

REVIEW

by

PROF. ANZHELINA GEORGIEVA YANEVA, PhD

EXTERNAL MEMBER OF THE SCIENTIFIC JURY

SOFIA UNIVERSITY "ST. KLIMENT OHRIDSKI"

REGARDING:

A DISSERTATION WORK FOR AWARDING THE SCIENTIFIC DEGREE:

„**DOCTOR OF SCIENCES**”,

THEME: **BIOMECHANICAL STRUCTURE OF THE SPORTS AND TECHNICAL MASTERY IN JUDO**

PROFESSIONAL FIELD: **7.6. SPORT**

AUTHOR: **ASSOC. PROF. NIKOLINA GEORGIEVA DIMITROVA - NEDKOVA, PhD**

LECTURER: **NATIONAL SPORTS ACADEMY “V. LEVSKI”**

REASONS FOR SUBMITTING THIS REVIEW:

Member of the Scientific Jury for the defense of the dissertation procedure for awarding of degree of “Doctor of sciences”,

According to the Order № 340/11.03.2020 by the Rector of the National Sports Academy “V. Levski” and the Decision of the Scientific Jury of 23.03.2020.

GENERAL INFORMATION ON THE AUTHOR:

Scientific, educational and academic background:

- Secondary education (Vocational education and training) (Technical school of Mechanical Engineering and Metallurgy "N. Vaptsarov" - 1980)
- Higher education up to master degree (NSA – 1993)
- Assistant-professor (NSA - 1996–1998);
- Senior assistant-professor (1998–2000);
- Chief assistant-professor (2000–2008);
- Ph.D. in the professional field 7.6. Sport (2002);
- Associate Professor (2008–up to present).

Qualification courses:

- Qualification course: Working with camera and video equipment, NSA (1990);
- Certificate from the Television and Radio Committee for "Working with video camera, videotape and panel mounting", (1990);
- English language course - II level, Institute for International Students (1994);
- Qualifications for judges - categories “.....“

Community service:

- Chairperson of the Judges College at the Bulgarian Federation of Judo (2002–2018);
- Organizer and chief judge at international judo tournaments in “A” category.

Sports competition activities and refereeing:

- Judo competitor – CSCA (1976-1982);
- Professional judo competitor at “Slavia” State Football Club (1983-1987)
- Long-time national champion in judo;
- Master of sports;
- International judo judge license „A“ – International Judo Federation.

Project activities:

- Participation in an international project (**Erasmus** + „Te(a)chIn sport”)
- Author of reviews on scientific projects under Regulation 9.

Other skills:

- Speaks Russian, English and French;
- Very good computer skills.

Scientific publication activities:

- More than 60 scientific publications;
- Participation in international and national conferences and workshops.

Besides the above-mentioned activities and skills that Prof. Dimitrova-Nedkova possesses, she is initiative, responsible, responsive, and tolerant.

My impressions and those of her colleagues are that Assoc. Prof. Dimitrova is a person who is respected by the sports and academic community.

EVALUATION OF THE STRUCTURE AND VOLUME OF THE DISSERTATION

The dissertation has a volume of 252 standard pages, including the Bibliography representing 175 sources. The dissertation is illustrated by 54 figures and 40 tables, out of which 22 are in the main text.

Structurally the dissertation work is built in three chapters, introduction, conclusions and recommendations, bibliography, two appendices and a dictionary of the terms used.

In the introduction, the applicant substantiates the relevance of the topic and defines the purpose, tasks, research thesis, object, and subject. The **three chapters** of the dissertation work consistently present the theoretical, methodological and applied issues related to the improvement of sports and technical mastery in the sport of judo.

In the final part of the dissertation, the conclusions and recommendations are formulated and the directions for the scientific provision of the training process are defined. In addition, this part of the presented work reflects the theoretical and practical contributions of the applicant. In general, the structure meets the requirements for the composition and proportional arrangement of the individual parts of the work and provides their logical connection, optimizing the components and units of the cognitive chain.

EVALUATION OF THE THEME, OBJECTIVE AND TASKS

The *ACTUALITY* of the chosen topic is justified by the features that are specific to this sport and the existing contradiction between the historically established principles, formulated as the "wisdom of the ages" and the modern development of sports and scientific knowledge.

Revealing this contradiction is a significant contribution, as the extremely strong traditionalism in the Eastern martial arts does not allow any revision of the ancient principles imposed. Conservatism is based on a world-class training system (KYU DAN), incorporating rigorously defined biomechanical models for the implementation of individual techniques.

The author has fully complied with the requirements for the science and validity of the dissertation statements, expressing the author's attitude to the views of other researchers who have worked on this topic. The dissertation work shows that the author is familiar with the most significant scientific and practical works and developments on the research problem and has become familiar with the experience of good specialists in this field.

The *AIM* of the research is clearly stated and precisely formulated and is a consequence of the hypothesis, namely "to determine the possibilities for a modern scientific approach for sports improvement based on the analysis and evaluation of the effectiveness of the techniques in competitive conditions". The aim formulated in this way characterizes the specific subject-oriented direction of the research process and the ways of its realization.

In this sequence, the applicant has correctly defined the OBJECT and THE SUBJECT of the thesis.

The *TASKS*, resulting from the defined aim are related to:

- Determination of the peculiarities of the target functions and phase structure in the motion system.
- Clarification of the conceptual apparatus from modern sports science.
- Development of a system of criteria, indicators, and methods for analysis and evaluation of sports and technical skills in Nage Waza.
- Offering models for realization efficiency and individualization of sports equipment.
- Formulation of guidelines and recommendations for the future development and improvement of the training process in high sportsmanship.

EVALUATION OF THE THEMATIC AWARENESS OF THE APPLICANT

The BIBLIOGRAPHY apparatus used by the applicant, her rich sports biography, managerial and international experience and refereeing at the world level, as well as her teaching practice at the National Sports Academy, represent her as an extremely knowledgeable and accomplished specialist in the field of research. The stated goal and tasks require a combination of deep knowledge of the specifics and historical prerequisites for the development of the sport of judo on one hand and the capabilities of modern science to improve the biomechanical structure of technology in judo on the other.

In the context of the research, the applicant presents in detail the *METHODOLOGY, ORGANIZATION, AND RESEARCH METHODS*.

The extreme courage and justifiable self-esteem of the applicant who undertakes to revise conventional dogmas and models of training should be emphasized. Assoc. Prof. Nikolina Dimitrova possesses all these qualities.

EVALUATION OF THE SCIENTIFIC AND APPLIED RESULTS

The dissertation has carried out in-depth research on a wide range of issues of theoretical, methodological and applied nature.

A critical analysis of the foreign experience has been carried out, the theoretical principles of the Kyu Dan system have been analysed, and the results of the main sports and technical actions during the modern World and Olympic tournaments have been investigated.

The tendencies in the development of the competition rules and their influence on the sports and technical characteristics of the performances are outlined, the biomechanical characteristics of the main schools in the World Judo are presented.

The way the content presentation is focused on the aim and topic of the research, there is a unity between the tabular and graphical presentation and the presentation of the results through statistical indicators, which determines the correct interpretation of the results.

Based on the analysis, evaluation, and synthesis of new ideas, the applicant redefines, and in many cases extends the existing knowledge, focusing on the investigation of problems whose solution leads to results that can be qualified as a contribution to science. These CONTRIBUTIONS are specified as follows:

- Significant differences in the biomechanical structure were found between the execution of judo techniques in *kata* and *randori* conditions.
- Quantitative criteria for biomechanical expediency and individualization of sports and technical mastery are derived.
- The developed system for control and modelling of the external to the "Tory" force field reveals hidden for the classical dynamographic analyses, the role of the compensatory mechanisms and the hitherto unknown structural interrelations.
- A methodology for improving the sports and technical skills has been developed, regardless of the dynamic stereotype of the elite competitors.
- The presence of a hitherto unknown phase (with proven significance for success) in the sub-structural level that builds motion actions in the throwing techniques is revealed.
- The multidimensional nature of the target functions forming the biomechanical expediency of sports equipment is proved. Despite the classic Judo Phase I (Kuzushi), there are alternatives to contest performances that have the private purpose of blocking the degrees of

freedom of movement or biomechanical characteristics that forestall the Uke's reaction.

- A scientifically sound idea of the existence of the concept of the "tactical composition" of a technique is presented.

The dissertation is at a high linguistic and stylish scientific level, using clear and precise concepts and terms, regardless of the Japanese terminology used in judo sports. There are no spelling or grammatical errors.

All of these contributing points are directly related to the theory and practice of the high-level judo competitors' preparation.

EVALUATION OF THE PUBLICATIONS RELATED TO THE DISSERTATION WORK

The type and number of presented publications correspond to those published in the abstract. These publications reflect the applicant's achievements and are sufficiently representative.

CONCLUSION

My overall assessment of the work, based on its relevance, structure, content and theoretical generalizations, gives me a reason to accept that it contains the scientific and applied results required by the Law on the Development of Academic Staff in the Republic of Bulgaria and represent a contribution to science.

In conclusion, I give a positive assessment and convincingly propose to the Honorable Members of the Scientific Jury, given the scientific contributions of the applicant, her many years of teaching and sports and competitive activity, to award assoc. prof. Nikolina Dimitrova the scientific degree "Doctor of Science" in professional field 7.6. Sport

Sofia, 01.04.2020

PROF. ANZHELINA YANEVA, PhD