

**THE GEOMETRICAL PROBLEMS  
AS THE MEANS OF THE FORMATION  
OF THE KEY COMPETENCES**

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The purpose of the educational system was always concentrated upon the formation in the oncoming generation those behavioral models and values which will allow it to become successful out of the school walls. The scientists from different countries consider that the expansion of the possibilities of the social choice consists in the formation of the key competences of the citizens as the complex of the individual characteristics which are necessary and sufficient for the effective realization of the professional work in the predetermined conditions and on the predetermined level of the quality.

The idea of the competency building approach has become the answer for the new social request not only in the vocational training, but also in the training to any subject at the comprehensive school, especially in mathematics. According to the educational standard, the formation of the key competences in mathematical training is understood as the formation of the readiness of the pupils to use the acquired knowledge, the abilities and the ways of an activity in a real life for the solution of the practical problems.

The important place in mathematical training is occupied by such problems as: both the purpose, and the means of study. Besides, the mathematical problems possess the huge potential in the sense of the methodical reserves. The activity of the solution of a mathematical problem is adequate to the activity of any kind, including a professional one. The ability to search and to choose the resources to plan the solution, to reach the result of the activity, to estimate and to correct is always and repeatedly necessary in the course of the solution of a mathematical problem. The work with a mathematical problem represents didactically adapted social experience of the solutions of the problems (informative, world outlook, moral, political and others).

Thus, the mathematical problems are the effective means of the formation of the key competences. And the ability to solve a problem is an indicator of the development of the pupil, his social maturity, an activity of a vital position, an independence of the person.

In the designated sense, the geometrical problems are especially valuable. Their mainte-

nance and the methods used for the solution allow the complex apply of the major knowledge and skills in a non-standard situation. The combination of the constructions, the calculations, the proofs, the researches aggregated in one problem is the best way to improve the formation and the development of key competences.

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**THE INTEGRAL MONITORING SYSTEM  
OF KNOWLEDGE: REALITY OR MYTH?**

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Speaking about integration of education, we should not forget about that, for example, the control of its quality should be built at the base of integral and united approach, to correspond state standards by the concrete discipline. It's necessary to use identical measure materials and define identical degrees of reaching the aim.

One of the checkout instruments is text control, which is long ago and rather widely used at pedagogical practice. The necessity to have some universal, reliable and effective measure instrument, which can estimate the quality of higher professional education, has been being always felt.

If we try to formulate the aim, for example, of language testing at technical HEI, that this is diagnosis of communicative abilities of students and estimation of their ability to understand and produce writing speech. What concerns the task of testing this is a development of test materials, at the base of which we could measure indicators of receptive and productive activity of students, in consideration of concrete parameters of communicative task.

In Samara State Technical University (filial in Syzran) for several years there is carrying out an internet-testing of students of second course by the foreign language. There suggested that passing through this testing student demonstrates all his knowledge, which he received and consolidated during first two years of studying in the HEI. (Naturally into consideration there also are taken that base knowledge, with which he came to the university.) Tasks of the test were formed such way that student can show the level of owning all skills, except such aspects as writing and oral speech (or in the less degree, than rest of them). Big part of

questions is devoted to the country-specific aspect of language at its rather narrow description, what carried complications, because our program is oriented to the understanding of the material of technical character. This, obviously, were chalked up by us.

Can we consider internet-testing as dimensional replacement of oral exam of the foreign language? I think, a lot of people agree, that only in part. So far as we will not receive real picture without alive communication with student, without "palpation" of his ability to react to the questions, talk or pick up the talk.

Therefore, to measure the quality of owing the foreign language ONLY by text way, rightly is not enough. But to become a PART of this process internet-testing is worth it.

Is it possible to create the integral systems of the control of quality of knowledge in the near future? Traditions and mentality of different nations will be always at defined opposition. Undoubtedly the integration of education is this to we should rush. But this process is very thorny and conflicting.

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**PSYCHOLOGIC-PEDAGOGICAL  
FOUNDATIONS OF SENSORY  
EXPERIENCE FORMATION  
OF CHILDREN IN EARLY AGE IN THE  
PROCESS OF GRAPHICS ACTIVITY**

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A child is born helpless, but with a huge potential of development, which appears more intensively in babyhood and infancy. Every day of his life is important to appear something new in a child's behavior, and losses in development are irretrievable. A newborn develops quickly. While analyzing psycho development of a newborn every day is taken into consideration. For example (Neonatal Behavioral Assessment Scale, (NBAS), composed by T. Berry Brazelton studies newborn's reflexes, the scale helps to control changes in his

conditions and determine peculiarities of his reactions to physical and social motivations.

A fact of "hospitalism syndrome" is known when to some reasons a child was in an environment in which there was no communication with adults. The care was taken formally, there was poor communication and did not enrich a child's sensor experience. More often such situation happens with newborns left in public institutions and maternity hospitals.

Sensor experience supposes not excessive stimulation of child's sensory organs, but the ability of an adult to show love and attention to a child. An adult should not forget that a baby see the world for the first time and everything is interesting to him. It is important that an adult accompanies his every action with words: "This is a ball. It is round. It is nice and red. It can bowl." The more often an adult communicates with a child, the more intensive a child develops. The communication should be of personal orientated, contextual character and accompany all actions of a child. That's why it is called contextual-practical communication (according to M.I. Lisina Lisina M.I. Problems of communication ontogeny. – M.: Pedagogy 1986. – 144 c.) And it is also so important to develop manual abilities. Even in babyhood thanks to inborn reflexes a child clenched his fists when an adult put into his hand a finger. Then in infancy a child studies any subject in his hands. Under sensor experience we understand a total of perception actions for the reception of subject's features. The perception of the environment comes with the help of a child's sensory organs and is accompanied with words. It seems that sensor experience is accumulated spontaneously, without organized study, but it is not so. If the process of perception comes spontaneously than a child may not pay attention to this or that object. Perception is a result of sensor experience. Physiologically perceptions are formed thanks to memory, thinking and speech. After an action of a specific stimulus upon a child's sensory organs, fixated in the act of perception, nervous connections are left in cortex, which are activated in verbal mention. Such connections are unsteady with children and can be easily destroyed that's why it is necessary to have certain development of memory and thinking for more steady perception fixation. In the situations of a child's sensor deprivation such development is slow. At the same time excessive stimulation and early teaching of children is also harmful to mind. When a child has no sensor experience due to his age abilities, intellectual operations are not developed (synthesis, classification) and mnemonical memory mechanism are not enough mastered