A RASCH MODEL ANALYSIS OF CRITICAL THINKING PROBLEM SOLVING TEST

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To my beloved grandfather, father and mother
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ABSTRACT

Rasch measurement model is used in many researches to determine the validity of the instrument. This study measures the validation of items and performance among first year undergraduate students in Universiti Teknologi Malaysia (UTM) by using the Rasch model. A sample of 981 students took part in the study. The research instrument used was Critical Thinking and Problem Solving Test (CTPST). Collected data were analyzed using the Winsteps 3.81 and Statistical Package for the Social Science (SPSS) 16.0 for Windows. The results are presented in logit values and mode respectively. The finding shows that the CTPST are suitable to all first year undergraduate students as it only involves non-routine questions that capture CTPS skills and do not follow any specific mathematical problems. Students from Faculty of Electrical Engineering (FKE) have the highest achievement in CTPST. However, the overall achievement shows that the students have low critical thinking skills in solving problems. The items in CTPST also show unidimensionality and fit to the model although there is a misfit items.
ABSTRAK