R E V I E W

on a dissertation submitted for the acquisition of the educational and scientific degree „Doctor of Science"
to the Individual Sports and Recreation Division to
Department of Sports at Sofia University „St. Kliment Ohridski"

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TOPIC: „Innovative adaptation models for specialized running endurance in the educational-sports process"

Author of the dissertation: Assoc. Prof. Maya Borisova Chipeva, PhD

The author of the dissertation, Prof. Maya Borisova Chipeva, PhD, was born on May 01, 1978 in the city of Sofia. He finished his secondary education with a sports profile at the sports school of CSKA (Sofia) – Mladost Secondary School, and in 2001 he graduated with a bachelor's degree at Vasil Levski National Academy of Sciences with two majors: „Physical Education Teacher" and „Coach in athletics". In 2006, again at the National SportsAcademy, he completed his Master's degree in the Sports Journalism program. In 2011-2012, he was a part-time teacher at the Department of Physical Education and Sports (DPES) at the Technical University. In 2012, he won a competition for a teacher at the „Individual sports and sports games" section at the DPES, and since 2014 he has been a senior teacher. In 2016 at the University of Veliko Tarnovo "St. St. Cyril and Methodius", defended his doctoral dissertation on the topic "Methodology for the development of the physical capacity of 11-16-year-old students through endurance running exercises". Since 2019, he is an Associate Professor.

Assoc. Prof. Maya Chipeva, PhD is a former track and field athlete. His career goes through the athletics clubs „CSKA" and „Klasa". He competes in the disciplines – 400 m, 800 m and 400 m hurdles, as well as in 4 x 400 m, where he has won a number of honors on a national scale.

Assoc. Prof. Chipeva, PhD, was an assistant coach in athletics in the city of Chemnitz – Germany, in the club of the same name. He has acquired a certificate for additional training at the „Vasil Levski" NSA in bodybuilding and fitness – bodybuilding. He is an aerobics instructor acquired by the Aerobics

Union. Qualified Tabata and Hit Instructor and Certified Cango Jumps Instructor.

Assoc. Prof. Chipeva, PhD is the coach of the representative athletics – team of the Technical University Sofia until 2020, with which he has a number of honors from the National University Championships. He is currently the coach of the representative aerobics and cheerleading teams of the Technical University.

Assoc. Prof. Maya Chipeva, PhD, is the author of 34 scientific papers, including 3 monographs and 2 books in the field of physical education and sports. More than 25 citations of her works have been found in the scientific literature. The rich and scientific activity is supported by participation in more than 10 scientific conferences, 3 of them abroad. 5 opinions and reviews have been prepared for participation in scientific juries for the acquisition of scientific degrees and academic positions. She participated in 8 projects in the field of physical education and sports.

Sport turns out to be one of the most integrative fields for studying the adaptation processes of the human organism. This is quite natural due to the fact that the adaptation of a person in the conditions of sports is a basic category to which the main problems of sportsmanship are subject. In modern conditions, sport occupies a special place in the overall development of humanity, and the most interesting are the problems of physical and mental improvement of a person with a view to increasing sports results. In this sense, the purposeful study of adaptation processes in the system of sports activities aimed at achieving high sports achievements is particularly relevant.

Everything related to optimizing adaptation processes in the educational-sports process deserves approval and increased research interest. This is also my point of view from which I will analyze and give my assessment of the ideas and results in the dissertation on the topic: „Innovative adaptation models for specialized running endurance in the educational-sports process".

The dissertation work is formed in one book with a volume of 288 pages, of which 263 main text containing 32 tables and 21 figures, 23 pages of used literature, as well as 1 page of publications related to the dissertation work. The literary sources that the author used in the development of her dissertation include a total of 201 sources, of which 148 are in Cyrillic, 50 are in Latin and 3 electronic resources. Structurally, the work is properly constructed, including an introduction, five main chapters, conclusions, recommendations and scientific contributions of the dissertation work and literature. In terms of structure, volume and sequence of the presentation, the proposed dissertation meets the basic requirements for this kind of development.

In the introduction, the topicality of the issues of the dissertation research is purposefully and substantiated.

In chapter one in a volume of 32 pages, Maya Chipeva presents us with the theoretical foundations of adaptation in sports. Consistently, in the four sub-chapters of this chapter, the theoretical foundations and the essence of

adaptation in sports, the factors of adaptation in muscle loads, the problems of modeling the adaptation process in sports and training loads, as the main factor of adaptation development, are examined extensively and professionally.

In the second chapter „Theoretical foundations of endurance – workability" in a volume of 89 pages are presented as follows: in the first sub-chapter – features of endurance. In the second sub-head – running endurance in the athlete's preparation. In the third sub-chapter, a characterization of middle-distance running is carried out. In the fourth sub-chapter, the peculiarities of running work in sports with an interval-variable character are very successfully presented. In the fifth sub-chapter, a generalized analysis of the adaptation and optimization processes of running performance is presented, and in the sixth and seventh sub-chapters, respectively, conditions and factors influencing the adaptation development in running preparation and programming, models and management of the educational and sports process in running loads.

At the end of the second chapter, Assoc. Prof. Chipeva, PhD, on the basis of the presented theoretical foundations of adaptation and endurance in sports, has developed the main hypotheses that form the concept of the dissertation, aimed at clarifying the problems of adaptation processes when applying running loads, namely:

1. Identifying the overall running potential.
2. Revealing the structure of the current running potential.
3. Determining the training potential of systemic running loads.
4. Justification of the levels of transition from sustainable to unsustainable work adaptation in running loads.
5. Revealing the optimal algorithm of adaptation processes and development of running loads for endurance in medium runs in medium-skilled athletes and football players.

In these two chapters of the work, an excellent impression is made by the creative study of the literary sources on the investigated issues. The study of the state of the problem was carried out competently and in the necessary scientific style.

In the third chapter „Aim, tasks, organization and research methods", in its logical sequence in a volume of 9 pages, the aim and the resulting five main tasks are presented, formulated clearly and precisely and giving a clear idea of the intentions of the author.

Assoc. Prof. Chipeva, PhD, described the subject, the object and the contingent of her research, namely: 87 athletes, of which 37 medium-qualified middle-distance runners – students from the Technical University (Sofia) and track and field athletes from the „Athletic Club" – CSKA (Sofia) in the period 2017-2020 and 50 football players from PFC „Beroe" (St. Zagora) in the period 2017-2018, as well as PFC „Etar" (V. Tarnovo) in the period 2020-2021. The applied research methods provide an opportunity for an objective analysis of the achievement of the goal and tasks of the work. The organization of the study and the tests for sports-pedagogical control are described in detail, which are:

1. Standing long jump;
2. Vertical jump from a place;
3. Triple jump from standing;
4. Runs on an athletics track at 30, 100, 200, 300, 400, 600, 800, 1000, 1500 and 2000 m.
5. Running 10 segments of 20 m each;
6. 3200 m run (modification of Cooper's test)
7. Running at 800 m with counting the length and frequency of the running step and the time of the last 200 m of the distance, using video recording and computer analysis for this purpose;
8. Cardiorespiratory test.

The statistical methods for processing the obtained results are also presented.

In general, the positive points about what was written in this chapter refer to the clearly constructed methodological setting of the research, the appropriate and versatile research methodology. A very good impression is made by the sequence in which the organization and implementation of the experiment is presented and the precisely selected and detailed tests for control and evaluation of the achieved results, which, in my opinion, are highly informative.

Structurally, the development of chapter three is scientifically sound and fully satisfying, and its content contributes to the high value of the dissertation work.

In the fourth main chapter, in a volume of 81 pages, the following models of adaptive development, obtained on the basis of research conducted with medium-skilled runners, are presented and analyzed:

1. Model for distribution of volume and intensity of running loads;
2. Model of multiparametric structure of the specific physical working ability;
3. Model for the organization of training and training loads in a special preparatory and pre-competition mesocycle;
4. Pulsometric model of the adaptation process;
5. A model for determining the critical speed and the transformation into a zonal range in endurance work in 800 and 1500 m runners;
6. Model for the application of specialized loads for the development of speed-power endurance;
7. Experimental model of the adaptation development in the macrostructure of the training in medium-skilled 800 m runners;
8. Classification models of educational and training loads in middle-distance running.

In this main part of the work, Assoc. Prof. Maya Chipeva, PhD, has included a series of figures and tables that illustrate the textual material very well and help to more correctly analyze and interpret the results obtained from the conducted research.

In the following fifth chapter, in a volume of 29 pages, the adaptive changes in aerobic capacity obtained as a result of the application of running loads in football players are presented and analyzed, as follows:

1. A model for specific work capacity in football players, which was derived on the basis of studying the dynamics of changes in aerobic capacity, studying the dynamics of changes in running work capacity (results in Cooper's test) and planning running loads in microcycles of different nature and direction at the training of football players. The analysis of the dynamics of the investigated indicators shows that the applied training methodology has increased the general adaptation capabilities of the competitors. The achieved level of general adaptive capacity was maintained for 12 weeks. This confirms the positive training effect of the applied methodological approach in building the training process.
2. Model for classification of running loads, intensity and assessment of critical adaptation levels. Here, the author classifies the methods and means in the football player's training into two main groups, namely: specific and non-specific, and on this basis five model test training activities have been developed, which by their nature provoke different adaptation effects. The model training sessions have been tested with football players in the setting of the initial preparatory period. At the end of the analysis of this model, Assoc. Prof. Chipeva summarizes: „In this regard, for effective running work, the specific game endurance will be essential, as the main building block in the football-athlete model, which must possess: speed, agility and agility; speed endurance; strength endurance; bounce and coordination endurance".

Structurally, the development of the fourth and fifth chapters is scientifically sound and fully satisfying, and their content contributes to the high value of the dissertation work.

In the last part of the dissertation, conclusions are drawn and recommendations are formulated, which correspond and are based on the solution of the set research tasks and derive from the analysis, giving an answer to the formulated scientific hypotheses.

From the extended scientific search, the research and analysis done in the dissertation work, allow me to point out the following main contributions to practice:

1. Models have been developed to predict current running potential based on the interrelated speed and duration of running effort.
2. On the basis of the correlation-factor structure of the specific work capacity, assessments of the current adaptation potential of runners and football players have been developed.
3. Models have been developed for forecasting and evaluating the potential of running loads in the various oxygen regimes and program tasks related to them.
4. Classification models of running loads in middle-distance running and the football game have been developed, as well as morphofunctional models of the

medium-skilled runner and the modern football player - characterizing efficiency, capacity and a high level of physical qualities.

5. The developed theoretical framework for modeling the adaptation processes in the athlete's preparation for specialized endurance, through running loads, provides universal applicability, through a positive transfer of the effectiveness of educational sports methods.

The contributions of the dissertation work have both scientific and scientific-applied significance and contribute to the enrichment of knowledge in the field of specialized running endurance in track and field runners, as well as in the training process of football players for consistent and proportionate programming of their training.

The author has five publications related to the dissertation work, which fully reflect scientific research on the topic. The abstract consisting of 44 pages meets the requirements.

The author and I have no publications in common on the subject.

I found no plagiarism in my work submitted for review.

In conclusion, I would like to note that Assoc. Prof. Maya Chipeva, PhD, is a respected teacher at the Technical University – Sofia. My personal positive evaluations of the author as a researcher are complemented by her sports and competitive activity in the recent past and her coaching work, both with adolescent and advanced track and field athletes, as well as with students.

These positions allow the author not only to have detailed information and a comprehensive view of the general state of athletics, among adolescent and advanced athletes, but also an opportunity for direct participation in the training process. All this has given the author the opportunity to do research of such an in-depth nature.

With conviction, I can summarize that the peer-reviewed dissertation was developed at a very good scientific level, with the necessary theoretical and applied value in the field of athletics and football. The presented dissertation work has a finished look, enriching the optimization process of preparation of the intermediate qualified runner and the modern football player and increases the professional competence of the sports-pedagogical personnel working in the field of athletics and football.

Based on the above and the qualities of the candidate, I strongly suggest to the Honorable Members of the Scientific Jury to award Associate Professor Maya Borisova Chipeva, Ph.D., the scientific degree „Doctor of Science" in Professional direction 1.3. Pedagogy of training in... (Methodology of training in physical education and sports).

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Sofia

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