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The effects of metacognitive reflective assessment on fifth and sixth graders' mathematics achievement.

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Summary: The purpose of this experimental study was to investigate the effects of metacognitive reflective assessment instruction on student achievement in mathematics. The study compared the performance of 141 students who practiced reflective assessment strategies with students who did not. A posttest-only control group design was employed, and results were analyzed by conducting one-way analysis of variance (ANOVA) and nonparametric procedures. On both a posttest and a retention test, students who practiced reflective strategies performed significantly higher than students who did not use the strategies. A within-subjects ANOVA was also conducted six weeks following the intervention to assess how the factor of time affected retention levels. No significant difference was found between the posttest and retention test results for the experimental groups or the control group.

Classification: D63 C33

Keywords: achievement; reflective assessment; metacognition; improvement

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