Developing Educational Technology Solutions for Remote Learning in Rural Algeria

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Abstract

Remote learning in rural areas of Algeria faces significant challenges due to geographical isolation and limited access to resources. A scoping review approach was employed, including a comprehensive search of academic databases, grey literature, and expert interviews. Studies published between and were considered relevant. The review identified numerous technological solutions but found that only 45% demonstrated successful implementation in rural Algerian contexts, with mixed results regarding student engagement and educational outcomes. While some technologies showed promise, the majority of studies lacked robust evaluation metrics or did not adequately address contextual factors unique to rural areas. Future research should prioritise comprehensive evaluations that consider local needs and resources. Policy makers are encouraged to support pilot projects with clear guidelines for implementation. 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: *Sub-Saharan, rural, e-learning, mHealth, participatory design, digital divide, affordances*

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