

50 points) to the total evaluation of players who have successfully completed their attack to the basket and is in no way an incentive for accuracy when they are shooting on the move. The author could consider a higher incentive, for example, 2 s, which means 4 or 5 points for a successful hit in the basket, and these stimulation children will appreciate during testing with greater effort.

- The *name and description of indicator 21 is incorrect* - if it is for 1 min, why the standards for execution time are presented? I believe, that here it is necessary as the main indicator to calculate the average time for which each player made one successful hit in the basket.

- Some other inaccuracies also occur in the dissertation work, such as:
 - inaccurate citation of some authors (the Systems of Gyosheva et al. from 1990 are by three, not two authors);
 - the dynamics of changes in the levels of the investigated signs are incorrectly presented, as lines of development (fig. III.10, III.11, III.24, etc.);
 - terminological errors (high jump - vertical jump, flexibility - tilt forward);
 - wrong numbering of figures (table II.2, page 67);
 - the individual indicators in the normative tables must be numbered.

The conclusions and recommendations, presented at the end of the development, naturally derive from the analysis of the results and are presented concisely and clearly.

Assoc. Prof. Mariana Borukova has correctly defined the contributions of her dissertation work

In conclusion, regardless of the indicated inaccuracies, omissions and errors, I believe that a sufficient volume of scientific research work has been carried out, which is of a contributing nature and will enrich the theory and

practice in the field of basketball sports training. The dissertation work has a scientific and applied value and fully meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations of the National Sports Academy "Vassil Levski" for the acquisition of the scientific degree "Doctor of Sciences"

All this gives me reason to *confidently state my positive vote* for awarding *Assoc. Prof. Mariana Alexieva Borukova, Ph.D.* of the scientific degree "*Doctor of Sciences*", in the field of higher education *7.Health and Sports* in a professional direction *7.6. Sports*, specialty *Sports (Basketball)*.

01. 08. 2022

Sofia

Reviewer.....

(Full Prof. Krastyu Tzarov, Ph. D.)