

THE EFFECT OF GEOGEBRA ASSISTED INSTRUCTION ON ACADEMIC ACHIEVEMENT IN SYSTEMS OF LINEAR EQUATIONS ISSUE

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Abstract

This study was conducted to investigate the effects of computer assisted instruction on academic achievement in Systems of Linear Equation issue. The sample consists of 68 second grade elementary mathematics preservice teachers from a state university. The study's design is the matching only design from pretest – posttest quasi-experimental designs with control group. In this study a researcher-made questionnaire LCBT was applied as pretest and posttest. During the research, while systems of linear equations issue of linear Algebra was taught in traditional methods in control group, interactive applications were made with geogebra worksheets based on geometric representations of algebraic concepts and relationships between them in experimental group. The test scores was analysed with Mann-Whitney U test and significant difference ($Z=-2,292, p<.001$) was found between groups in favour of experimental group. This result shows that the geogebra assisted instruction affects academic achievement positively in systems of linear equations issue.

Keywords: Linear Algebra, Systems of Linear Equations, Geometric Representation.