



# Mobile Learning Apps for Mathematics in Northern Kenyan Primary Schools: Adoption and Cognitive Outcomes Analysis

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## Abstract

Mobile learning apps have gained popularity as a tool for enhancing educational access in remote areas. In Northern Kenya, primary schools face challenges with traditional teaching methods and limited resources. A mixed-methods approach was employed, including a quantitative survey assessing app usage frequency and quality, alongside qualitative interviews exploring teachers' perceptions and challenges. During the study period, there was a significant increase in app adoption rates from 20% to 50%, with an average of 3 hours weekly per student. Cognitive outcomes showed a 15% improvement in mathematics scores compared to pre-app intervention levels. Mobile learning apps have become integral to teaching and learning in Northern Kenyan primary schools, leading to notable improvements in students' mathematical skills over time. Further research should explore the long-term effects of these apps and potential areas for app development to better support mathematics education. mobile learning, Kenya, cognitive outcomes, primary schools

**Keywords:** *Kenyan, northern, mobile learning, app adoption, cognitive development, educational technology, socio-economic factors*

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