Mobile Learning Accessibility and Effectiveness for Senegal's Teenage Girls: An Ethnographic Study

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Abstract

Mobile learning has emerged as a promising tool for education in developing countries, particularly for marginalized groups such as teenage girls. Qualitative ethnographic methods were employed, including participant observation and semi-structured interviews with a purposive sample of teenage girls accessing mobile learning platforms in urban and rural areas of Senegal. Mobile learning programmes showed high user engagement (85% weekly usage) among teenage girls, particularly those from low-income backgrounds who had limited access to traditional educational resources. However, the impact on academic performance was mixed, with improvement noted for basic literacy skills but less evident in advanced subjects like mathematics and science. The study underscores the potential of mobile learning as a tool for education equity in Senegal, though further research is needed to refine content delivery and enhance its effectiveness across all subject areas. Future interventions should focus on developing more engaging educational content tailored to teenage girls' needs and interests, with ongoing support for teachers and parents to facilitate use of mobile learning platforms. Model estimation used $\hat{\theta} = argmin\{\theta\} \, sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert \, 2^2$, with performance evaluated using out-of-sample error.

Keywords: *African Geography, Mobile Learning, Ethnography, Access Issues, Adolescent Education, Cultural Adaptation, Technological Barriers*

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