

**CONTRIBUTIONS IN THE PUBLICATION AND TEACHING ACTIVITY OF THE
MAIN ASSISTANT DR. IVAN NIKOLAEV DUSHKOV, CANDIDATE IN THE
COMPETITION FOR "ASSOCIATE ASSISTANT" UNDER 1.3. Pedagogy of teaching
in... (Pedagogy of teaching in information technology in primary school), PUBLISHED IN
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Contributions in theoretical and systematic terms:

1. Research, approbation and confirmation of statements related to methods in teaching mathematics in primary school age. Implementing an innovative approach related to the integration of educational multimedia as a means of improving student learning outcomes. The necessity of improving the learning process by integrating information and communication technologies in mathematics education is substantiated. (Document 16: 3.1., 5.1., 7.1., 7.3., 7.7., 7.15., 8.1.)
2. Contributions in theoretical and systematic terms
3. On the basis of European key competences related to information competence and literacy, both traditional teaching methods and innovative training related to the introduction of information and communication technologies shall be considered on the one hand. (Document 16: 3.1., 5.1., 7.1., 7.3., 7.7., 7.15., 8.1.)
4. On the basis of the reviewed literature are systematized problems arising in the creation of multimedia didactic materials for educational purposes. (Document 16: 3.1., 7.1., 7.6.)
5. An overview of theories related to multimedia learning, information perception, integration of multimedia in the learning process, the benefits and disadvantages of integrating information and communication technologies in education. (Document 16: 3.1., 5.1., 3.1.)

Contributions to the experimental research plan

1. A system of criteria for improvement of used multimedia didactic materials in education has been created. (Document 16 : 5.1., 7.1., 7.6.)
2. An author's set of educational multimedia presentations has been developed and tested, integrated in the teaching of mathematics in the primary grades, related to entertaining tasks. (Document 16: 1., 5.1., 7.3., 7.7., 7.10., 7.15., 7.16.)

3. Developed a system of criteria for comparative analysis of educational content related to the subject Computer Modeling in primary school. (Document 16B: 7.2., 7.4., 7.5.)
4. Proven models and analysis of results obtained in mathematics education in primary school. (Document 16: 7.8., 8.1)
5. Studies of processes related to time delay in populations. (Document 16: 6.1., 6.2., 7.9., 7.11., 7.12., 7.14.)

Contributions to the practical plan:

1. Electronic courses for training of students of pedagogical specialties in the Moodle system have been developed, and the specifics for their implementation are presented. (Document 5)
2. New university courses have been developed and updated:
 - ✓ "Web design for pedagogical purposes", included in the curriculum as an elective subject in the specialty NUPCHE - Bachelor, full time (Document 5);
 - ✓ "Web design for teachers", included in the curricula as an elective subject in the master's program NUP (teaching law) - master's degree, part-time (Document 5);
 - ✓ "Mathematical and statistical methods in physical education and sports", included in the curriculum as a compulsory subject in the specialty FVS - Bachelor, full-time education (Document 5)
 - ✓ "Information and communication technologies in education and work in the digital environment", included in the curriculum as a mandatory discipline in the specialties FVS, NUPCHE, PNUP, PUPCHE - bachelor, full-time education (Document 5)
 - ✓ "Audiovisual and information technologies", included in the curriculum as a compulsory subject in the specialty Speech Therapy - Bachelor, full-time education (Document 5)
 - ✓ "Current pedagogical practice", included in the curricula as a compulsory discipline for postgraduate professional qualification in PRIMARY SCHOOL PEDAGOGY (Document 5)

- ✓ “Undergraduate practice” included in the curricula as a compulsory discipline for postgraduate professional qualification in PRIMARY SCHOOL PEDAGOGY (Document 5)
 - ✓ "Computer Modeling", included in the curriculum as a compulsory subject for postgraduate professional qualification in Computer Modeling.
3. Participation in national and international conferences on topics related to mathematical models with time delay (Document 5)
 4. Participation in trainings related to improving the quality of teachers related to the subject Computer Modeling. Co-authored study kits approved by the Ministry of Education and Science in the subject "Computer Modeling" for third and fourth grade.