

FACTORS INFLUENCING STUDENT ACHIEVEMENT IN MATHEMATICS AT THE G.C.E. O/L: A STUDY OF SCHOOLS IN THE KELANIYA EDUCATION DIVISION, SRI LANKA

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This study examines the factors influencing student performance in Mathematics at the G.C.E. Ordinary Level (O/L) in government schools within the Kelaniya Education Division, Sri Lanka, and its findings provide insights into how strengthening student attitudes and supportive learning environments at the school level can build a stronger foundation for future work-integrated learning practices. The purpose was to investigate how six factors: teacher qualifications, parental involvement, home study environment, availability of learning resources, teaching methods, and students' attitudes and study habits, relate to academic achievement in Mathematics, providing insights into connecting academic learning with practical support mechanisms.

A quantitative, descriptive research design was adopted. Ten schools representing the main school types (1AB, 1C, and Type 2) were selected using random sampling. The sample included 100 students, 10 Mathematics teachers, and 10 parents, allowing for triangulation of perspectives. A single structured questionnaire, answered by all participants, contained demographic items and 20 closed-ended Likert-scale statements designed to capture views on the six study factors. The questionnaire was pre-tested and refined for clarity and reliability. Academic performance was measured using official Grade 11 final examination results. Although modest, the sample size was considered sufficient for preliminary statistical analysis, supported by a Kaiser-Meyer-Olkin measure (0.721) and Cronbach's Alpha (0.724), confirming sampling adequacy and internal consistency.

Data were analyzed in SPSS using descriptive statistics and Simple Linear Regression. The results showed that student attitudes and the home study environment had a significant positive impact on Mathematics achievement, while teacher qualifications, parental involvement, teaching methods, and learning resources did not show significant effects.

These findings highlight the importance of cultivating positive student attitudes and supportive home environments to improve academic outcomes, while also informing strategies for better integration of school-based learning with family and community support.

Keywords: *Academic Achievement, Home Study Environment, Mathematics, Student Attitudes, Teaching Methods*