



FROM PORTFOLIO TO PROGRESS: REFLECTING TOGETHER FOR ENHANCED MATHEMATICS PERFORMANCE

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ABSTRACT

This study determined the effectiveness of the Mathematics Learning Portfolio with student and parent reflections as a learning and assessment tool in improving learners' academic performance in Mathematics. Specifically, it assessed performance before and after implementation, determined whether a significant difference existed between the two assessment periods, identified challenges encountered by students, examined parents' perceptions, and proposed enhancements. A mixed-methods approach was used, integrating a one-group pretest-posttest pre-experimental design and a qualitative descriptive approach. The participants were 145 Grade 10 learners from four sections handled by the researchers during the Second and Third Quarters of School Year 2025–2026, with their parents or guardians participating in reflections and open-ended responses. Second- and Third-Quarter Mathematics grades and expert-validated researcher-made questionnaires were used as data sources. Mean, standard deviation, composite mean, paired-samples t-test, and thematic analysis were employed. Mean performance increased from 84.30 (SD = 4.86), interpreted as Satisfactory, to 89.40 (SD = 4.67), interpreted as Very Satisfactory. The difference was statistically significant, $t(144) = -9.65$, $p < .001$. Students experienced challenges to a moderate extent overall ($M = 2.77$), with writing meaningful reflections as the greatest

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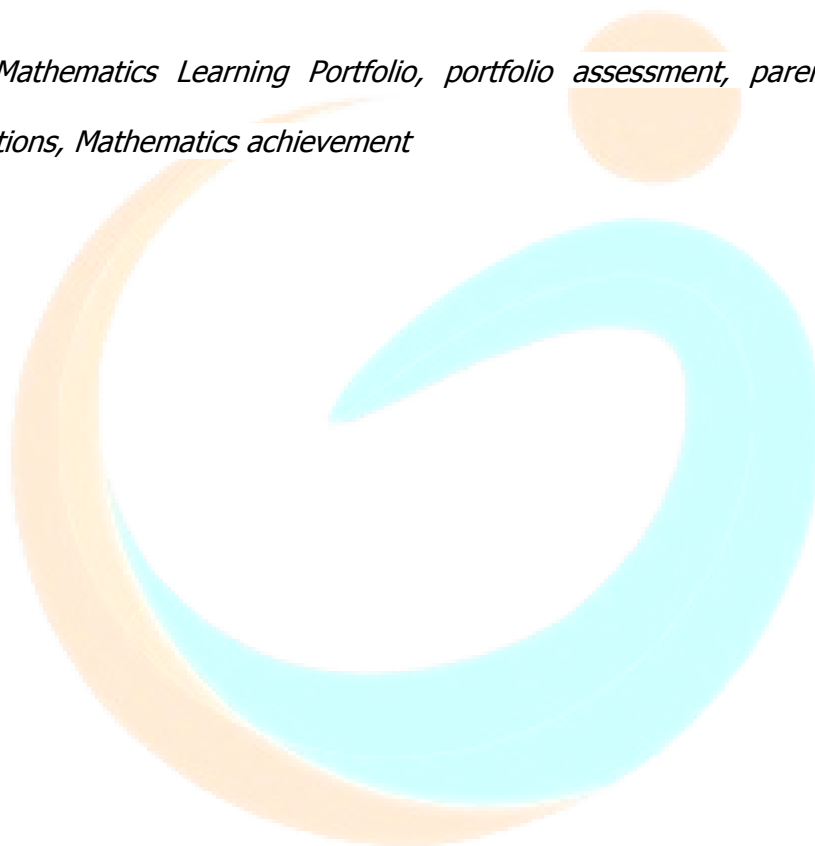
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challenge ($M = 3.45$). Parents reported increased awareness of learners' progress, stronger home support, and improved home-school communication. The study recommends structured reflection guides, clear portfolio timelines and instructions, standardized layouts, and strengthened parent reflection tools to sustain the portfolio as a complementary Mathematics learning and assessment strategy.

Keywords: *Mathematics Learning Portfolio, portfolio assessment, parent involvement, student reflections, Mathematics achievement*



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