

MATHEMATICS TEACHERS' VIEWS ABOUT MATHEMATICAL MODELING AND USING MATHEMATICAL MODELING IN MATHEMATICS COURSES

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Abstract

The aim of the study is to investigate the views of middle-grade mathematics teachers about mathematical modeling and using mathematical modeling in mathematics courses. The participants of this study were four middle-grade mathematics teachers, who enrolled in a graduate course called as mathematical modeling and who teach different public middle schools. During the course, the teachers learned basic theoretical knowledge about mathematical modeling in mathematics teaching, they recognized various mathematical modeling activities that can be applied at different class levels as well as worked as a group on different mathematical modeling activities. The data of the study were gathered through semi-structured individual pre and post interviews. In order to analyze data, the descriptive qualitative data analysis method was utilized. The findings of the study displayed that mathematics teachers' thought of mathematical modeling were as embodying or visualizing verbal mathematical expressions. On the other hand, all mathematics teachers think that the mathematical modeling activities can be used in middle-grade mathematics courses and they want to apply modeling activities in their own lessons. On the other hand, the teachers think that the application of modeling activities in the lessons will enable students to participate in the active learning environment as well as increase their creative thinking and communication skills.

Keywords: Mathematical modeling, mathematical modeling activities, middle school mathematics teachers.