ANNOTATION OF THE MATERIALS UNDER ART. 65 OF REGULATIONS ON DEVELOPMENT OF THE ACADEMIC STAFF OF PLOVDIV UNIVERSITY (RDASPU)

of **Chief Asst. Prof. Rositsa Hristeva Shtereva, PhD**
Candidate in the competition for the academic position of "Associate Professor" in Field of higher education 1. Pedagogical Sciences, Professional Field 1.3. Pedagogy of education on... (Theory and Methodology of Physical Education in Kindergarten), announced in SG, issue 32/09.04.2024.

For participation in the competition for the academic position of "Associate Professor", I submit: 2 authored monographs, 25 scholarly publications that have not been used for obtaining a PhD and the academic position of "Chief Assistant Professor", and 17 workbooks.

The scholarly papers are distributed as follows:

- ✓ 2 monographs:

"General Physical Development Exercises in Kindergarten" and

"The Impact of Active Play on the Psychomotor Abilities of Preschool Children";

- ✓ 1 paper published in an academic journal, peer-reviewed and indexed in a globally renowned database of scholarly information;
- ✓ 14 scholarly publications in non-peer-reviewed journals with scholarly review or published in edited volumes;
- ✓ 10 scholarly publications in peer-reviewed proceedings of an academic conference;
- ✓ 2 co-authored workbooks for instruction of university students;
- ✓ 15 co-authored workbooks for the practical application of pre-school physical education.

The monographs and the scholarly works have themes relating to two main fields:

I. Pre-school Physical Education.

II. Instruction of Students in Higher Education.

The workbooks are related to my role as an educator at the Pedagogy Faculty of Paisii Hilendarski University of Plovdiv, and to the development of competencies in children aged 3–7 in the area of "Physical Education" in kindergarten.

I. Annotation of the materials related to pre-school physical education

The field of "**Pre-school Physical Education**" covers materials categorized into three groups:

- ✓ **Publications No. 1.1.; 1.2.; 3.4.; 4.3.; 4.4.; 4.5; 4.8.; 4.9.**

  The research presented in these publications is related to:

- the implementation of pedagogical methodologies geared towards motor development and functional enhancement in children aged 3 to 7 – the means, methods, and algorithms for improving their motor skills. (**No. 1.1.; 3.4.; 4.3.; 4.4.; 4.5; 4.8.; 4.9.**);
- investigation of the impact of active play on the development of certain motor and mental abilities in preschool-aged children (**1.2.**).

- ✓ **Publications No. 2.1.; 3.6.; 3.7.; 3.8.; 3.9.; 3.10.; 3.13.; 3.14.; 4.6.; 4.7.**

  The investigations in these publications cover:

- revealing the characteristics of motor function development in preschool-aged children (**No. 3.6.; 3.8.; 3.9.; 3.10.; 4.6.**);
- assessing the coordination and conditioning abilities of preschool-aged children (**2.1.; 3.7.; 4.7.**);
- the impact of socio-economic environmental factors on the functional, morphological, and health development of a child's body. (**3.13.; 3.14.**).

- ✓ **Publications No. 3.3.; 3.5.; 3.11.; 3.12.**

  The investigations in these publications are aimed at refining the scholarly views on important processes and phenomena relevant to preschool physical education.

The presented **monograph** titled "General Physical Development Exercises in Kindergarten" (**1.1.**) represents a both theory and methodology-based discussion on a range of topics focusing on the common subject-matter of general physical development exercises in preschool physical education in kindergarten. Explored is the pedagogical methodology of this distinctive set of tools. This is an instrument which enables every preschool teacher to create a learning environment where children can develop their motor, functional, and cognitive abilities. The general physical development exercises are presented as an active expression of various forms of pedagogical interaction in kindergarten to achieve the diverse goals of preschool physical education. Recommended are methodological models for structuring various general physical development exercises and combining them into sets. A large number of sets of general development exercises are proposed for different age groups within the preschool stage, both with and without various sports facilities and equipment. Additionally, pedagogical settings and morning routines have been developed, integrating general development exercises as active components to attain specific objectives.

Publication 4.3. presents a system of physical exercises aiming at developing the sensorimotor abilities in children aged 6–7. The classification is based on several criteria: type and variations of natural movements; movement parameters (direction, trajectory shape and amplitude, speed, muscle strain); complexity of the motor task (distance, diameter of targets, combinations with other movements, execution with a partner); use of equipment and facilities with various characteristics. By applying variability across different criteria, accessible physical exercises have been structured and described, targeting the development of the sensorimotor abilities of children aged 6–7.

The dual-piece composition of **publications 4.4.** and **4.5** presents an innovative integrated station-game model, designed and tested in preschool physical education practice to enhance natural movements. The compiled pedagogical methodology is based on the constructivist paradigm of education and its principles in facilitating motor development through the set-up of the educational environment. It features several sample scenarios for the integrated application of the play and station methods for children aged 3–5 and 5–7.

The focus of the research in **publication 4.8.** is the effectiveness of the methods for conceptualizing the motor actions to shape the spatial accuracy of movements in preschool-aged children. Kinematometry is the primary diagnostic method in the study. By registering the standard deviation in the quality of performance of motor tasks presented through visual, verbal, and kinaesthetic patterns, the assessment of the effectiveness of individual methods in enabling conceptualization of motor actions to shape the spatial component of their synthesized sensory image across different ages during the preschool period is measured. The demonstration, assisted motor, and verbal methods demonstrate varying degrees of effectiveness in promoting spatial accuracy of movements. Under investigation are the dynamics of improvement in results through each of the methods within the preschool period.

The need for a tentative distribution of the educational content in the "Natural-Applied Motor Activity" segment in the domain of "Physical Education", presented in **publication 4.9.**, arises from the fact that a mandatory preparatory group in kindergarten is being established for the first time, as well as within a short period, and experience, traditions, and contemporary practical guidelines for its operation are still wanting. Following a survey conducted with preschool teachers, whereby this need was a confirmed, a tentative distribution of natural-applied exercises based on refined criteria has been proposed. This tentative distribution, including the selection, arrangement, and combination of educational content within the segment, ensures a systematic, consistent, and effective pedagogical interaction and the attainment of the necessary physiological, educational, and developmental effects.

Publication 3.4. addresses certain key questions related to the development of a methodological model for the application of active play aimed at achieving the goals of physical education in kindergarten. Following an analysis of the results of the survey, which confirmed the need for such a model in practice and identified the difficulties encountered by teachers, practical guidelines for its development have been proposed.

The monograph titled "The Impact of Active Play on the Psychomotor Abilities of Preschool Children" **(1.2.)** presents the theoretical and applied aspects in studying active play as a means of developing certain motor and mental abilities in children aged 3 to 7, and as a diagnostic tool for their assessment. The monograph consists of six parts. The first part explores the nature and essence of active play. The second one addresses the

contemporary scholarly views on the structure of active abilities as a system of conditioning and coordination properties. The third part of the monograph outlines the current theoretical framework relating to coordination motor abilities. In this section, theoretical views on the role of active play in improving the quality of performance in fundamental natural-applied movements and in facilitating motor learning are empirically tested. At the core of the exposition in the fourth part of the monograph are the conditioning motor abilities and their development through active play. The theoretical views are examined, also presenting empirical evidence on the impact of active play on the level of development of strength, speed, and endurance abilities in children. The fifth part discusses the potential of active play to serve as a diagnostic tool in preschool physical education. Presented therein are the author's originally developed diagnostic methods. They are utilized to diagnose children's motor abilities and motor qualities in the context of active play, as well as to reveal the dependency of children's quantitative results on their play motivation. The focus of the sixth part of this monographs is on the role of active play in children's mental development. Theoretical claims regarding the impact of active play on the development of various mental processes (cognitive, volitional, emotional), functions, and abilities are presented. Theoretical postulates about the significance of active play for the development of various types of memory and different attentional properties in children are experimentally tested. Based on an empirical study utilizing the author's original diagnostic approach, the effect of active play on the awareness of essential characteristics of motor actions is revealed.

The series of **publications 3.6.; 3.8.; 3.9.; 3.10.** represents a study on the developmental peculiarities of children's motor skills, focusing on fundamental movements such as walking, running, jumping, and throwing. The study identifies the specificities in the formation of motor skills for these movements in 3 to 7-year-old children, when the foundation of human motor skills is established. The study is conducted based on quality criteria, specially designed for each of the movements, over the span of four years. Expert assessment is the method of choice. The dynamics and increase in the quality of performance of the movements under examination are tracked throughout the preschool period. The fluctuations in the percentage of children within different age groups performing the movements correctly are analysed. Comparison is drawn between the quality of performance in two types of settings: when the natural need for movement is satisfied through supplementing children's organized motor activities with games involving natural movements, and under standard conditions.

Publication 4.6. contains a survey examining the influence of the magnitude of motor activity on the manifestation of ontogenetic sensitivity and its regularities in the development of the conditioning abilities of preschool-aged children. The primary research method is testing through a battery comprising four motor tests. The experimental data has been processed through analysis of variance. The results of the experiment demonstrate that a sufficient volume of organized motor activity stimulates the manifestation of sensitivity, with the rates of improvement in motor qualities—both individually and collectively—being identical to those identified and established in science. Conversely, insufficient motor activity does not allow for consistent and regular sensitivity to be manifested, disrupting it, and thus leading to results which contradict the established trend of increasing conditioning abilities in 3 to 7-year-old children.

Publication 2.1. provides experimental verification of the theoretical views regarding the ease of forming motor abilities in children aged 6–7 as an indicator of the level of development of their coordination skills, a consequence of their play-related motor experience. The method of expert assessment is used for diagnosis. The results of the

formation process of two motor skills in two studied groups have been compared – the experimental group having been subjected to a methodological model of active games over the previous 4 years, as a result of which the children's coordination abilities have developed to a higher degree compared to the control group. The dynamics of skill formation are analysed against the following criteria: quality of performance, speed and efficiency in mastering motor actions, durability of acquired skills, and consistency of results. The trends in the rate of skill formation are outlined. An analysis of variance is performed on the recorded data. It has been established that the ease in the course of the process serves as an indicator for the level of development of preschool-aged children's coordination abilities.

Publication 3.7. presents several active-play activities, structured as a tool for diagnosing the conditioning abilities of children aged 3–7. In these activities, the motor tests (motor actions) are placed within a specific meaningful context. Thus, children remain unaware of the control and evaluative task, and they are guided by the gaming task instead. On one hand, this prevents the stress associated with direct assessment, while also strongly motivating the children to demonstrate their maximum potential for speed, strength, and endurance in order to achieve the gaming goal. This way, for the first time, the diagnostic function of active play, as indicated in various theoretical concepts, is adapted into a methodology.

The research presented in **publication 4.7.**, (in English) gauges the potential of active play to be utilized as a tool for diagnosing the conditioning abilities of preschool-aged children. Two types of control conditions are set up – one with traditional motor tests, and another with specially structured active games. It has been established that these active games do not create any organisational, procedural or recording impediments, and the assessment can be conducted successfully. The emotion-stimulating nature of active play, awareness of the movements, and focus on accomplishing the gaming objective (rather than the diagnostic one) allow children to better demonstrate their speed, strength, and endurance abilities than in the conditions of direct testing. The conclusions drawn suggest that active play can be used as a diagnostic tool, as, through it, children's conditioning potential is revealed to a greater extent.

Publications 3.13. and **3.14.** present a study identifying the impact of the socio-economic factors in a critical historical moment on three aspects of child development: physical fitness status, health condition, and physical development of preschool-aged children. The obtained empirical results at the time of the study have been compared to those of national assessments from previous periods. The comparative analysis indicates the following: an improvement in the absolute values of the measurement of motor qualities but a decrease in verbal assessment during periods of strong socio-economic upheaval; an increase in the values of anthropometric data of the children during the preschool period, but a significant deviation from the normal pace in the growth and body weight increase during the historical period covered in the study; a higher frequency of absences of children due to colds and infectious (viral) illnesses is recorded. This necessitates the conclusion that the current economic environment has a negative impact on the functional, morphological, and health aspects of children's bodies and their natural biological development.

Publication 3.3. provides a historical overview of the introduction and clarification of the notions of "agility" and "coordination abilities" within categorical framework of Physical Education Theory as a branch of science. The text presents the views of a number of European (including Bulgarian) scholars – from those who authored the first books on

physical education in the late 18th century to the present day – on determining the nature, essence, differentiation, and nomination of the abilities designated by the two terms, as well as their association with various groups of motor abilities, and the typological and genealogical interrelations between them.

Publication 3.5. addresses the place of active play within the system of gaming forms. The genesis, structural components, and nature of active play are examined within the context of gaming activities. The essence of play (in general) and active play (specifically) is revealed as a universal human activity, predominant during the preschool years, serving as a form of culture and as an educational tool.

Publication 3.11. provides an overview of the specificities in the manifestation and diagnosing of coordination abilities in preschool age. The characteristic integrity, cohesion, and indivisibility of the individual components in the infrastructure of motor coordination are revealed in children up to the age of 7. There is also emphasis on their strong interdependency with conditioning abilities, as well as various mental processes, sensory perception, and consciousness, with which they interact in simpler or more complex combinations. The age range during which motor coordination structures are susceptible to advancement is explored, conclusively identifying the preschool period as the most conducive. Subject to discussion is the question of the validity of tests for diagnosing coordination abilities and their applicability to children under 7 years old.

Publication 3.12. interprets from a theoretical perspective the question of the great significance of active play in the process of forming and developing motor abilities. Commentary is provided on the formative value of active play at various stages of motor learning. Active play is viewed as a natural environment for development and manifestation of advanced motor skills. Play is defined as a key factor in nurturing coordination abilities for regulating movements with precision. Theoretical arguments are provided regarding the significance of active play in physical conditioning – its holistic enhancement, maintaining its levels, as well as overcoming the overly differentiated approach towards movement abilities and motor skills. The role of active play in developing speed, strength, and endurance abilities is examined.

II. Annotation of the materials in the field of education of university students

The domain of "**Instruction of Students in Higher Education**" covers the materials presented in publications **No. 3.1.; 3.2.; 4.1.; 4.2.; 4.10.**

The harmonization of the wide variety of pedagogical activities of a university educator – teaching, conducting examination and assessment – from the perspective of the competency-based approach in higher education and their common orientation towards knowledge, skills, and attitudes is at the core of designing a creative examination task. The students' opinion in this regard is surveyed in **publication4.1.** Students' attitudes toward the examination method in the academic discipline of "History of Physical Education" are surveyed through a questionnaire. Investigated are: the respondents' preferences for the exam format; attitudes towards teamwork; perceptions of assessment methods; evaluation of acquired knowledge, social, cognitive, and digital skills and attitudes; opinions on sourcing resources, organization, and challenges in developing a creative exam task. The publication presents the author's claim that the objectives of the exam in a given discipline should align with modern models used for acquiring competencies in the learning process.

The series of **publications**: **3.1.; 3.2.; 4.2.** reports studies on the results in the individual components of the comprehensive practical exam taken by students applying for the programme "Pedagogy in Physical Education" at Paisii Hilendarski University of Plovdiv. It presents both a qualitative and quantitative analysis of the grades from the practical exam in gymnastics conducted during the 2023/2024 student application campaign, also accounting for the changes compared to those from previous campaigns. The main general deficiencies in the performance of the gymnastic routine have been identified. The results (achievements and grades) of the candidates from the practical entrance examination in the standing triple jump are investigated. The grades in the 2023/2024 campaign have been analysed, taking account of the trends in grades across the most recent student application campaigns. The results of the triple jump performance achieved in 2023/2024 are compared with those from 2015/2016, when different grading scales were used compared to the current ones. An analysis of the grades from the comprehensive exam in sports games during the student application campaign in 2023/2024 is presented. Changes in grades and the number of candidates are taken into account and compared to previous campaigns. The data have been statistically processed using analysis of variance, ensuring the reliability of the drawn conclusions and findings.

Publication 4.10. demonstrates the application of an innovative approach to the organization of sports activities for the students of different programmes at Plovdiv University. It involves structuring various specialized groups and examining the effects of the approach. The groups are not formed according to the students' programme and the sports specialization of the instructor (allocated according to the curriculum), but based on the students' preference for practising a specific sport, as indicated by them in a survey. The stimulating effect of this organisational approach is manifested as follows: reducing the number of student absences from sports classes; improving their physical fitness level, technical preparedness, and consequently, their grades in the academic discipline; increasing students' interest and engagement in sports classes; fostering their desire for independent and extracurricular sports activities in the next year of study.

III. Educational Materials

5.1. Co-author of a manual on theory and methodology of physical education

Margaritov, V., S. Boeva, ***R. Shtereva***, M. Chepisheva, M. Sokolova, N. Yordanova, V. Margaritova, M. Margaritov. (2015). Theory and Methodology of Physical Education. Manual. Plovdiv, University Press, Paisii Hilendarski, 153 p., ISBN 978-619-202-092-7.

The manual on theory and methodology of physical education was developed in accordance with the curricula for teaching students in bachelor's and master's degree programmes in Professional Field 1.2. Pedagogy and 1.3. Methodology of Education in ... at Paisii Hilendarski University of Plovdiv.

The manual encompasses 25 thematic centres focusing on: the means, methods, and forms of physical education; the development of motor skills and habits and the enhancement of motor qualities; functional load and intensity in physical education forms; physical education for preschool children, students in the primary and lower secondary stages of general education, and in the upper secondary education stage; planning and monitoring physical education and sports activities; tests for diagnosing physical fitness; variation, correlation, and regression analysis of sports data and hypothesis testing; multi-year sports training, etc. Control questions and tasks are designed for each topic.

The objective of the exercises is for students to attain competencies relating to the contemporary pedagogical methodologies in physical education and sports.

5.2. Co-author of a workbook on methodology of physical education

Margaritov, V., V. Alipieva, S. Boeva, ***R. Shtereva***, M. Chepisheva, V. Margaritova, R. Tsvetkov. (1999). Methodology of Physical Education. Plovdiv, University Press, Paisii Hilendarski, 187 p., ISBN 954-423-168-4.

The workbook covers the teaching methodology for all types of sports which make up the compulsory areas of the curriculum in the school subject "Physical Education and Sports" – gymnastics, athletics, and sports games(basketball, handball, volleyball, football), as well as several optional areas (swimming, karate-do). The text is organized into 14 chapters. A general theoretical framework has been established, elucidating the specificity of the educational process in physical education and uncovering the rich variety of methods with both general pedagogical and specific characteristics related to motor activities, among which methods for teaching motor actions occupy a central place.

The pedagogical methodology for developing specific motor skills is presented, with a detailed description provided for each, revealing its significance. A methodological standard for its execution is presented, along with recommended specific preparatory exercises. Typical errors are noted, and methods for their correction in the process of motor learning are indicated. The methodology for conducting active and sports-preparatory games, for movements and games with music and folk dances, as well as for drills and general developmental exercises, has been developed. The description is abundantly illustrated with drawings that complement students' understanding of the respective motor action. In student training, they can be used as static demonstrations. Requirements for planning and documenting physical education activities, as well as criteria for assessing the pedagogical activities of physical education and sports teachers, have been developed.

The workbook is intended for preparing students in the respective specialized sports pedagogy, as well as generally for pedagogy in physical education teaching – particularly for their current and undergraduate practice. It is also useful for practising teachers and specialists working in the field of physical education.

IV. Materials for preschool physical education practice

Materials**5.3; 5.4.; 5.5.; 5.6.; 5.7.; 5.8.; 5.9.; 5.10.; 5.11.; 5.12.; 5.13.; 5.14.** present in co-authorship the complete set of teaching aids for teachers and children for the “Fairy Paths” (Prikazni Patechki) program system (Bulvest 2000 Publishing House - Sofia) for preschool education in the first, second, and third age group of the kindergarten. Developed for each group are the following: teacher’s book, methodology manual for implementation of the educational content, a set of individual diagnostic worksheets, a collection of texts, games, and songs, each of them featuring Physical Education as a field of education. The teacher’s book features a description of the age-specific characteristics of children in each group; an outline of the goals of the educational field, the system of tasks, and the expected results; a syllabus design with distribution of educational content for the academic year; a description of the means and methods; an index of connections with other fields; a description of diagnostic procedures for assessing children's achievements. The workbook provides methodological guidelines for implementing the educational content and comprehensive methodological designs of various teaching scenarios for the field of study throughout the academic year. The sets of individual worksheets and the diagnostic booklet include pictorial tests, developed to assess children's perceptions, knowledge, and attitudes related to motor activity. The workbook outlines the recommended active games and sets of exercises aimed at achieving competencies

in the respective age group for the discipline. Thus, the pedagogical methodology in the educational field of Physical Education in kindergarten is fully deployed and supplied.

Materials **5.15.; 5.16.** include a teacher's book and a children's workbook for the preparatory stage of kindergarten (Gea-Libris Publishing House – Sofia). In the teacher's book, the authorial team develops pedagogical methodologies in preschool education, including the methodology for physical education of children in the preparatory group. The workbook for children in the 4th year of kindergarten is intended for solving educational and diagnostic tasks through pictorial tests.

Material **5.17.**, co-authored, proposes ideas for everyday kindergarten activities. They are grouped under two domains: "The Child Plays, Works, and Has Fun", and "Teaching the Child". Alongside the content of the other areas of preschool education, the workbook presents the educational content of the Physical Education programme for children aged 3–4, 4–5, and 5–7.

Date: 8.05.2024 Written by:……

Plovdiv (Chief asst. prof. Rositsa Shtereva, PhD)