## **OPINION**

by Assoc. Prof. Todor Zhelyazkov Marinov, PhD - Member of the Scientific Jury within the meaning of the Law on the Development of the Academic Staff in the Republic of Bulgaria, in accordance with the decision of the Faculty of Science for Education and Arts, Protocol No. 6 / 25.06.2019 and Order RD 38 - 317 / 02.07.2019 of the Rector of Sofia University "St. Kliment Ohridski "in connection with the thesis defense:

## "DIDACTIC TECHNOLOGY FOR DEVELOPMENT OF COORDINATION ABILITIES OF PUPILS AT PRIMARY SCHOOL THROUGH GYMNASTICS"

**Regarding:** For awarding educational and scientific degree "Doctor of Phylosophy" in professional field 1.3. Pedagogy of education in ... (Methodology of physical education and sport at kindergarten and primary schools) to Nikolina Milkova Tankusheva

The dissertation thesis submitted by the PhD student meets the requirements of Art. 27, para. 1 and 2 of the Rules for Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria. In this respect, it can be noted that the work of Nikolina Tankusheva contains the scientific-applied results of a pedagogical experiment to prove the effectiveness of didactic technology for the formation and development of coordination abilities of students from primary school. The dissertation is composed of a total of 258 pages, of which 207 pages are text, richly illustrated with 41 tables and 69 figures. A total of 199 sources were used to write the theory of the problem, of which 150 were sources in Cyrillic, 37 in Latin and 12 websites. In the volume of 36 pages are included 5 applications to the dissertation.

The thesis structure is standard, in accordance with the requirements and recommendations for such work.

In Chapter One, "Theoretical Statement of the Problem," the PhD student, on the basis of a wealth of literature, characterizes the key concepts of "didactic technology" and "motor skills". The focus is naturally on clarifying the nature and importance of coordination skills. Age patterns in the development of elementary school students are revealed. Some of their anatomical-physiological and psychical features are presented. At the end of chapter one, the place of gymnastics in the physical education and sport system is revealed. From the theoretical analysis, it becomes clear that Nikulina Tankusheva has the skills to

synthesize knowledge about the problem and to build her own conception. This reflects the well-formulated hypothesis presented at the beginning of chapter two.

The purpose and objectives of the study are well defined. The subject area of the study is the educational-pedagogical process of physical education and the opportunities for developing the coordination skills of elementary school students. A total of 1,073 children aged 9-10 years were examined. Of the total number of students surveyed for the main pedagogical experiment, a total of 94 students were included, divided into 2 groups: a control group with 47 students and an experimental group with 47 students. A complex methodology has been implemented, involving the use of reliable research methods. For 12 school weeks, Nikulina Tankusheva has been applying the experimental didactic technology she has developed to develop the coordination skills with the means of gymnastics. The steps of the didactic technology experimentation include technological steps in the complexes of general development exercises, in the complexes for physical training and in games. All this is well described and illustrated.

Of particular importance is the interpretation of the results of the study presented in chapter three. Here are some of the highlights of the work. A comparative analysis of the coordination abilities of 9-10 year old students by demographic characteristics was made, finding that there is a direct correlation between the state of students' coordination abilities and demographic conditions. With the help of variation analysis the PhD student thoroughly presents the variability of the coordination abilities of the studied girls and boys. The variability of the indicators for the physical development of the subjects was also thoroughly analyzed. The Student's t-test was used to test the effectiveness of the applied didactic technology and to prove the working hypothesis. There is some ambiguity in the presented differences in the individual indicators for the two groups at the beginning and at the end of the main pedagogical experiment.

Using the sigma method, normative tables for assessing the physical development and coordination abilities of 9-10 year old girls and boys are presented.

The dissertation ends with 8 conclusions resulting from the obtained results. The four recommendations made are important for improving sports pedagogical practice in school.

The abstract accurately reflects the content of the dissertation. Three independent scientific publications are also presented.

## **Conclusion:**

The dissertation covers the requirements of such scientific work. PhD student Nikolina Tankusheva has extensive theoretical knowledge and applied skills to conduct complex scientific research, which is why I propose to the distinguished scientific jury to award her Doctorate degree in professional field

1.3. Pedagogy of education in ... (Methodology of physical education and sport at kindergarten and primary schools).

13.08.2019 Prepared by:

Sofia (Assoc. Prof. Todor Marinov, PhD)