

STATEMENT

by Prof. Nikolay Stoyanov Kolishev, D. Sc.

on the theoretical and practical contributions in the publications

of Assoc. Prof. Ph. D. Rositsa Dimitrova Davidova-Madzharova, a participant in a competition for taking the academic position of "Professor" in the field of higher education 1. 1. Pedagogical sciences, professional field 1.2. Pedagogy of training in... (biodiversity, biology, health, and environmental education), published in the State Gazette, issue No. 111/31.12.2021

I. Biographical Info

Assoc. Prof. Ph.D. Rositsa Davidova, was born on 25.04.1972. In 1995 she graduated in biology at the Shumen University "Bishop Konstantin of Preslav" K. Preslavsky'. In 2004 she defended a doctoral thesis at the same university.

Assoc. Prof. Ph. D. Rositsa Davidova's work experience began in 1996 after winning a competition for assistant in the Methodology of Training in Biology at the Shumen University "Bishop Konstantin of Preslav" K. Preslavsky'. Between 2000 and 2004, she was consistently awarded the scientific titles of Senior Assistant (2000) and Principal Assistant (2004), while in 2013 she won a competition for the academic position of Associate Professor.

In 2019 she was elected by the Academic Council of Shumen University as Vice-Rector of Educational Policies, Research, and Artistic-Creative Activities, and in 2021 the scope of the administrative position occupied by her was changed, which is reflected in her new name, namely "Vice-Rector of Research, Project and International Activities".

II. General characteristics of scientific production.

The applicant has submitted for review scientific production in a volume of 34 publications, including 1 monograph, 15 articles published in scientific journals, referenced and indexed in world-renowned databases with scientific information, 17 articles published in non-referenced journals with the scientific review or published in edited scientific volumes, 1 university textbook.

Since the competition for a professor is in the professional field 1.3. Pedagogy of training in... (biodiversity, biology, health, and environmental education), I will comment on the publications in this scientific field.

Didactically justified methodological models for the application of interactive learning methods for the formation of key competencies in students in the subjects like "The Human and the Nature" (5-6 grade) and "Biology and Health Education" (7-10 grade) are presented in the candidate's habilitation work "Formation of key competences in the training in "The Human and the Nature", 5-6 grade and "Biology and Health Education", 7-10 grade".

Part of the publications (6.1., 6.2. and 6.3.) offer a number of productive pathways for developing students' cognitive interest in the subject of "The Human and the Nature" in 6th grade: thought-provoking, including problematic learning-cognitive tasks; application of biology-specific techniques (microscoping, magnifying glass work, distribution materials work, etc.); application of common for all subjects of learning (development of a lesson plan, use of visual aids, filling of tables, construction of schemes, etc.); application of logical methods (analysis, comparison, proof, summary, conclusions, etc.).

In another part of the publications, an experimental check of the cognitive and motivational effectiveness of interactive, including innovative, methods of environmental and health education is carried out (6.5, 6.6 and 6.8). Specifically, the subject of the experiment is the methods of modeling, contingent analysis, case studies, method of associations, role play, incident, method of associations with intellectual map building, brain attack with intellectual map building, and game simulation. As part of the publications can also be referred the publication 7.7, which presents a theoretically justified and practicable model for the training of students in the discipline of Hospetting in Biology, aimed at forming skills for the application of interactive learning methods.

In the third part of the publications (7.10. and 7.15), a diagnosis of the student's educational achievements in Biology and Health Education in the 5th grade is carried out through competently composed didactic tests.

In the fourth part of the publications (7.16. and 7.17.) were developed and subjected to experimental verification didactically justified models of training in Biology and Health Education in 7th grade, based on the Bulgarian software platform "Envision".

The university textbook "Anatomy of the maxillofacial vertebrates" has been developed at a high professional level with regard to all three mandatory didactic components, namely: basic text, learning apparatus, and orientation apparatus.

As common characteristics for all presented publications, we can highlight the following: the actuality of the subject matter; logical structure; precision in the definition and use of basic concepts; competent systematization and analysis of significant literary sources; justification of productive practical ideas; highly professional language and style of exposition.

III. Evaluation of scientific and theoretical contributions.

The theoretical and practical contributions made by the applicant in the field of music teaching methodology correspond to the content of the submitted publications and generally speak of a good level of professional reflection. As particularly important for the development of the theory of biology teaching, I would point out the following contributions:

1. Didactically justified methodological models for the application of interactive methods in the training in "The Human and the Nature", 5-6 grade and in "Biology and Health Education", 7-10 grade has been developed, the effectiveness of which has been proven experimentally.
2. Didactically justified methodological models for the application of interactive methods for environmental and health education of students have been developed, the effectiveness of which has been proven experimentally.
3. Productive approaches have been developed for the development of the students' cognitive interest in the process of training in the subject "The Human and the Nature" in 6th grade, according to their age psychophysiological characteristics, namely: educational-cognitive tasks, application of common for all subjects and specific for the training in biology, application of logical techniques.
4. A didactically based model for the application of the software platform "Envision" in the training in "Biology and Health Education" in the 7th grade has been developed, the effectiveness of which has been proven experimentally.

IV. Evaluation of the practical and applied contributions.

The content of the presented publications testifies to the developed ability of theoretical designs to become adequate practical solutions, the realization of which will lead to improvement of the process of training in biology.

V. Teaching activity

I have no immediate impressions of the teaching activity of the candidate, but the presented textbook attests to its high quality. It is distinguished by competently systematized theoretical and practical information, with reasonable accents on the essential, language and style of exposition available for the specific readership group, and an intriguing way of presenting the curriculum appropriate for the academic motivation.

VI. Conclusion.

In conclusion, I can state that the quality of the systematization of theoretical information in the presented publications on the methodology of training in biology, the developed and experimentally verified methodological models, as well as the justified productive practical ideas, are at a level that fully meets the legal requirements for taking up the academic position of "professor" in the professional field 1.3. Pedagogy of training in... (biodiversity, biology, health and environmental education).

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