

**The influence of students' beliefs on mathematical problem solving towards mathematics achievement among Malaysian matriculation students**

ABSTRACT

The purpose of this study is to investigate beliefs on mathematical problem solving among matriculation students. Five factors of students' beliefs on mathematical problem solving, i.e., difficult problems, steps, understanding, word problems and effort were investigated to predict factors that influence their mathematics achievement. The study sample consisted of 312 matriculation students from three matriculation colleges. The questionnaire was adapted from the Indiana Mathematics Beliefs Scale (IMBS) and a mathematics test. The results of the data analysis indicated that students have positive beliefs about mathematical problem solving. The findings showed that there is a positive significant relationship between the overall beliefs with mathematics achievement. Three sub-factors, i.e., difficult problems, steps and understanding were found to have positive significant relationship with mathematics achievement. Furthermore, by using the multiple regression analysis, it was revealed that difficult problems, steps and understanding contribute significantly to students' mathematics achievement.

**Keyword:** Difficult problems; Steps; Understanding; Problem solving; Mathematics beliefs; Mathematics achievement