

## OPINION

by Assoc. Professor Magdalena Stoyanova, PhD

member of a scientific jury, approved by Order No. 4378 of 06.12. 2023 of the Rector of Thrace University, Stara Zagora

in connection with a competition for a full-time associate professor in the field of Higher Education 1. Pedagogical sciences, professional direction 1.3. Pedagogy of teaching "Methodology of teaching mathematics in preschool age", announced for the needs of the "Preschool and Primary School Pedagogy" Department of Thrace University in the State Gazette, no. 88, dated 20.11.2023

### ***Information about the competition held.***

In the competition announced for the needs of the University of Thrace for a full-time associate professor in professional direction 1.3. Pedagogy of training on "Methodology of mathematics training in preschool age", published in the State Gazette no. 88 of 20.11.2023, one candidate participated - ch. Assistant Professor Yordanka Dencheva Ilieva, PhD.

The competition is in accordance with the requirements for the candidates defined in the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Rules for its implementation, as well as on the basis of the additional requirements of the Rules for the Development of the Academic Staff of Thrace University.

According to para. 3 of Art. 74 and Art. 75. (1) and (2) in the Regulations of Tr. U, persons who meet the conditions of Art. 74. That is why I will present my assessment in a procedure after the announcement of the order for the structuring of a scientific jury, following the admission of the candidate to the competition.

### ***General presentation of the candidate participating in the competition.***

Ch. Assistant Professor Yordanka Dencheva Ilieva, PhD, was born on 01.05. 1971 in the Shumen region. In November 1993, he completed his higher education majoring in "Preschool Pedagogy", VPI, Shumen. On 01.02. In 2019, she was awarded a PhD in "Teaching Methodology in Mathematics and Informatics (in Kindergarten)" from "Episkop Konstantin Preslavski" School of Education, Faculty of "Mathematics and Informatics" with a doctoral dissertation defense on the topic "Didactic-technological model for mastering key competencies by 5-7-year-old children in the process of comparing and measuring quantities" (with diploma D-190, issued on 22.03. 2019). Substantively, this fact, as well as her implementation in basic kindergartens of the SHU as a teacher and senior teacher (DG

"Svetulka", DG "Druzha", etc.), her activity as a senior expert in preschool education in the Regional Inspectorate, her part-time teaching activity in the School of Education, related to the curriculum in mathematics of kindergarten education, prove that the candidate has extensive professional experience in the field in which she teaches to this day at Tr. U., Stara Zagora, announced in the current competition and is able to link her academic and his managerial competences from his higher education with his pedagogical practice in kindergartens.

***Educational activity realized by the candidate.***

From 01.03. 2022 ch. Assistant Professor Yordanka Dencheva Ilieva, Ph.D., has been appointed at Tr. U, Stara Zagora as a teacher of mathematics teaching methodology in preschool age in kindergarten. Participates in educational disciplines Pedagogy of mastering elementary mathematical concepts in kindergarten, Methods of teaching mathematics in grades 1-4, Qualitative characteristics of mathematics education in the specialties PNUP, PNUPCHE, PNUP with ICT in OKS "Bachelor" and "Master", exceeding the study load of 360 hours. I find that the accumulated teaching experience is completely sufficient for acquiring the academic position of associate professor. From the publications submitted for review, it can be seen that, in a methodological plan, they are intended and provide the disciplines taught by her to help students and teachers in practice, and 10 of them, including her monograph, were published in the last two years of her teaching activity in Tr.U, Stara Zagora.

Content-wise, they correspond to important and technologically updated methodological priorities of preschool education, related to the 2016 ZPUO, as well as to the updated standards from Ordinance No. 5 of 2016 (DOSPO, MES, 2016) - quantitative relations, the problem of mastering key competencies of 5-7 -year-old children in the process of comparing and measuring magnitudes in kindergarten, expected results exceeding research before the introduction of modern educational documentation. From the information provided for the competition, it can be seen that it satisfies the formal requirements for evaluating the criteria under the section of educational activity, which I focus on in this opinion.

***Research activity of the candidate.***

Ch. Associate Professor Yordanka Delcheva Ilieva, Ph.D., presented a list of a total of 14 publications, including one monograph, 1 published book based on a protected dissertation

work after obtaining the ONS "Doctor", 1 article in published in scientific publications, refereed and indexed in world-renowned databases of scientific information and 11 articles in the periodical methodological press and communications in scientific proceedings of forums and conferences. Two of the publications are in a foreign publication Norwegian Journal of development of the International Science (№№ 7.7, 7.10).

Depending on the investigated issue, the scientific production presented in the competition can be divided into the following areas:

- specificity of training according to the methodology of mathematical education in preschool childhood and innovative technologies for its implementation (No. 5.1., 7.9, 7.10);
- integration of the content and organization of the educational direction in "Mathematics" (No. 3.1, 7.2, 7.4, 7.5, 7.8);
- the improvement of preschool education and trends in the rediscovery of democratic traditions in the world heritage and modern vision (№№ 7.1, 7.6, 7.7).

In terms of volume and quality, the presented scientific production is completely sufficient and meets the recommended criteria for awarding the academic position of "docent". From the attached reference 8.4, it is clear that the candidate meets the criteria for fulfilling the minimum national requirements for the academic position "Docent" (according to criteria from A to D - 365 points out of the required 350). The total number of citations presented in the reference in criteria E also exceeds twice the required points (in criterion E 100 points against the required 50). I find that this is positive evidence of an existing serious scientific potential recognized by leading researchers in our country (Prof. T. Borisova, Doctor of Science, Prof. R. Neminska, Doctor of Science, Assoc. Professor M. Temnikova, PhD, Prof. D. Galabova, PhD, Prof. A. Krasteva, PhD, etc.), which allows her further scientific development.

Ch. Associate Professor Yordanka Delcheva Ilieva, PhD., participates in two projects for the improvement of teachers' pedagogical qualifications ("Step by Step" foundation and "Trust for a Social Alternative" foundation) and cooperates with RAABE as a partner in the presentation of good practices in preschool education. All this contributes to the increase of her authority among pedagogical specialists in practice and the discovery of a professionally prepared audience for the sharing of her scientific research. I can also add here with satisfaction the participation of the candidate in 11 national initiatives and one international forum for the improvement of her own qualification, which she shares with an audience of colleges in higher education structures.

*Scientific contributions to the publication activity of ch. Assistant Professor Yordanka Delcheva Ilieva, PhD.*

I accept the contributions identified by the candidate in the scientific production of ch. Assistant Professor Yordanka Delcheva Ilieva, PhD among whom I emphasize:

*First: Contributions of a theoretical-research nature:*

1. On the basis of theoretical research, classic pedagogical and modern methodological models for teaching children, a basic concept for the content and forms of organization of the educational core "Measurement" in the "Mathematics" direction for preschool education is presented.
2. An author's theoretical model was developed "If I measure I know - I can learn everything myself!" The problem of integrating mathematics with construction, music, visual arts, the surrounding world, the Bulgarian language and physical culture in kindergarten was theoretically examined and clarified.
3. Models of mathematical competence of 6 - 7-year-old children were constructed based on a comparative analysis of the concepts of competence, key competences and mathematical competence.
4. The interdisciplinary STEAM approach is comparatively studied - the role of the teacher in STEAM education is systematized and a new definition of cooperation with parents is proposed for the application of the interdisciplinary STEAM approach in the mathematics education of 6 - 7-year-old children.
5. A theoretical basis for productive educational technologies, the theory of multiple intelligences, constructivist learning models and methods has been developed, and educational technologies in the field of "Mathematics" in kindergarten have been systematized.

*Second: Contributions of an experimental-applied nature:*

1. A content-technological model "Variability of quantities" was developed and tested.  
B1. a new element was introduced in the "Measurement" core, the concept of "area" (face of a plane figure), enriching the educational content of mathematics in preschool age.

2. Author's alternative organizational forms in an innovative educational environment were developed and tested - author's model STEAM workshop "Mathematical Kaleidoscope" for 6-7-year-old children, the workshop "To measure I know - I can learn everything myself!", author's game technologies and scenarios with application of the STEAM approach.

3. Developed and approved Annual distribution "I know how to measure - I can learn everything myself!" for integrated mathematical learning in Core "Measurement" in kindergarten (table model for preparatory groups in kindergarten).

4. Didactic tools (original and modified) and development materials of Montessori, Cuisiner, Nikitin, Denesh, etc. were developed.

In these contributions, the emphasis is placed on the teacher and his professional role in the long-term perspective of improving the pedagogical interaction in the first seven years. This determines the importance of the publication activity of the candidate for the methodical training of the children's teacher as a factor for the educational policy. The active use of modern model and innovative technologies approved by the author in the interaction in mathematics in kindergarten, related to the assessment of the achievements of students and adolescents, is confirmed.

After studying the publications provided for the competition, I believe that the formulated scientific contributions are largely contained in the presented materials. They present Ch. Assistant Professor Yordanka Delcheva Ilieva, Ph.D., as a competent and reliable scientific researcher in the field of mathematics teaching methodology in the educational institution.

As a recommendation, I would suggest ch. assistant professor Yordanka Delcheva Ilieva to think about a specialized course (probably in the master's programs) on the problems of the methodology of teaching mathematics in institutions.

**CONCLUSION:** The educational activity and the scientific production presented for participation in the competition from Ch. Assistant Professor Yordanka Delcheva Ilieva, Ph.D., are proof that all the requirements of ZRASRB have been met for the occupation of the academic position of "associate professor" in professional direction 1.3. Pedagogy of teaching "Methodology of teaching mathematics in preschool age"

I give a positive opinion and recommend the respected scientific jury to choose Ch. assistant professor Yordanka Delcheva Ilieva, PhD, for associate professor according to the announced competition.

Sofia, 12.02. 2024

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Prepared the

(Assoc. Professor Magdalena Gyurova-Stoyanova, PhD