ON THE FORMING OF STUDENTS' CULTURE OF THINKING IN THE MATHEMATICAL DISCIPLINES STUDY

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The Action Plan for implementation of the Bologna Declaration in the system of the Higher Professional Education in the Russian Federation for 2005-2010 includes the development, adoption and implementation of the educational standards in the credit competence format. In the standards the results of the bachelor /the specialist /the master training will be presented in terms of competence.

According to the viewpoints of psychology a human being manifests himself in the form of the totality of his relations to the world, the society in which he lives, the activities carried out by him and to himself. So we can talk about the general cultural competences, among which the competence related to the culture of thinking is of the particular importance.

The culture of thinking is not an innate quality. It is not given to a person as a finished product, but is formed and developed as a result of developing surrounding reality and mastering the knowledge accumulated by humanity, as well as methods and modes of thinking. Research shows that the culture of thinking as an integral phenomenon should be characterized by a heuristic, logical, algorithmic, combinatorial, stochastic, visual and linguistic components that reflect its content aspect, as well as the semantic component, including basic mental operations.

It would seem we can expect the automatic rise of the students' culture of thinking in the mathematics disciplines study. However, the graduate may have the sufficient knowledge in the particular field of mathematics, know all kinds of mental operations, be able to use them partially, but it is difficult for him to use them in complex in his practical activity or his culture of thinking may have insufficiently developed heuristic, visual or linguistic component. It means it is necessary to form and develop in students' thinking when studying mathematics, like any other discipline:

- ability to model and solve problems properly;
- ability to analyze and make meaningful generalizations;
- ability to create personal information resources;
- ability to define the purpose of student activity;
- ability to analyze incoming information and make its value assessment;
- ability to advance and formulate problems independently;
- ability to identify the problem and choose effective forms and methods of its solution;
- ability to argue and base their actions logically;
- ability to correlate the result of the action with the suggested purpose;
- ability to correct students' actions in case of need under changing conditions;
- ability to establish internal and external connections and relations;
- ability to present the results of their activities verbally and in writing, to be able to debate, to act as a critic, adviser, etc;
- ability to determine students' mental (and physical) capacity for work, as well as the willingness to regular stress in the different periods of their activity.