



# Educational Technology Access and Performance Disparities in Rural Zimbabwean Vhemidiri Districts: An Afrofuturist Perspective

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### Abstract

The rural Vhemidiri districts of Zimbabwe are characterized by limited access to educational resources, including technological tools that could enhance learning outcomes. A mixed-methods approach combining surveys with qualitative interviews was employed to gather data from 150 participants across three Vhemidiri districts, utilising a convenience sampling strategy. Findings indicated that only 25% of respondents had access to basic educational technology at home or school, which correlated significantly ( $p < 0.05$ ) with their academic performance in Nigeria. The study highlights the urgent need for targeted interventions to bridge technological gaps and improve learning outcomes in these underserved communities. Policy makers should prioritise infrastructure development and inclusive education programmes that integrate digital tools into curricula, particularly focusing on rural settings. Model estimation used  $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi)) + \lambda \|\theta\|_2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** African Geography, Rural Development, Educational Equity, Technological Access, Disparities Analysis, Afrofuturism, Mixed-Methods Approach

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