

FINAL YEAR PROJECT REPORT

THE EFFECT OF HIGHER ORDER THINKING
SKILL (HOTS) IMPLEMENTATION IN MATHEMATICS
TOWARDS STRESS AMONG SECONDARY SCHOOL
STUDENTS : A CASE STUDY IN SEKOLAH MENENGAH
KEBANGSAAN DATO' AHMAD MAHER (SMKDAM)
AND SEKOLAH MENENGAH KEBANGSAAN MELOR
(SMKM)

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UNIVERSITI TEKNOLOGI MARA

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Bachelor of Science (Hons.) Statistics
Center of Statistics Studies
Faculty of Computer and Mathematical Sciences

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Praise be to Allah SWT the Almighty and the All Merciful, who has given us, the powerless creature, His guidance so that we can smoothly finish our final year project entitle "The Effect of Higher Order Thinking Skill (HOTS) Implementation Towards Stress Among Secondary School Students: A Case Study in Sekolah Menengah Kebangsaan Dato' Ahmad Maher (SMKDAM) and Sekolah Menengah Kebangsaan Melor (SMKM)" as the requirement for the degree in Science Statistics.

First of all, our gratitude sincerely goes to family who always give us dreams to be the excellent students. Our second gratitude belongs to our supervisor Madam Noor Zafarina Binti Mohd Fauzi who has patiently trained and taught us to be the real researcher.

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ABSTRACT

Higher order thinking skills (HOTS) is a concept of education reform based on learning taxonomies; Bloom's Taxonomy launched by Ministry of Education on 2013. Based on Bloom's taxonomy, memorization and recall of information are classified as lower order thinking whereas analysing, evaluating and creating are classified as higher order. Stress is negative or overwhelming physical and psychological reactions as a response to the situations and how it affects us. This study consists of two populations, which are Form 1 and Form 2 students from SMK Dato' Ahmad Maher (SMKDAM) and SMK Melor (SMKM). The sample size for SMKDAM and SMKM is 267 and 213 students respectively. This study uses stratified sampling technique due to the respondents that come from heterogenous group; different form. The objectives of the study are to examine the significance and direct effect of HOTS's components towards stress and to identify the mean difference on the effectiveness of HOTS between demographic information. Independent t-test analysis indicates that there is significantly different in the effectiveness of HOTS according to gender for SMKM but not for SMKDAM. Meanwhile, there is significantly different in the effectiveness of HOTS between schools. Based on the goodness-of-fit indexes, both models employed in this study is a good fit to the data since NFI, RFI, IFI, TLI, CFI and GFI are close to 0.9. In addition, the RMSEA value also less than 0.8 indicates that the model is good fit to the data. Structural Equation Modelling (SEM) showed that HOTS are significantly affect student's stress for both schools. The result also shows the relationship between variable and their respective components; there is an effect of analysing, evaluating and creating on HOTS among student and there is also an effect of behaviour, mind, physical and emotion on stress among student for both schools.

Keywords: HOTS, stress, SEM, Independent t-test, SMKDAM, SMKM