

IMPACT OF STUDENTS' PERCEPTION TOWARDS THE USAGE OF MATHEMATICAL LABORATORY ON ACADEMIC ACHIEVEMENT IN MATHEMATICS

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Abstract

Purpose: To investigate the impact of students' perceptions of mathematical laboratory usage on their academic achievement in Mathematics among Grade 10 students in 1AB and 1C schools within the Sandilipay educational division.

Design/Methodology/Approach: A quantitative approach was employed, utilizing a cross-sectional survey with a self-administered questionnaire comprising 24 closed-ended items on a 5-point Likert scale. The population size was 422, and a stratified random sampling method was used to select a sample of 202 students. Data from the sample were analyzed using descriptive and regression analyses.

Findings: The findings of this study highlight students' overwhelmingly positive perceptions of Mathematics laboratory usage, accompanied by consistently high academic achievement in Mathematics, evidenced by the attainment of 'very good pass' grades. Moreover, the study identifies a statistically significant and positive relationship between students' perception of the laboratory and their academic achievement. However, the observed effect size of this relationship appears to be limited, constituting 16.4% of variance.

Research limitations: Research limitations include the focus on Grade 10 students in specific schools and the reliance on self-reported data, potentially affecting generalizability and response accuracy.

Implications: This study provides valuable insights into the important role of mathematical laboratories in fostering engagement and facilitating academic success in Mathematics education. Recommendations derived from the findings encompass enhancing available resources, implementing teacher professional development initiatives, and cultivating positive

student perceptions towards mathematical laboratory usage. These measures are essential for optimizing the effectiveness of mathematical laboratories and enhancing overall educational outcomes in Mathematics.

Keywords: Academic achievement, Activity based learning, Mathematical laboratory, Students' perception