

Investigating Pre-service Mathematics Teachers' Geometric Problem Solving Process in Dynamic Geometry Environment

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Abstract

The aim of this study is to investigate pre-service elementary mathematics teachers' open geometric problem solving process in a Dynamic Geometry Environment. With its qualitative inquiry based research design employed, the participants of the study are three pre-service teachers from 4th graders of the Department of Elementary Mathematics Teaching. In this study, clinical interviews, screencaptures of the problem solving process in the Cabri Geometry Environment, and worksheets included 2 open geometry problems have been used to collect the data. It has been investigated that all the participants passed through similar recursive phases as construction, exploration, conjecture, validate, and justification in the problem solving process. It has been thought that this study provide a new point of view to curriculum developers, teachers and researchers.

Keywords: *Problem solving; teaching geometry; dynamic geometry software; teacher education*