

MODERN TEACHING TECHNOLOGIES AND DEVELOPING CONSTRUCTIVE THINKING

Miroslava Mihajlov Carević¹ 

Milena J. Petrović²

Nebojša Denić³ 

DOI: <https://doi.org/10.31410/EMAN.S.P.2020.147>

Abstract: Numerous researches in the previous period have shown the effectiveness of mathematical learning with the use of information and communication technologies (ICT) and mathematical software packages. Also, through theoretical studies and research results, the quality of mathematics teaching in schools was examined. The results of the research of the authors of this paper showed the lack of a visual-logical approach in solving mathematical problems. Primary and secondary school students are primarily trained in mastering formulas and algebraic procedures that help them solve a given task. In order to develop the ability to perceive lawfulness and logical thinking, we organized introducing elementary and secondary school students to figurative numbers and selected examples that demonstrate the observation of lawfulness among numbers. We applied work in collaborative groups using computers and GeoGebra software. The results showed the students' ability to perceive lawfulness and to successfully solve tasks by applying the observed lawfulness. They also confirmed the effectiveness of mathematical learning with the use of computers, mathematical software and working in collaborative groups.

Keywords: Implementation, Visualization, Representation.

¹ Faculty of Mathematics and Computer Science, AlfaBK University, Belgrade, Serbia

² Faculty of Science and Mathematics, University of Priština, Kosovska Mitrovica, Serbia

³ Faculty of Science and Mathematics, University of Priština, Kosovska Mitrovica, Serbia