



Mobile Learning Applications in Mathematics Instruction: Evidence from Rural Kenyan Secondary Schools

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Abstract

This study examines the impact of mobile learning applications on mathematics instruction in rural secondary schools in Kenya. A mixed-method approach was employed, including pre- and post-tests alongside qualitative interviews to assess changes in student understanding and teacher practices. Students showed a statistically significant improvement in test scores by an average of 15% after the intervention period, with notable gains particularly among female students who often lagged behind their male counterparts in traditional teaching environments. The findings suggest that mobile learning applications can be effective tools for enhancing mathematics education in rural settings, especially when tailored to meet local educational needs and student demographics. Schools should consider implementing these apps alongside conventional teaching methods, while policymakers could support the development of localized content to maximise benefits.

Keywords: *Kenya, Mobile Learning, Pedagogy, Quantitative Research, Qualitative Research, Educational Technology, Rural Education*

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