

Relationship between mathematics statistics engagement and attitudes towards statistics among undergraduate students in Malaysia

ABSTRACT

This paper explored the relationship between the attitudes toward statistics and mathematics statistics engagement among undergraduate students taking the statistic course. A total of 293 undergraduate students from several programs at Universiti Putra Malaysia (UPM) were the sample of the study. A structured, self-administered questionnaire was used to elicit responses from these students. Descriptive analyses showed the overall mean for students' mathematics statistics engagement was 3.38 (SD = .36). The analysis on mathematics statistics engagement domains revealed behavioural engagement had the highest mean (M = 3.63, SD = .52), followed by affective engagement (M = 3.35, SD = .41) and cognitive engagement (M = 3.26, SD = .35). Inferential analysis indicated attitudes towards statistics were positively related to mathematics statistics engagement ($p = .721^{**}$, $p = .001$). Further analysis on mathematics statistics engagement domain indicated attitudes towards statistics were positively related to the affective domain ($p = .902^{**}$, $p < 0.001$), cognitive domain ($p = .818^{**}$, $p < 0.001$) and behavioral domain ($p = .855^{**}$, $p < 0.001$). These findings show attitudes are important for students to be engaged in mathematics statistics. Implications of the findings are discussed.

Keyword: Attitudes; Statistics; Mathematics statistics engagement; Undergraduate students