E-5. THE POSSIBILITIES OF VIRTUAL LEARNING ENVIRONMENT TOOL USABILITY FOR PROGRAMMING TRAINING

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Abstract. Learning (teaching) of programming is a sensitive and hot topic for all scientists all over the world. When we learn to program something we have not only to listen to lectures, to analyze supplied and recommended learning material, to listen to teachers advice but to take an active part in learning process too. Virtual learning environment has been more and more integrated into full time study. The majority of Lithuanian universities and colleges apply blended learning in educational process: virtual environment tools (the most popular is Moodle) are implemented parallel with traditional lectures and workshops. Such platforms are commonly used to present the learning material, to test students knowledge (self-control and knowledge control for evaluation tests), and for communication with students when they are outside classes. According to various studies blended learning is acceptable for both students and teachers. The experience of using blended learning has shown its strengths and weaknesses. We have used blended learning for teaching basics of programming and programming methods since 2004.

Increasingly, it comes about the individualization of learning, tutorial adaptation of a particular learner's needs, abilities and learning goals. It becomes relevant to organize teaching process applying it to the individual style of a learner. In our research (this article is based on) we used Kolb, Honey and Mumford learning style methods that are closely related.

The majority of virtual learning environments provide learning material, organization of learning activities, communication and cooperation means to the students but the standard kit does not meet specific learning programming needs. Active researchers, developers and Moodle users community has developed and constantly creates new and additional instruments. This paper analyzes virtual learning environment tools that are suitable for teaching programming and corresponds effectively to a student's individual learning style.

This work is devoted to the following topics:
a) teaching (learning) methods of programming that are tailored to student's learning style are defined;
b) virtual learning environment tools that help to implement those learning methods are identified.

The learning (teaching) methods by using virtual learning environment tools, mentioned above, are experimentally tested on mathematics and informatics students of Lithuanian university of Educational sciences.

Key words: programming training, virtual learning environments, methods for teaching programming.