ABSTRACTS

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Regarding: The application of the candidate for the academic position of ASSOCIATE PROFESSOR according to the Bulgarian legislation in the Area of Higher Education 1. Pedagogical sciences, 1.3. Pedagogy of … (Methodology of teaching mathematics at primary school)

Monograph

Aleksieva, K. Preparing seven-year-olds for classes of Mathematcs at school. Shumen, *Konstantin Preslavsky* University Press, 2020, 230 pp., ISBN 978-619-201-369-1 (in Bulgarian)

The monographic work presents the results of many years of theoretical and experimental research of the author on the problem of mathematical training of children for school. The emphasis is on the current status, problems, dynamics and trends in the development of this process. The need for this scientific research is dictated by the changes in the legal framework and the educational documentation, regulating new requirements for education, and in particular with regard to the content, goals and objectives of teaching Mathematics in transition: pre-school – primary school.

The study of children's mathematical training was carried out with the author's research toolkit, developed in accordance with the State Educational Standards (SES) for educational content, the age of enrollment of children in the first grade, the traditions and system of pre-school education and the normatively established practice for diagnostics.

The monograph presents methodological ideas for discovering, tracking and developing the mathematical abilities of children with a keen interest in Mathematics.

The content of the monograph is structured in three chapters, conclusions and annexes. The research was carried out in three stages over a period of five school years: I. Questionnaire survey of the knowledge, skills and attitudes of 6-7-year-old children according to the traditional methodology; II. Diagnostic examination of the knowledge, skills and competences of first-graders applying author's methodology; III. Studying the achievements of the children with a keen interest in mathematics.

The analysis traces the dynamics of the achievements of first-graders and children with a keen interest in Mathematics for the period from the academic year 2016/2017 to 2019/2020. The results of the three studies are summarized and published.

Books

Aleksieva, K. A methodological guide for seminars and practical exercises in teaching Mathematics at elementary school. *Konstantin Preslavsky* University Press, ISBN 978-619-201-328-8, Shumen, 2019, 179 pp. (in Bulgarian)

The methodological guide for seminars and practical exercises in teaching Mathematics in elementary school is intended for BA and MA students of the majors Pre-school and Primary School Pedagogy and Primary School Pedagogy and a Foreign Language at *Konstantin Preslavsky* University of Shumen. It is consistent with the syllabus of the course "Methodology of Teaching Mathematics" in the curricula of these majors.

The proposed tasks are directly related to the updated content of Mathematics, regulated in the SES for general education and the curricula for grades 1-4 and aim at improving the quality of methodological training of future primary teachers.

The guide presents the theoretical developments related to the preliminary training and organization of the mathematical learning process. At the beginning of each topic are outlined the main methodological issues and educational tasks that must be accomplished through the specific curriculum content. Practical tasks (both reproductive and creative) are provided for group and individual work, exemplary individual work (tests) and instructions for their implementation. For each of the 13 topics, tasks and exercises are assigned from the specific content of the existing course books.

Studies

Aleksieva, K. Alexander G. Madzharov (1929–2001) – life and creative work. Shumen, *Konstantin Preslavsky* University Press, Collected Papers "Contemporary Aspects of Pedagogical Communication", pp. 84–137, 2019, ISBN 978-619-201-342-4 (in Bulgarian)

The study is dedicated to the 90th anniversary of A. Madzharov and presents his life and professional achievements, his scientific and pedagogical work. The author shows the main developments and works of the scholar in three directions: methodology of teaching Mathematics; scientific foundations of Pedagogy; history of Pedagogical studies and education. Madzharov's views on the role and place of primary school in the educational system, namely the nature and functions of primary education and primary school are analyzed; the beginning of compulsory training; the pre-school group; the pre-school class; the status, training and functions of primary teachers – problems that are still relevant today.

Articles

1. Aleksieva, K. Computational tasks in text form in the mathematics curriculum in primary classes. SocioBrains, www.sociobrains.com, Bulgaria, Issue 65, January 2020, pp. 30-42, 2020, ISSN 2367-5721 (online) (in Bulgarian)

A special place in the mathematics curricula for grades 1-4 is devoted to the ability to solve text problems, as well as the ability to model situations (compose text problems), to extract information from different sources and use it, transformation of text problems, applying problem solving in practice, etc. This is reflected in the objectives set out in the syllabus for each grade, as well as in the content covered in *Modeling*. The article provides a detailed analysis of the author's decisions regarding text math problems and creative exercises related to text math problems included in the current course books. An emphasis is placed on good methodological decisions of the authors regarding the tasks and exercises for supplementing, transforming and compiling text math problems by the students using given information, independently collecting numerical information from various sources (reference books, encyclopedias, information boards, road maps, timetables, Collected Papers of the Travelling Seminar "Innovations in education", price lists, etc.) included in the different course books.

2. Aleksieva, K. Examining the level of mathematical knowledge and skills of first graders (diagnostic toolkit). Faber Publishing, 2019, pp. 174-180, ISBN 978-619-00-0996 (in Bulgarian)

The article presents a diagnostic toolkit developed by the author for testing the mathematical knowledge, skills and attitudes of first graders. Eight indicators are identified: 1. Children's knowledge of quantities, numbers and ratios; 2. Knowledge of numbers and skills for writing them; 3. Comparing quantities and numbers; 4. Knowledge of arithmetic addition and subtraction; 5.

Knowledge of geometric shapes; 6. Knowledge and skills about spatial relations; 7. Knowledge and skills of measurement and units of measurement; 8. Solving logical problems.

The proposed diagnostic test to study the mathematical knowledge and skills of 6-7-year-olds was approbated in real learning environment in May (2016/2017), at the end of the pre-school group and at the beginning of the first grade in September / October, 2017/18 and 2018/19 school years.

3. Aleksieva, K. Mathematical training of six–seven-year-old children for school within the context of State Educational Standards. SocioBrains, www.sociobrains.com, Issue 57, May 2019, pp. 77-84, 2019, ISSN 2367-5721 (online) (in Bulgarian)

The article presents a comparative analysis of the educational content in the Mathematics curricula for the pre-school group of 2003 and 2016 in the section of expected learning outcomes. In our opinion, regarding the enriched content in the current curricula for the first grade, in accordance with the new tendencies in the development of primary education and the attainment of competences: mathematical knowledge, skills and attitudes, it is necessary that the mathematical training in the pre-school group is provided with a more varied and rich content, proven to be achievable by 6-7-year olds. We recommend improving good practices to encourage the cognitive activity of children.

4. Aleksieva, K. Analysis of participants' achievements in the 13th Little Mathematician competition – Shumen, 2019. Annual of *Konstantin Preslavsky* University of Shumen – 35 anniversary of Pedagogical Faculty, Volume XXIII D, *Konstantin Preslavsky* University Press, 2019, pp. 467–477, ISSN 1314-6769 (in Bulgarian)

The article presents six tasks developed by the author from the math educational sections: "Quantitative ratios", "Measurements", "Spatial relations", "Geometric figures and shapes" for the pre-school group. The math problems are consistent with the content of the currently studied curriculum and are thematically integrated. Fun games, logic puzzles, matching, similarities and differences, drawing symmetrical elements of figures in a square grid, etc. are also included. The study analyses the results of the participants' achievements and comments on the difficulties and possibilities for stimulating mathematical cognitive activity.

5. Aleksieva, K. Results from the achievements of children participating in the Math Festival. Annual of *Konstantin Preslavsky* University of Shumen, Volume XXII D, *Konstantin Preslavsky* University Press, 2018, pp. 316–332, ISSN 1314-6769 (in Bulgarian)

The article presents the achievements of the children who participated in the 12th Math Festival. The developed variants include math problems from the educational content of "Quantitative ratios", "Measurements", "Spatial relations", "Temporal relations", "Geometric figures and shapes" for the pre-school group. Little mathematicians show knowledge and skills to add and subtract numbers, to compare, to measure, to draw in a square grid, to orient themselves in two-dimensional space. The author makes a comparative analysis of the results achieved by the participants in the 10th, 11th and 12th Math Festivals held in the period 2016 - 2018 in Shumen. She points out typical mistakes and difficulties encountered by the children and seeks ways of eliminate them.

6. Aleksieva, К. A study of the mathematical knowledge and skills of children who have finished the pre-school group. Collected Papers “Innovations in education", Veliko Turnovo, Faber Publishing, 2018, pp. 149–162, ISBN 978-619-00-0783-8 (in Bulgarian)

The article deals with the question of testing the mathematical knowledge and skills of children in the pre-school group. We present a modified questionnaire for the diagnosis of knowledge and skills in the field of Mathematics, according to our conditions, goals and objectives. The questionnaire includes seven indicators: counting and counting down; counting of real and depicted objects; knowledge of numbers and skills for writing them; knowledge of quantities and numbers; problem solving skills; knowledge of some geometric shapes; knowledge and skills for orientation in space. Individual cards have been developed for maximum convenience of the educator. The study makes a comparative analysis of the achievements of present-day 6-7-year-old children with similar age groups 50 years ago.

7. Aleksieva, К. Mathematical literacy and competence during the transition from kindergarten to (primary) school. www.sociobrains.com, Issue 40, December 2017, pp. 64-74, 2017, ISSN 2367-5721 (online) (in Bulgarian)

The article gives definitions of the notions of literacy, mathematical literacy, mathematical competence, preparedness for school, mathematical training and their projection in the transition from kindergarten to school. We formulate the main activities that define mathematical literacy and illustrate the process of showing mathematical competences. The study reveals some possibilities of how traditional teaching and assessment practices can be interpreted in the spirit of modern understanding of a mathematically literate person. We present the results of the diagnostics (baseline) of 35 children from a pre-school group in Varna.

8. Aleksieva, К. Learning some elementary mathematical concepts in the first grade at a school for children with special needs. Collected Papers of the Travelling Seminar “Innovations in education", Faculty of Education, Veliko Turnovo, Faber Publishing, 2015, pp. 130–135, ISBN 978-619-00-0265-9 (in Bulgarian)

The article deals with the general and special questions regarding the formation of initial mathematical concepts in children. Some didactic and psychological problems have been specified, including: the role of teaching in the construction of mathematical concepts; the nature of mathematical concepts, the concrete and abstract thinking; cognitive processes (analysis, synthesis, comparison, summary, abstraction, concretization) in the formation of concepts. A methodological system is proposed for introducing mathematical concepts according to the potential possibilities and psychophysical features of children’s development.

9. Aleksieva, К. Activities with objects in teaching Mathematics to students with intellectual disabilities. Annual of *Konstantin Preslavsky* University of Shumen, Volume XIX D, Faculty of Education, Konstantin Preslavsky University Press, 2015, pp. 530-536, ISSN 1314–6769 (in Bulgarian)

In the article we study *activity* as a philosophical category reflecting the interaction of the personality with the world. We characterize the external – practical, perceptual and the internal (mental) activity as a system of mental operations, which arises from the external in the way of internalization. Special attention is given to the nature, specificity, diversity and functions of the

activities with objects in the education of children with intellectual disabilities. A methodological system of purposeful activities, exercises, manipulations in the process of teaching Mathematics is proposed in order to activate and involve the students in the practical activities with objects.

10. Aleksieva, K. Specifics in acquiring mathematical knowledge by students with mental disorder. Annual of *Konstantin Preslavsky* University of Shumen, Volume XVIII D, Shumen, *Konstantin Preslavsky* University Press, 2014, pp. 331–336, ISSN 1314–6769 (in Bulgarian)

The article reveals the nature and structure of the abilities that are acquired and revealed in and through the activity. We clarify the basic characteristics and components of mathematical abilities as a feature of mental activity. The focus of study are methodological developments on the problem of acquiring and mastering mathematical knowledge and skills by students with intellectual disorder in M. Perovas works. The difficulties and specifics of acquiring the different sections of Mathematics are analyzed in detail. We propose methodological solutions to overcome them.

11. Aleksieva, K. Framing the time concept in children with intellectual disorder. Collected Papers of the Travelling Seminar "Innovations in Education", *Konstantin Preslavsky* University of Shumen, Faculty of Education, Faber Publishing, Veliko Turnovo, 2014, pp. 156-160, ISBN 978-619-00-0092-1 (in Bulgarian)

The article proposes methodological solutions for framing the time concept in children with intellectual disorder. We study the process of framing the time concept from the pre-school group to the fourth grade of the elementary school. The formation of time perception in children begins late and has its own specificity. Acquiring temporal ideas is realized through children's practical tasks. Therefore, in the course of special training, it is necessary to organize activities aimed at determining the duration and sequence of different phenomena and life events, measuring and fixing time with the help of special equipment, didactic materials, calendars. The specificity of the training process requires the inclusion of a whole system of resources in its organization: individual and differentiated training approach; visualization, including all kinds of analysis: visual, auditory, speech, motor; opportunities for development of the emotional and sensorimotor sphere; thinking, speech and other mental processes such as being active and independent in the learning process.

12. Aleksieva, K. Neuropsychological evaluation of children with special educational needs (co-authors Ivan Karagiyozov, Plamen Petkov). Annual of Trakya University, 9th Balkan Education and Science Congres, Edirne, 16-18 October 2014, pp. 913-917 (in Bulgarian)

When the specialists examine the qualities of children's development, the level of neuropsychological functions is too important. The abilities to recognize objects and specific signs, the programs of complex movements and activities, the comprehension of verbal information and the expressive language skills need to be explored, defined and described. The results of the enquiry of some functions are presented within the article. The enquiry refers to: orientation within the space, left-right recognition, the sustainability and flexibility of the attention, verbal and nonverbal memory, understanding of prepositions, comprehension of the context, comprehension of proverbs and metaphors, retelling stories, reading and writing. Some conclusions and recommendations are presented for the sake of development of children with special educational needs. The examined children with special educational needs have significant difficulties related to left- right orientation, attention, verbal and nonverbal memory, assembling of figures, comprehension of prepositions, comprehension of instructions, comprehension of proverbs and metaphors and the ability to retell.

Those who are students, make many mistakes using the written language especially in the area of transformations from phonological structures to the spelling of written words. The educational interventions have to be organized according to the possibilities for stimulation of these functions and processes.

13. Aleksieva, K. Analysis of problems related to childhood hyperactivity and attention deficit at school. Collected Papers of the Travelling Seminar "Innovations in Education", *Konstantin Preslavsky* University of Shumen, Faculty of Education, Faber Publishing, Veliko Turnovo, 2013, pp. 97-103, ISBN 978-954-400-925-0 (in Bulgarian)

The article defines the concept of Attention-Deficit Hyperactivity Disorder (abbreviated as ADHD). Special attention is given to symptomatology and diagnosis. It presents the five conditions according to the Diagnostic and Statistical Reference Book (DSM-IV) for a positive ADHD diagnosis. The main difficulties and the reasons for them in the school environment are determined based on the analysis of conducted studies by Bulgarian psychologists and their personal experience in working with children with ADD/ ADHD. To achieve a positive learning effect in the classroom, a wide range of methodological approaches has been proposed to enable the children to feel equal participants in the educational process.

14. Aleksieva, K. Multisensory learning approaches to children with learning disabilities. Annual of *Konstantin Preslavsky* University of Shumen, Pedagogical Faculty, Volume XVII D, "Education Technologies" Conference Proceedings, *Konstantin Preslavsky* University Press, 2013, pp. 281-286, ISSN 1314-6769 (in Bulgarian)

The article presents the tools and methods for integrating children with learning disabilities successfully into the learning process through multi-sensory learning. Multisensory training offers opportunities to stimulate actively human perceptions and mind by organizing a type of educational process in which stimuli of various nature synergistically attack the trainees' psyche, in order to elicit multiple reactions that support the multifaceted cognitive development of the individual. The benefits of multi-sensory learning are the use of visual, auditory, kinetic and tactile channels to support the development of memory and the learning process. Multisensory methods and approaches (such as visualization through dyslexics' smart card) help to counterbalance some of the information channels' malfunctioning.

15. Aleksieva, K. Constructive methods in Mathematics lessons with integrated learning. Collected Papers of the Travelling Seminar "Education Technologies", *Konstantin Preslavsky* University of Shumen, Faculty of Education, Faber Publishing, Veliko Turnovo, 2012, pp. 97-102, ISBN 978-954-400-755-3 (in Bulgarian)

The problem discussed in this article is whether the teacher can make students with special educational needs active participants in the learning process of Mathematics and how to make the process effective for both categories of students. This research shows that the constructive method-based instruction leads to better results, that learning with such methods is more motivating, engaging, and challenging. The purpose of the study is to investigate the effect of the application of constructive methods and techniques in the Mathematics lesson and to consider the students' participation in learning the material and the ability to relate the new information to the old one. We draw conclusions from our direct observations of the work of students with special educational needs in a series of Mathematics lessons for learning the multiplication table.

16. Aleksieva, К. The principle of visualization in teaching Mathematics as a means of cognitive activity. Annual of *Konstantin Preslavsky* University of Shumen, Volume XVI D, Faculty of Education, Shumen, *Konstantin Preslavsky* University Press, 2012, pp. 233-239, ISSN 1314-6769 (in Bulgarian)

This article presents some theoretical aspects of the role, position, and importance of the principle of visualization in teaching Mathematics. The contemporary interpretation of this principle is based on the interconnection and organic unity between sensory and logical knowledge. Visualization in the learning process contributes to the extension and enrichment of students' sensory experiences, their feelings, perceptions and ideas. The importance of visibility and the development of observation is of great importance, which greatly facilitates the process of learning, enhances the motivation for learning, stimulates the cognitive interests of students, helps to establish the connection between theory and practice. Children's visualization, perceptions and practical activities are the fundamentals of conscious learning and successful means of developing their mental activity.

17. Aleksieva, К. Developing mental activity when solving mathematical problems through modeling. Collected Papers – International conference „40-years anniversary of Shumen University 1971-2011", Shumen, 2011, pp. 275-281, ISBN 978-954-577-582-6 (in Bulgarian)

The current trends in the development of school education are related to the reorientation of the priority of its educational function to the informative one. In this regard, the task of purposefully educating students in cognitive activity is put forward, i.e. the ways of learning – observation, analysis, comparison, classification, modeling. In this article, we consider modeling as one of the innovative areas of teaching. Various theoretical statements on the issue of modeling as a method and tool in the psycho-pedagogical literature are presented. We offer five types of schematic models for math text problems. Models are an effective tool in finding the solution to the problems and a step forward in the development of students' abstract thinking.

18. Aleksieva, К. Analysis of Geometry teaching material in the second grade Mathematics course book in the context of State Educational Requirements (co-authors Sl. Slavova, R. Petrova), Scientific Papers - International Seminar "Education for All", *Konstantin Preslavsky* University Press, Shumen, vol. 1, 2010, pp. 157–165, ISSN 1313-4310 (in Bulgarian)

The article deals with the Mathematics curriculum for 2 grade, and more specifically the content in "Plain Figures" and "Measurements" sections. The subject of analysis is the Geometry material in the Mathematics coursebooks and notebooks for the 2nd grade by the following authors: assoc. prof. Angelina Manova, PhD, Reni Rangelova and Juliana Yaneva-Garcheva (Prosveta Publishing House); senior assistant Mariana Bogdanova, Katya Nikolova and Nikolina Dimitrova (Bulvest 2000 Publishing House); assoc. prof. Zdravka Novakova, PhD and Stoyan Ivanov (Prosveta Publishing House). From the analysis made, we can summarize that the developed Geometry material is in accordance with the State Educational Requirements and the curriculum. The studied Geometry material creates opportunities for the intellectual development of young students, ensures the breadth of knowledge and the durability of the acquired skills and habits.

19. Aleksieva, К. The role of graphs and graphical modeling in solving math problems in elementary school. International Scientific-Practical Conference "Innovations in Education", DIPKU-Varna, 2010, pp. 304–308 , ISBN 978-954-400-298-5 (in Bulgarian)

The article focuses on the role and importance of graphs as a tool to illustrate and model when solving problems. Presenting an abstract mathematical material in graphic and symbolic style

helps the students understand it better, encourages the perception and learning of this material, rationality and awareness of thinking. Graphic language is accessible to young students and can be easily learned when choosing the right tasks. The use of graphs and other non-standard methods and tools in solving problems stimulates positive emotions and turns the process into a mental game. We have provided some sample graphic models.

20. Aleksieva, К. Visualization and modeling as tools and methods of teaching. Technological education - traditions and future. Jubilee edition of 25-year anniversary of Faculty of Education and 15-year anniversary of "Technics and Technology" major – Shumen, Faber Publishing House, 2009, pp. 318-325, ISBN 978-954-400-229-9 (in Bulgarian)

The article presents some pedagogical aspects about the position and importance of visualization and modeling as tools and methods of teaching Mathematics at elementary school. We associate the classical differentiation of the principle of visualization with the names of Jan A. Komensky, J. J. Russo, J. H. Pestalozzi, A. Diesterweg, K. D. Ushinski, etc. Some of the studies of V. V. Davidov, L. M. Friedman, M. B. Gamezo, V. S. Gerasimova discuss the issue of modeling in teaching. N. Chakarov, A. Madzharov, R. Radev, D. Frenkev, V. Milushev work in Bulgarian methodological sphere on the problem of visualization and the use of types of models. We display the views and opinions of the authors on the subject under consideration.

21. Aleksieva, К. Information technologies – a necessary tool for improving the quality of teaching (co-author K. Kolev). Collected scientific papers dedicated to the 105th anniversary of the birth of the pioneers of computer technology John Atanasov and John von Neumann - Volume I, Shumen, *Konstantin Preslavsky* University Press, 2009, pp. 328–331, ISBN 978-954-577-539-0 (in Bulgarian)

The article deals with the concepts of information society, information culture, information technology, information communication. The level of information culture is determined by the ability to use information resources efficiently and to apply information technology achievements. This resonates with the purpose of teaching students of all disciplines in the field of information technology and communication. New teaching models need to be introduced alongside traditional education. A model for on-line training with several sections of the Excel computer program is presented as a tool for quality fulfillment of the learning process.

22. Aleksieva, К. On the problem of the quality of Mathematics education at the elementary school (co-author R. Petrova). Anniversary Conference "Teacher Education in Bulgaria: Status and Trends", vol. III, *Neophyte Rilski* University Press, South-West University, 2007, pp. 556–561, ISBN 978-954-680-464-8 (in Bulgarian)

The primary school teacher solves a complex of pedagogical problems. They are required not only to achieve with students a high level of knowledge, skills and habits that correspond to the requirements of the curriculum, but also to ensure in the course of teaching the development of the mental processes and personal qualities of the students, their moral values. In the article we offer diagnostic technology for checking the level of acquired knowledge and the acquired skills and habits of the students for the purpose of permanent management of the educational process. The proposed diagnostic technology includes a diagnostic test to check the level of learning, skills and habits; results analysis; corrective tasks; higher level math problems; acquisition tests. In our opinion, such an approach will ensure a qualitative and effective learning process.

23. Aleksieva, K. Content continuity of Information Technology course books for college majors (co-authors K. Enev, K. Zlateva). Veliko Turnovo, SLOVO Publishing House, "Mathematics, Informatics and Computer Science" Conference of Applied Sciences, part II, 2006, pp. 415–419 (in Bulgarian)

The article deals with the issue of continuity of Information Technology (IT) teaching material, studied in the ninth and tenth grades of high school and in the pedagogical college specialties (Primary School Pedagogy and a Foreign Language; Pre-school School Pedagogy and a Foreign Language; Work, Technique and Fine Arts). In this regard, the structure of the curriculum in the discipline Information Technology should take into account the State Educational Requirements for educational content. The purpose of the training is to teach students some basic concepts and applications of IT and the nature of the use and support of computer systems and networks. The training is structured in two modules that conform to the requirements and standards for the course content.

24. Aleksieva, K. Cross-curricular links in teaching Mathematics at second grade (co-authors R. Petrova, S. Slavova). Sofia, VEDA SLOVENIA - ŽG, Proceedings of "Education and Upbringing at Primary Schools, Kindergartens and Special Schools", Second Autumn Scientific Conference of the Faculty of Primary and Pre-school Pedagogy, Sofia University, 2004, pp. 126-128, ISBN 954-8510-87-1 (in Bulgarian)

This study addresses the issue of the implementation of cross-curricular links in Mathematics education in the context of State Educational Requirements and Standards (2002). We analyze the cross-subject and intra-subject links involved in the 2nd grade curriculum as prerequisites for the children to understand better the connection between abstract notions and reality, to master skills for practical application of knowledge. Specific tasks of the course book units are discussed which relate to other subjects – Bulgarian language and literature, Geography, Fine Arts, Traditions and Skills, Music, Sports.

25. Aleksieva, K. Content analysis of Geometry material in Mathematics course books for 1st grade in the context of the State Educational Requirements (co-author R. Petrova). *Konstantin Preslavsky* University Press, Collected Papers "Education and Arts", Volume II, Shumen, 2004, pp. 54–57, ISBN 954-577-216-6 (in Bulgarian)

The study analyzes the 1st grade syllabus and, in particular, the curriculum content of the "Plain Figures" and "Measurements" sections. The object of analysis is the Geometry material of the Mathematics course books for the 1st grade of Prosveta Publishing House by the authors Angelina Manova and Reni Rangelova. The analysis reveals that the curriculum content offered by the authors in the "Plain Figures" section conforms to the State Educational Requirements. The content of the course is practical. It is relevant to the psychological development of the children and presupposes an opportunity for the intellectual development of young students.

26. Aleksieva, K. The Role of Geometry knowledge at 1st grade for the development of spatial imagination (in collaboration with R. Petrova). Collected scientific papers dedicated to the 100th anniversary of the birth of John Atanasov, *Konstantin Preslavsky* University Press, Volume I, 2004, pp. 191–196, ISBN 945-577-257-3 (in Bulgarian)

The subject of the research is Geometry knowledge, which is acquired at 1st grade as an integral part of the subject of Mathematics at elementary school. We present the stages of formation of geometric concepts at 1st grade. An emphasis is placed on the role of the study of Geometry

material in the development of spatial and logical thinking of young children. The article proposes a system of tasks (15 tasks) contributing to the development of attention, imagination and observation. Practical activities are included - origami work, using schemes for orientation, drawing in a square grid, determining the relative position of elements in a model, etc., which, in our opinion, are scarcely represented in the curriculum content.

27. Aleksieva, K. Acquiring intellectual skills in solving simple text math problems at first grade (in collaboration with R. Petrova, M. Docheva). Collection of scientific papers dedicated to the 100th anniversary of the birth of John Atanasov, *Konstantin Preslavsky* University of Shumen, Volume I, 2004, pp. 197–203, ISBN 945-577-257-3 (in Bulgarian)

The subject of research in the article is the process of forming intellectual skills in solving simple text math problems at 1st grade. The process of solving simple text math problems is presented schematically, in which we include the construction of an auxiliary model (abbreviated writing or graphical schemes). Applying the modeling method at 1st grade and the knowledge of ways and approaches to solving simple text math problems will prepare the students to solve complex text problems.

Prepared by: 

(Kalina Ivanova Aleksieva)