

R E V I E W

By

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Of Scientific Works Presented**

**By Associate Professor Vladimira Stefanova Angelova, PhD,
In Relation with Participation in a Contest for Occupying the Academic Position of
“Professor” at Plovdiv University “Paisii Hilendarski”
Under Higher Education Area: 1. Pedagogical Sciences,
Professional Field: 1.3. Pedagogy of Teaching
(Methodology of Teaching Primary School Mathematics)
Announced in State Gazette Issue № 31 of 12.04.2019**

With order № R 33 – 3697 of 10.07.2019 of the Rector of Plovdiv University ‘Paisii Hilendarski’ (PU) I have been appointed as a member of the scientific jury and a reviewer in a contest for occupying the academic position of **“professor”** at PU under higher education area: 1. Pedagogical Sciences, Professional Field: 1.3. Pedagogy of Teaching (Methodology of Teaching Primary School Mathematics) announced for the needs of the Department of Primary School Pedagogy of the Faculty of Pedagogy.

Only one candidate has submitted documents for participation in the contest announced: associate professor Vladimira Stefanova Angelova, PhD from PU “Paisii Hilendarski”.

1. Summary of the presented materials

The set of materials submitted by associate professor Vladimira Stefanova Angelova, PhD in paper and electronic form complies with the Regulations on the Academic Staff Development of PU and includes the following documents:

- application form to the Rector for admission to the contest;
- CV in EU format;
- diplomas for MSc. educational-qualification degree;
- diploma for PhD educational and scientific degree;
- certificate for acquiring the academic position “associate professor”;
- list of scientific works and their copies;
- reference on complying with the minimum national requirements;
- declaration regarding enclosed documents’ originality and authenticity;
- annotations of the scientific publications, including self-assessment of the contributions of the candidate;
- work record certificate;
- documents regarding educational work;

- documents regarding scientific-research work;
- other documents.

2. Brief biographical information about the candidate

Vladimira Stefanova Angelova was born in Assenovgrad on 24th, October, 1968. In 1992 she graduated from PU “Paisii Hilendarski” with Master specialty “Mathematics and Computer Sciences”. In 1992 – 1993 she did two postgraduate qualification courses and was awarded second qualification degree. In 2001 – 2006 she did a PhD programme Methodology of Teaching for acquiring the educational degree “doctor”. Throughout the years Angelova has been developing her professional skills and has participated in many courses with diverse content as for example – Language Courses (English); Assessment Standards; Implementation of Electronic Didactic Resources, etc.

From 1992 to 1995 Angelova worked as Mathematics and Informatics teacher in a municipality center for students’ technical and scientific arts in Assenovgrad. She started her career at PU ‘Paisii Hilendarski’ in 1996 and since then has been gradually promoted to assistant, senior assistant in 1998, assistant professor in 2000 and assistant professor in 2014.

3. Summary characteristic of candidate’s activities

Assessment of the candidate’s pedagogical and educational activity

Associate professor Vladimira Angelova, PhD has an over 25-year-long professional experience. She has been reading lectures, tutorials and laboratory classes in disciplines such as: “Methodology of Teaching Mathematics”, “Mathematic Activities with Talented and Gifted Students”, “Multimedia in Teaching Mathematics”, “Teaching Mathematical Modelling in Mathematics Education”; she has been supervising and assessing students’ pedagogical practicum and undergraduate pedagogical practicum, etc. Associate professor Vladimira Angelova, PhD has been interested in the application of ICT in education and uses various modern tools and technologies in her classes with the students from the programmes “Primary School Pedagogy”, “Primary School Pedagogy in a Foreign Language”, “Kindergarten and Primary School Pedagogy”. Associate professor Vladimira Angelova, PhD reads both to Bachelor and Master educational-qualification degrees. Associate professor Vladimira Angelova, PhD has published many resource books and methodological works that she uses in her educational work with students.

Assessment of the candidate’s scientific- research activity

The candidate submitted 18 scientific papers – 2 monographs, 1 studio research paper, 10 scientific articles in Bulgarian language, 5 scientific articles in English, 1 resource book for university students, 4 methodological handbooks for teachers, 8 mathematics textbooks for primary school students, and 13 mathematics activity books for primary school students.

18 scientific works have been admitted for review and assessment (in 16 of which the candidate is an independent author and in 2 of them she is in co-authorship) and they were published after the materials used for the PhD educational-scientific degree defense. She has

also published 26 textbooks and resource books and has taken part in 5 national scientific-research projects and 1 international project.

Associate professor Vladimira Angelova, PhD has participated in 16 national and 4 international forums.

The scientific works submitted by the candidate relate mainly to methodological problems directed towards teaching mathematics in primary school. As the candidate herself has suggested the presented content and ideas in the submitted scientific production can be classified in the following seven thematic areas:

1. Scientific research and papers related to the creation of technologies for mastering word problems in primary school mathematics: [1; 8; 14; 15].
2. Scientific research and papers related to the creation of technologies for understanding basic concepts from sphere of competencies: Geometric shapes and bodies and Measurement in primary school education: [3; 4].
3. Scientific research and papers related to the improvement of the methodology for teaching the algorithms for written and mental calculations with natural numbers and basic properties of the arithmetic operations: [6; 7; 9; 11; 12; 13].
4. Scientific research and papers related to the creation of technologies for mastering the skills necessary for solving non-standard problems in primary school mathematics: [2; 10; 16; 17; 18].
5. Scientific papers related to the use of information and communication technologies in education and the creation of electronic mathematics textbooks for students from 1st to 4th grade: [5; 25; 27; 29; 31].
6. Developing and creating mathematics textbooks for students from 1st to 4th grade of primary school: [24; 26; 28; 30], and methodological handbooks for mathematics teachers working in primary schools: [20; 21; 22; 23].
7. Developing and creating resource books for university students [19] and activity books for primary school students [32; 33; 34; 35; 36; 37; 38; 39; 40; 41; 42; 43; 44].

Associate professor PhD Vladimira Angelova's main contributions can be summarized as follows:

- Scientific Research:
 - Development of innovative typology of word problems in primary school mathematics – characteristics, didactic technology, good examples from practice (these contributions are related to the first thematic area)
- Scientific and Applied Research
 - Implementation of methodological technologies for teaching geometric shape, perimeter of a triangle, a rectangle, and a square, area of a rectangle and the units of measurement for area, multiplication and division, addition and subtraction of natural numbers (these contributions are related to the second and third thematic areas)

- Implementing technologies for teaching that develop students' logical-mathematical thinking and their skills for solving non-standard types of problems (mainly Diophantine equations and systems of Diophantine equation) (these contributions are related to the fourth thematic area)
 - The educational platform mozaBook is presented as well as its potential for creating electronic educational content in mathematics. Original electronic educational resources are developed and they are integrated into the educational content and provide effective education in a digital environment (these contributions are related to the fifth thematic area)
- Applied Research
- Mathematics textbooks, educational workbooks and methodological handbooks are developed, published and distributed at national level (these contributions are related to the sixth and seventh thematic areas)

The submitted scientific works are characterized with strong applicability and the presented good examples from the practice as well as the presented technologies can be useful for university students, teachers and textbook authors.

The monograph “Pedagogical technology for teaching word problems in primary school” published in 2019 by Plovdiv University “Paisii Hilendarski” Publishing House examines some topics from the area of modelling of word problems designed for primary school students. The theoretical background of word problems helps Angelova to design an innovative technological variation for teaching them. Some strategies are suggested for comprehending, planning and solving word problems.

The candidate has presented a reference on 31 citations. All these citations are by Bulgarian authors and are in pedagogical journals and books. The presented citations are accumulated in the period 2018 – 2019.

The quantity of the presented materials complies with and even exceeds the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria.

4. Assessment of the candidate's personal contribution

Undoubtedly the presented scientific work is original and authentic and the co-written works have a clearly differentiated contribution.

5. Critical remarks and recommendations

The scientific production submitted for participation in the contest does not contain noticeable imperfections that can minimize its value.

As a recommendation I can note that the candidate can expand her participation in international educational projects and can present her achievements abroad more actively.

6. Personal impression

I know associate professor Vladimira Angelova, PhD as an acknowledged professional in her field ready to help and share her expertise with colleagues.

CONCLUSION

The documents and materials presented by associate professor Vladimira Angelova, PhD comply with all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations on its implementation, and the respective PU Paisii Hilendarski Regulations.

The candidate in the contest has presented a significant number of scientific materials, published after the materials used for the PhD educational-scientific degree defense and the contest for acquiring the academic position of 'associate professor'. The candidate's work contains original scientific and applied contributions that have been granted recognition and a considerable part of them are published in scientific journals and editions by national and international academic publishers. The candidate's theoretical elaborations have practical applicability and part of the work is closely directed to teaching and education. The scientific and lecturer qualification of associate professor Vladimira Angelova, PhD is undeniable.

The candidate **complies with** the minimum national requirements for occupying the academic position of "professor" in Professional Field 1.3.

I have no doubts for plagiarism in the submitted scientific work.

After reviewing the materials and scientific works presented for the contest and analyzing their significance and the scientific, scientific-applied and applied contributions they contain I find it justified to give my positive assessment and to recommend to the Scientific Jury to prepare a report-proposal to the Faculty of Pedagogy Council to appoint associate professor Vladimira Stefanova Angelova, PhD to the academic position "**professor**" at PU Paisii Hilendarski under Professional Field 1.3. Pedagogy of Teaching (Methodology of Teaching Primary School Mathematics).

19.07.2019

Reviewer:
/Prof. DSc. Natalia Pavlova/