

R E V I E W

in relation to a competition for the academic position “Associate Professor” in the Field of higher education 1. Pedagogical sciences; Professional field 1.3. Pedagogy of Mathematics and Information Technology in Primary Education, for the needs of Sofia University “St. Kliment Ohridski”, Faculty of Educational Studies and the Arts

1. General presentation of the procedure

This review is prepared in accordance with Order № ПД 38-6/09.01.2020 of the Rector of Sofia University “St. Kliment Ohridski” – Prof. Dr. Habil. Anastas Gerdjikov, in compliance with Art. 7 from Regulations on the Terms and Conditions for Acquiring Scientific Degrees and Occupying Academic Positions in Sofia University “St. Kliment Ohridski” and on the basis of the corresponding Decision №11/17.12.2019 of the Faculty Council of Faculty of Educational Studies and the Arts (FESA). In SG, issue 93 / 26.11.2019 a competition for the needs of SU “St. Kliment Ohridski”, FESA, is announced in relation to the occupation of academic position “Associate Professor” in the Field of higher education 1. Pedagogical sciences; Professional field 1.3. Pedagogy of Mathematics and Information Technology in Primary Education. The only candidate in the competition is a lecturer, Ch. Assist. Prof. Dr. Lyubka Krasteva Aleksieva from SU “St. Kliment Ohridski”. No procedure irregularities were identified. As a member of the Scientific Jury I have received an access to the documents of Ch. Asst. Prof. Dr. Lyubka Krasteva Aleksieva, which include:

1. CV
2. Higher Education Degree Diploma
3. Doctoral Degree Diploma
4. Document for academic position
5. Certificate of professional experience
6. Lists of all publications
7. List of publications presented for the competition
8. Reference from SU Author system
9. Reference for the implementation of the minimum national requirements for the corresponding professional field with attached points table
10. Citations reference
11. Reference for the original scientific results and achievements
12. Reference for the indicators of art. 112, para. 2 with relevant evidences
13. Copies of scientific papers presented for the application
14. Abstracts of the reviewed papers in Bulgarian and English languages
15. Copy of the announcement in the State Gazette.

2. General presentation of the candidate

The documents and materials of the only candidate in the competition have been carefully presented and enable an objective and complete evaluation in accordance with the requirements of the National Acts (3PACPE and the Regulations for its implementation), as well as the Regulations of SU and FESA. Ch. Asst. Prof. Dr. Lyubka Aleksieva graduated from the National Professional High School for Polygraphy and Photography, Sofia in 2000 and holds a specialist degree (level 5, photographer). From 2001 to 2006 she studied "Primary school pedagogy with English as a foreign language" at Sofia University "St. Kl. Ohridski" and obtained a Bachelor's Degree (Level 6) - Pedagogue, Primary and Foreign Language (English) Teacher. In the period 2006-2008 she obtained a Master's Degree (Level 7) in "Information Technology in Primary School" (Master- Pedagogue) as well at Sofia University. Since the beginning of 2010 she was a full-time doctoral student at SU on methodology of mathematics education in primary school, and in November 2011 she became a part-time doctoral student due to her assignment of the academic position "Assistant". She was granted the right of defence on 11.07.2013. From January 2013 to April 2013 she studied Methods of Pedagogical Research at the Doctoral school of Institute of Education, University of London. For a short period of 3 months, from January to March in 2007, Dr. Lyubka Aleksieva was a primary teacher at 41 Primary School "P. Evtimii", Sofia, and in the period 2008–2010 she was a Chief State Property Expert at the TSV SE, Sofia. In the period 2010 - 2011 she was a lecturer, part-time assistant professor in Methodology of mathematics education, in the period 2011 - 2015 she was a lecturer, assistant professor in Methodology of information technology in education, and since 2015 she has been a lecturer, chief assistant professor in Pedagogy of Education in Mathematics and Information Technology. In 2014, she acquired a professional qualification "specialist in design and delivery of online education". In the same year after completing her part-time PhD at the Department of Primary Education – Faculty of Primary and Pre-school Education (now FESA) at Sofia University "St. Kl. Ohridski", she successfully defended her dissertation on the topic "Instructional potential of educational software in mathematics education of second grade students" for obtaining the educational and scientific degree "Doctor" in Professional field 1.3. Pedagogy of Education in....., Doctoral Program "Methodology of Mathematics Primary Education", under the scientific supervision of Prof. Dr. Zdravko Lalchev. Ch. Asst. Prof. Dr. Lyubka Aleksieva has a deep knowledge of English and German, impressive computer skills as well as musical and poetic skills (she is a winner of the National Competition for Young Pianists in 1992 and has participated in various poetry competitions). She is a member of the Expert Council of the Centre for Distance Education at Sofia University.

3. Description of candidate's scientific production

The scientific production of Ch. Asst. Prof. Dr. Lyubka Aleksieva is rich and diverse. From a total of 58 publications, including 4 textbooks and 17 handbooks, for this competition she presented one monography, one book based on her dissertation for a doctorate degree and 18 scientific articles and reports, 10 of which are in English and have been published in scientific journals, referenced and indexed in world-famous scientific information databases (4) and in scientific journals, referenced and indexed in other scientific information databases (6), as well as

6 papers in Bulgarian in non-refereed peer-reviewed journals or in edited volumes. Two of the publications are studies in Bulgarian. The monograph, the dissertation book and the two studies are independent, in 6 of the other publications Chief Assistant Professor Lyubka Aleksieva is the first author, in 6 she is the second and in 4 she is the third author.

The monography is dedicated to the results of an empirical study of 500 teachers from all over the country regarding the attitudes, experiences and competencies of primary teachers in Bulgaria to work with electronic resources. The dissertation book includes an experimental study of the effectiveness of implementation of educational multimedia in education, and also an author's model for studying tabular multiplication and division using educational multimedia is proposed based on empirical research and relevant theoretical review. An analysis in one of the studies revealed that students enjoyed multimedia lessons, better understood the learning content taught through multimedia, and preferred educational multimedia to be part of their education in the future. The second study examines the didactic and mathematical foundations of tabular multiplication and division, and based on interviews with primary teachers, the need for updating the learning content of the second grade (8-9-year-old students) mathematics by enriching it with electronic resources is justified.

In a co-authored paper in the renowned *British Journal of Educational Technology*, Ch. Asst. Prof. Dr. Lyubka Aleksieva explores some technological, organisational and pedagogical issues related to accessibility, security, privacy and e-assessment design and feedback. The concerns and practices of 108 teaching staff who used the TeSLA—Adaptive Trust-based e-Assessment System were examined. In a co-authored paper in the *Journal of Academic Ethics* (also renowned), she presents a case study conducted at Sofia University that describes the relationship between two developments, firstly an expanding involvement with online learning and e-assessment, and secondly the development of institutional approaches to academic integrity.

Two of the publications are reports from AIP conference and are included in the conference proceedings, which have been referenced in SCOPUS and Web of Science. In one of them the authors, one of which is Ch. Asst. Prof. Dr. Lyubka Aleksieva, presents the attitudes and perspectives of 590 undergraduate students of the Sofia University towards online learning and distance education. The interrelations between students' attitudes and their demographics, the experience of using the technologies in everyday life and the experience of using technologies in an educational context are analysed. The second report examines the impact of technology on cheating and plagiarism from the perspective of teachers and students from Sofia University related to both aspects of facilitation and prevention, i. e. control of such behaviour. The results of two online surveys with 100 academic staff and 239 bachelor and master degree students from Sofia University are described and analysed.

Other publications are dedicated to a variety of studies: a survey of the views of 452 teachers on the use of e-resources in primary education; a study on the use of student's authentication and authorship checking system developed by a project funded by the European Union's Horizon 2020 ICT program - TeSLA, and the way it affects students' trust in online assessment; analysis of data from a systematic research of views and attitudes towards e-assessment and the use of software for authentication and plagiarism detection of disabled and non-disabled students of Sofia University; identifying how the level of experience in online education and assessment

impacts on the perspectives that teachers and students have with respect to the introduction of e-assessment and in particular the challenges related to the potential increase in cheating and plagiarism, and exploring the ideas the students and teachers have on prevention and reduction of cheating and plagiarism in assessment through technology; analysis of the results of online survey which was conducted during the summer term of academic year 2018-2019 and was completed by 166 students-prospective primary teachers from bachelor and master degree programs at FESA (SU), Bulgaria; presentation of part of the results of the third phase of a research project "Exploration of learning outcomes in mathematics and science education in primary school", funded by Research Fund of Sofia University; presentation of an author's model of blended learning called a "Virtual Guest Teacher" and the results of its pilot implementation in kindergarten during the school year 2016-2017; analysis of the applicability of Web Content Accessibility Guidelines (WCAG) 2.0 concerning web content used for teaching in synchronous virtual learning environment; description of the process of implementation of quality standard Epprobate in the design of the university e-course "ICT in primary education", intended for students in Master Degree Programmes of Faculty of Primary and Preschool Education, Sofia University; research on the competences of university students in Primary Education to teach in a synchronous virtual classroom; presentation of the specifics and practices in integrating ICT in Bulgarian primary school; study on different approaches for developing the European and national policies in the field of ICT in education.

4. Presentation of candidate's teaching

As an Assistant Professor in Methodology of Information Technology Education and Teaching Practice at FPPSE, and later as a Chief Assistant Professor in the renamed FESA of Sofia University, Dr. Lyubka Aleksieva has taught various disciplines in accordance with the curriculum, some of which she is still teaching: Methodology of information technology education, Practical exercises in didactics of mathematics, Information technologies in education, Fundamentals of Primary Education, Lessons Observations, Didactics of mathematics, Didactics of information technology, Information and communication technologies and work in digital environment, Modern multimedia technologies, Multimedia in mathematics education. Ch. Asst. Prof. Dr. Lyubka Aleksieva is leader in four disciplines:

- The compulsory discipline "Didactics of Mathematics" which is taught in the Bachelor's programmes in the specialties Preschool and Primary Education, Primary Education with Foreign Language as well as in the master's programmes in the specialties Primary Education for graduates with teaching qualifications and Primary Education for graduates of other specialties. Dr. Aleksieva is a leader in the course "Didactics of Mathematics" for part-time students in Bachelor Programme Preschool and Primary Education and an assistant in the other programmes;
- The course "Information and Communication Technologies and Work in the Digital Environment" is compulsory for the specialty Physical Education and Sports, Bachelor's Degree Programme of the FESA, and it is conducted in a blended mode, with an electronic course, which is updated annually;

- The discipline "Modern Multimedia Technologies" is compulsory and is taught in a blended mode in the Master's degree programme in the specialty Primary Education for graduates with a teaching qualification, with an electronic course, which is updated annually and aims to support the work of students in extra-curricular hours;
- The course "Multimedia in Mathematics Education" is optional and is taught in the Bachelor's programmes in the specialties Preschool and Primary Education, Primary Education with Foreign Language as well as in the master's programme in the specialties Primary Education for graduates with teaching qualifications.

In addition to the teaching activity of Ch. Asst. Prof. Dr. Lyubka Aleksieva it should be noted that she is an author of approved by the Ministry of Education and Science mathematics textbook sets for students from 1st to 4th grade, including two handbooks, a teacher's book and handbook for additional optional mathematics classes for each grade. These textbook sets have been distributed in the school network since 2016.

5. Presentation of candidate's scientific and applied scientific activity

Ch. Asst. Prof Dr Lyubka Aleksieva has been participating in 4 international and 11 national projects. In most of them, she is a researcher, who is as well performing the roles of coordinator, facilitator, trainer and more. The following projects will be noted:

- International project "PARENTSTEM: STEM for Pre-Schoolers and their Families", which is under the Erasmus + program and is for the period 2018-2021;
- International project "TeSLA - An Adaptive Trust-based e-assessment System for Learning", which is under the EU programme "Horizon 2020 Research and Innovation Framework Programme" and is for the period 2016-2019;
- International project "Hands-On ICT: Learn, Practice, Teach Creativity and ICT" under the Lifelong Learning Program (2014-2015);
- International project "Application of ICT in education - from the university to the school based on Bulgarian and Portuguese experience" which lasts from 2013 to 2014.

Ch. Asst. Prof. Dr. Lyubka Aleksieva was a coordinator and a supervisor of the practical training of students, organizing and providing observations, ongoing teaching practice and pre-graduate teaching practice of students in the specialties Pre- and Primary School Education (full-time and part-time education), Primary Education with a Foreign Language and Physical Education. As a person in charge for contracting with the school organizations and teachers-supervisors of the Department of Primary Education, she has been communicating with the principals and teachers of different schools in the capital of Bulgaria, supporting the process of contracting between organizations for the practical training of students at FESA and SU. She has led practical sessions at school, contributing to the development of students' competencies for their future profession by supporting them in observing, performing and evaluating mathematics lessons in a central metropolitan school.

CONCLUSION

From all of the above it is obvious that Ch. Asst. Prof. Dr. Lyubka Krasteva Aleksieva is a proven specialist in methodology of mathematics and information technologies in primary edu-

cation with an impressive experience in this field. Her scientific production complies with the minimum national requirements under Art. 2b of ЗПАСРБ for the scientific field 1. Pedagogical Sciences, 1.3 Pedagogy of Mathematics and Information Technology in Primary Education. Her works have been repeatedly cited, also by foreign authors. There is no reason to believe that they are not her personal work, which excludes a presence of plagiarism. This makes me conclude that her scientific, scientific-applied, teaching activity and her qualities fulfil the requirements of the ЗПАСРБ, the Regulations its implementation, as well as the Regulations of Sofia University “St. Kliment Ohridski” for the academic staff development required to the candidates for the academic position “Associate Professor”. Therefore, **my conclusion is positive about the election of “Associate Professor”** and I would like to propose to the honourable members of the Scientific Jury to support this application and to submit a proposal to the Faculty Council of the Faculty of Educational Sciences and the Arts at Sofia University “St. Kl. Ohridski” to elect Ch. Asst. Prof. Dr. Lyubka Krasteva Aleksieva for **“Associate Professor” in Pedagogy of Mathematics and Information Technology in Primary Education**, with the strong believe that she deserves it.

Sofia, 20 March 2020

Reviewer:

(Prof. Dr. Habil Sava Grozdev)