ACADEMICIAN MAKHMUTOV - NATIONAL PROPERTY

Valerian Faritovich Gabdulchakov\textsuperscript{a}, Dilara Mansurovna Shakirova\textsuperscript{b},
Mourat Ashirovich Tchoshanov\textsuperscript{c}

Institute of Psychology and Education of Kazan (Volga) Federal University
Institute of "Applied Semiotics" of the Academy of Sciences of the Republic of Tatarstan
The University of Texas at El Paso

The purpose of the article is to show the place of problem-based teaching/learning in the modern theory of education. Academician Mirza Ismailovich Makhmutov is considered a founder of the holistic concept of problem-based teaching/learning in the 60-80s of the twentieth century. According to Makhmutov, problem-based teaching/learning is a didactic system. This system is based on the principles of learning and its definition, combination of techniques and methods of teaching and learning. Methods and techniques are reminiscent of scientific inquiry.

Makhmutov emphasized two major elements of his system: problem-based teaching and problem-based learning. Problem-based teaching is defined as a classroom activity of teacher to deliberate the implementation of successive problem-based situations and to facilitate the process of student learning. Whereas problem-based learning is defined as learners’ cognitive activity acquiring new knowledge and skills through involvement in analysis of problem situations, statement of a problem, and solving a problem by posing hypotheses, providing rationale and collecting evidence, as well as by checking the correctness and reasonableness of the solution. Therefore, the development of problem-based situations to engage learners in independent decision making is an essence of the problem-based teaching/learning. And a problem-based situation serves an instrumental role in the theory of problem-based teaching/learning. Situation appears as a cognitive conflict between learners’ prior experience and new knowledge, and/or between practical/applied and theoretical/generalized knowledge.

Modern educational theories (at pre-school, secondary school, higher education levels) take into account both theoretical and practical experiences in the implementation of problem-based teaching/learning. Problem-based teaching/learning’s methods and techniques are applicable in the early childhood education, to the development of variety of learning and instructional technologies including but not limited to modular-based education and distance learning, to the development of students’ critical thinking, to name a few. The theory of problem-based teaching/learning developed by Makhmutov is a leading theory in the perspective development of modern education.

Keywords: Makhmutov Mirza Ismailovich, organizer of science and education, theory of problem-based teaching/learning, modern education.

\textsuperscript{a} Gabdulchakov Valerian Faritovich, doctor of pedagogical sciences, professor at the Institute of Psychology and Education of Kazan (Volga) Federal University E-mail address of the author: Pr.Gabdulhakov@mail.ru Tel.: 89050260544, 420008, Kazan, 18, Kremlyovskaya str., Russia. E-mail: public.mail@kpfu.ru
\textsuperscript{b} Shakirova Dilara Mansurovna, leading researcher at the Research Institute of "Applied Semiotics" of the Academy of Sciences of the Republic of Tatarstan. E-mail address of the author: shdilyara_mi@mail.ru. Tel.: 89673716572 The Academy of Sciences of the Republic of Tatarstan, 420111, Kazan, Bauman str., 20, Russia. E-mail: anrt@antat.ru
\textsuperscript{c} Tchoshanov Mourat Ashirovich, doctor of pedagogical sciences, professor, University of Texas at El Paso, USA E-mail address of the author: mouratt@utep.edu EDU612, The University of Texas at El Paso. 500 West University Avenue. El Paso, Texas 79968 (915) 747-5000 E-mail directory@utep.edu
Bibliography