

Abstract No. 03

Mathematics Education

EXAMINING THE INTERACTION OF MOTIVATION, SELF-EFFICACY, AND ACADEMIC EMOTIONS IN SHAPING MATHEMATICS LEARNING OUTCOMES: A STUDY ON UNDERGRADUATE STUDENTS IN MANAGEMENT SCIENCE IN SRI LANKA

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This study investigates the influence of motivation components, *effort*, *self-efficacy*, and *worry*, on the mathematics learning outcomes of Sri Lankan undergraduate students in Management Science, with a sample of 384. Using a validated questionnaire, these components were measured in relation to gender and academic performance. Results show high overall motivation with 72.7% demonstrating strong effort, while self-efficacy is moderate with 47.1%. Female students scored significantly higher in motivation than males, particularly in self-efficacy and effort. Students with higher cumulative grade point averages (CGPA) exhibited stronger motivation, specifically in the range of 3.00-3.49 CGPA showing the highest scores. Significant positive correlations emerged between motivation components and academic achievement: effort ($r = .152, p < .01$), self-efficacy ($r = .175, p < .01$), and overall motivation ($r = .214, p < .01$). Moderate worry levels correlated with better performance, suggesting some anxiety may be motivational, which should be investigated further. Both male and female students demonstrated overall higher levels of motivation, while no visible differences were observed in terms of gender. The study contributes to understanding the influence of motivation on learning Mathematics.

Keywords: Effort, Gender, Mathematics, Self-Efficacy, Worry