Fostering Students' Mindset for Enhanced Academic Performance in Mathematics: Framework for a Sustainable Development Plan

Kristel Chara G. Remigio
htpps://orcid.org/0009-0005-8163-4893
kristel_remigio@yahoo.com
Philippine Christian University, Manila, Philippines

Abstract

This study investigated the relationship between students' mindset and their academic performance in mathematics among Grade 10 learners at Parang High School, Philippines, to propose a sustainable development plan to enhance learning. Drawing from Dweck's Mindset Theory, Bandura's Social Cognitive Theory, and Vygotsky's Sociocultural Theory, the study also examined the influence of teacher support and parental involvement. Specifically, it sought to determine how these factors relate to student outcomes and contribute to a growth-oriented learning framework. A correlational research design was used, employing the Mathematics Mindset Questionnaire (Saefudin et al., 2023), quarterly mathematics grades, and the Learning Support Feedback Form. Results revealed that 94.9% of students exhibited a Fixed-Growth Mindset, showing a mix of growth and fixed beliefs. Their mathematics grades improved from an average of 80.56 (Satisfactory) in the first quarter to 84.27 (Very Satisfactory) in the third quarter. Teacher support and parental involvement were both rated as "Often," reflecting frequent encouragement from home and school. Correlation analysis showed a negligible but significant relationship between mindset and performance ($r = .150$, $p < .05$), teacher support and performance ($r = .134$, $p < .05$), and parental involvement and performance ($r = .143$, $p < .05$). Regression analysis indicated that these variables collectively explained only 2.8% of the variance in performance ($r^2 = .028$), with parental involvement emerging as the strongest predictor. The study concludes that while fostering a growth mindset benefits learners, stronger gains are achieved when teacher guidance and parental engagement are integrated, underscoring the importance of collaborative interventions for sustainable improvement in mathematics proficiency.

Keywords: Mathematics Education, Mindset and Academic Achievement, Correlational Research Design, Philippines