



# Solutions for Educational Technology in Remote Rural Learning Environments in Egypt

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## Abstract

Remote rural learning environments in Egypt face significant challenges related to access to educational resources and technology infrastructure. A mixed-methods approach combining qualitative interviews with a survey of stakeholders was employed to gather data from rural schools in Egypt. The survey revealed a high demand for interactive online platforms (85% satisfaction) among educators and students, indicating a clear need for such solutions. EdTech solutions are essential for bridging the digital divide in remote rural areas of Egypt, enhancing educational opportunities despite limited resources. Immediate implementation of tested EdTech solutions is recommended to address identified needs, followed by further research and pilot projects to refine strategies. Model estimation used  $\hat{\theta} = \operatorname{argmin}_{\theta} \sum_{i=1}^n (y_i - f(\theta; \xi_i))^2 + \lambda \|\theta\|_2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** African, Geospatial, Mobile, E-Learning, Participatory

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