By prof. Boryana Georgieva Tumanova, Ph.D.

Sofia University "St. Kliment Ohridski”

of a dissertation for awarding a scientific degree

"Doctor of Science"

In the field of Higher Education 1. Pedagogy

professional field 1.3 Pedagogy of teaching in ...

(Methodology of teaching in Physical Education and Sports)

Author: Assoc. Prof. Maya Borisova Chipeva, Ph.D.

Topic: **“Innovative Adaptation Models for Specialized Running Endurance in the** **Sports-Educational Process”.**

***Subject to review***

I am a member of a scientific jury by order of the Rector of Sofia University “St. Kliment Ohridski” № RD-38-165/11.04.2023 for providing a procedure for the defense of a dissertation work on the topic: “Innovative Adaptation Models for Specialized Running Endurance in the Sports-Educational Process” for the acquisition of a scientific degree "Doctor of Sciences" in the field of Higher Education 1. Pedagogical sciences, professional field 1.3 Pedagogy of training in... (Methodology of training in Physical Education and Sports).

The author of the dissertation is Assoc. Prof. Maya Borisova Chipeva, Ph.D., Sports Department of the Technical University of Sofia.

The Presented by Assoc. Prof. Maya Borisova Chipeva's set of materials is under the Rules for the Development of the Academic Staff in the Republic of Bulgaria and includes the following documents: 1) CV; 2) Dissertation; 3) Abstract of the dissertation in Bulgarian; 4) Printed five scientific works related to the dissertation; 5) Declaration of authorship; 6) Reference for compliance with the minimum national requirements for the scientific degree “Doctor of Science” for the relevant scientific field.

From the presented tabular reference for MNR by a group of indicators for awarding the scientific degree "Doctor of Science" in the Field of Higher Education 1. Pedagogy, Professional field 1.3 Pedagogy of ... It is evident that the candidate fulfills the required national minimum of 350 points and participates in the competition with 355 points.

There is also a reference that shows a lack of plagiarism.

The materials are presented with the necessary correctness and precision.

***Brief information about the candidate***

The candidate Assoc. Prof. Maya Borisova Chipeva, Ph.D., has been a lecturer at the Technical University of Sofia since 2012. Since 2014 she has been a senior lecturer and since 2019 - an associate professor. Coach of the representative teams of TU of: athletics from 2014 to the present, aerobics from 2015 to the present, and cheerleading from 2018 until today. Previously, she worked as a part-time lecturer for one academic year at the Technical University of Sofia and 2 years as an assistant coach of athletics in Chemnitz - Germany.

She graduated from the National Sports Academy "Vasil Levski" – bachelor's degree (1996 – 2001) with a first specialty – a Teacher in Physical Education and a second one – a Coach in athletics, and a master's degree (2004-2006) with a specialty – Sports Journalistic.

In 2016 she defended her dissertation and acquired a Ph.D. degree in professional field 1.3 Pedagogy of teaching in...

The publications submitted by the candidate are proof of the development of Assoc. Prof. Maya Chipeva as a teacher, researcher, and active participant in forums related to Physical Education, sports, and in particular training loads for middle-distance runners.

***The actuality of the topic***

To respond to the educational and social needs in the Bulgarian sports-educational policy, the interest of researchers is growing more and more definitely in issues related to overcoming some problems in the preparation for different sports and searching for new opportunities for sports training. The author of the current dissertation skillfully points out the relevance of the problem and the need to be solved. The study is a theoretical analysis and synthesis of specialized literature on the problem. The idea contained in the dissertation summarizes and systematizes the previous scientific-applied and practical results and contains theoretical summaries and solutions for scientific-applied problems related to the training of middle-distance runners and football players. The dissertation is current, distinguished by the applicability of the results in practice, and can be used by a wide range of users – coaches, lecturers, teachers, instructors, as well as students taught in the subject "Physical Education and Sport".

***Knowledge of the problem***

Assoc. Prof. Chippewa combines a deeply understood reading of the theoretical literature on the problem with her pursuit of quality research, offering an innovative scientific product. The theoretical analysis made and the proposed models for predicting the current running potential and evaluations of the current adaptation potential in track and field runners and football players are an indication of a consistent search for a solid scientific basis and the deployment of scientific logic. The author has found an adequate reflection in the structure of the dissertation, objectively and argumentatively presenting the essence of models for predicting and evaluating the potential of running loads in different oxygen regimes.

***Methodology of the Study***

The candidate has submitted for participation in the competition a manuscript with a volume of 288 pages and a related abstract with a volume of 44 pages. The theoretical competence of the author has allowed her to develop and well justify the idea of ​​her research already in the introductory part. The object, subject, aim, tasks, and hypothesis are clearly and precisely defined. Each research task is related to specific methods and procedures: theoretical analysis, pedagogical observation, expert evaluation method, sports-pedagogical testing including 7 tests, the cardio-respiratory test to establish the power of physical exertion, which is necessary to increase the pulse rate to a level of 170 beats per minute, testing learning models, mathematical-statistical methods - the variation, correlation, regression, and factor analysis. Thus, the chosen research methodology allows for achieving the set goal and obtaining an adequate answer to the tasks solved in the dissertation work.

***Characteristics and evaluation of the dissertation work***

The text of the dissertation is structured in an introduction and six sections.

***The introduction*** of thedissertation has a volume of 5 pages and highlights the topicality of the problem and the need to be solved.The author puts the focus on “Sport turns out to be one of the most integrating fields for studying the processes of adaptation of the human body”. In this sense, the purposeful study of the processes of adaptation in the system of sports activities aimed at achieving high sports achievements is particularly relevant. ***The first two*** sections are a thorough theoretical basis in a literature review, which is expanded in the second chapter at the end of which, based on the analysis of a significant number of literary sources and studies of other authors, Assoc. Prof. Chipeva formulates her working hypothesis (p. 132). The results of research in the practice give grounds to the author to present “Theoretical Foundations of Adaptation in Sport” with a volume of 32 pages, and “Theoretical Foundations of Durability — Working Capacity”, with a volume of 86 pages. Important conclusions are drawn, the thesis of many authors is that “the development of training models should be carried out based on the functional and physical condition of the athlete, as well as a certain system for building the training process in the annual cycle, according to the type of sport or specific discipline” is advocated. ***The third section*** *“*Aim, tasks, and methods of the study” with a volume of 9 pages gives a concrete idea of what lies ahead in the development of the dissertation. Professionally and competently formulated, 5 tasks are set for solving. Each research task is associated with specific methods and procedures and directs the author to the upcoming research activity. In my opinion, the tasks thus derived fully correspond to the main purpose of the dissertation. The object and subject of study are correctly formulated - the processes of adaptation, the educational and training process of the studied persons, and the related changes in their adaptation capabilities. The contingent of the study was medium-qualified cross-distance runners – students from “Athletic Club” CSKA, in the period 2017–2020, football players of PFC “Beroe”, Stara Zagora, and football players of PFC “Etar”, Veliko Tarnovo, in the period 2020–2021. For processing the obtained results Assoc. Prof. Chipeva has used highly informative mathematical-statistical methods - variation, correlation, regression, and factor analysis. Through them, she analyzed the results obtained in the ***fourth section*** of her work entitled “Models of adaptation development obtained based on studies conducted with medium-skilled runners” with a volume of 69 pages. presented in eight sub-paragraphs.

The author focuses on the various factors that influence adaptation development. The section is illustrated richly with figures and tables that show the essence of the presented research material. I give an extremely high assessment of the presented developed model for the distribution of the volume and intensity of the applied running loads and their dynamics in the annual load cycle. The characteristics in terms of volume, intensity, and running strength are presented. I highly value the determination of the dynamics of aerobic regimes in one-cycle planning, which was applied to a part of the studied persons for student-athletes, according to the peculiarities of their sports calendar. In the presented in her dissertation, “A Model for Determining Critical Velocity and Transformation and Zonal Range in Endurance Work in Track and Field Athletes - 800 and 1500 m Runners”, Chippewa outlines her ideas in the author's proposed “load zone range” and “qualification model for running work in the range of pulse zones”, which would help the work of sports teachers in calculating the critical speed through “test” sections. The author of this dissertation can explain the relevance of the problem and the need to be solved. The idea of the researcher to use the possibilities of predicting the current running potential based on the relationship between speed and duration of running effort responds to the need to create models of adaptation development. ***In the fifth section of*** the dissertation with a volume of 29 pages and consisting of two sub-paragraphs, attention is paid and the processes of development of aerobic capacity and its effective use in increasing the specific sports performance of football players are monitored. The approbated methodology for identifying a model for increasing the level of specific sports performance in football players would increase the general adaptation capabilities of the athletes. In the second subparagraph of this section, the described and proposed models create the principal basis for the development of aerobic plans, according to the specific adaptation tasks in the preparation of the meso- and the micro-structure of the training process. Based on the theoretical-methodical approach and especially on the presented research and analysis, the author sets out her recommendations for the development of endurance and proposes a morpho-functional model of the football player – as an athlete that is distinguished by game efficiency, more capacity, and a high level of physical qualities. In the last ***sixth section*** of her dissertation Assoc. Prof. Maya Chipeva logically concludes the studies, research, and analysis of the results and the development of models for adaptation in building specialized endurance in the training of athletes through running loads, reducing them to 10 main ones with the relevant subclauses. In the same section, based on the conclusions drawn, eight recommendations for the practice are made.

The dissertation is illustrated with 21 figures and 32 tables.

At the bibliographic level, citation standards have been met. The bibliography covers a total of 201 sources, of which 148 titles are in Cyrillic, 50 titles in Latin, as well as three internet sources.

***Assessment of the contributions and significance of the development to the science and practice***

Although narrowly specialized, the text throughout the dissertation is readable and at the same time precise from a scientific point of view. At the terminological and technical level, the dissertation is at the highest level. The results of all studies have a comprehensive analysis and correct conclusions and recommendations for theory and practice are made. Summarizing the review, I can conclude that Assoc. Prof. Chipeva successfully offers to the sports-pedagogical personnel working in the field of specialized running endurance in track and field runners and in the training process of football players, new innovative models for adaptive development in the sports process for targeted programming of the preparation. Methods and classification structures are proposed for the construction of specialized running resistance.

The contributions contained in the work of Assoc. Prof. Maya Chipeva, Ph.D., presented in the competition for awarding the scientific degree “Doctor of Sciences” are in the field of Pedagogy of teaching in Physical Education and have a theoretical, methodological, and practical-applied nature. They are expressed in the resulting specific goals of Physical Education. Theoretical and practical formulations based on the peculiarities of physical activity are systematized and outlined. The contributions of the dissertation are reduced to five main results. Emphasis is placed on the essence of technological tasks and solutions to adaptation processes in building endurance in the field of medium-distance running and, to some extent, in football. Models have been developed to predict current running potential based on the interrelated speed and duration of the running effort. The following were developed: assessments of the current adaptation potential in runners and football players; models for predicting and evaluating the potential of running loads in different oxygen regimes and program tasks for them; classification models of running loads in middle-distance running and the football game, as well as morpho-functional models of the average runner and the modern football player; theoretical formulation for modeling the adaptation processes in the athlete's preparation for specialized endurance, through running loads, universal applicability is provided, through a positive transfer of the effectiveness of educational sports methods.

***Conclusion***

The present work is limited to summarizing scientific and applied results in the field of athletics, mainly middle-distance running and to some extent in football. The scientific contributions of Assoc. Prof. Maya Chipeva, Ph.D., in the doctorate presented for review and 5 publications on the subject, are within the scope of the Pedagogy of teaching in Physical Education and Sports. The ongoing process of the general adaptation syndrome, as a methodology of sports training, necessitates a complex and balanced attitude to its theoretical and practical dimensions. A base on which Chipeva steps and methodically develops. All this speaks of a high level of theoretical, teaching, and research experience.

The submitted for review production does not duplicate the work of other authors and there is no plagiarism. Considering all the above and as a reviewer and member of the scientific jury, I strongly suggest to the members of the honorable scientific jury to vote on Assoc. Prof. Maya Borisova Chipeva, Ph.D., to be awarded the scientific degree "Doctor of ***Science"*** in the field of higher education 1. Pedagogy, professional field 1.3. Pedagogy of teaching in... (Methodology of teaching in Physical Education and Sports).

10.05.2023 г. Prof. Boryana Tumanova, Ph.D.