Pre-service Elementary School Teachers’ Perceptions of Mathematics and a Problem-Solving Approach in the Teaching and Learning of Mathematics

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April 2010

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Research Apprenticeship Report Abstract

This study was carried out with the purpose of obtaining views from pre-service elementary teachers towards mathematics, teaching and learning of mathematics in general and teaching via a problem solving approach in particular. Data were obtained by interviewing nine pre-service teachers, four of whom were in their freshmen year while the others were sophomores. All participants were enrolled in one of a two-course series in mathematics content on learning via problem solving designed for pre-service elementary teachers’. According to the findings, pre-service teachers agreed on the characteristics of quality teaching as explaining different examples and approaches, giving little tricks, and breaking down information into accessible parts. Also, despite the fact that most pre-service teachers had pleasant experiences with mathematics, none of them chose mathematics as their concentration subject in their program due to lack of confidence in their ability to do mathematics. While most of the pre-service teachers regarded a problem-solving approach as the use of word problems, others clustered a problem-solving approach as an exercise or a form of assessment rather than an instructional method. After explaining to each of the pre-service teachers about a problem-solving approach to teaching of mathematics, most of the teachers did not believe in the practicality of the approach.