A Contextual Approach to Teaching Algebra in Elementary Education

Sanja Maričić
University of Kragujevac, Faculty of Education in Užice
sanjamaricic10@gmail.com
Nenad Milinković
University of Kragujevac, Faculty of Education in Užice
milinkovic.nenad84@gmail.com

The authors underline the importance of mastering algebra-related content, but also difficulties associated with the acquisition of such content at an early age, students' comprehension of algebra and the application of knowledge in problem-solving. Within this context, they point out the characteristics, importance and effects that can be achieved in mathematics education through the implementation of a contextual approach to teaching algebra. The aim of the study was to examine the effects that the contextual approach to teaching algebra in junior elementary school had on student achievement. We organised an experimental study (experiment with parallel groups) on a sample (N = 192) to determine whether a methodological approach based on the principles of contextual learning results in the improvement of learning and student achievement in comparison to the traditional model utilised in mathematics education, and we chose algebra for that purpose. Results of the final measurement show that students from the experimental group, who were exposed to the experimental programme, have achieved better results than students whose work was based on the traditional model. This study has shown that a contextual approach to teaching algebra has significant effects on student achievement, improves their understanding of algebra-related content, and their application of the acquired knowledge in problem-solving.

Keywords: contextual approach, early algebra, mathematics education, mathematics, student achievement.