



# Digital Literacy Programmes in Dar es Salaam Slums: Adoption and Longitudinal Impact on Secondary School Students

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**Published:** 21 March 2001 | **Received:** 16 December 2000 | **Accepted:** 18 February 2001

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**DOI:** [10.5281/zenodo.18732035](https://doi.org/10.5281/zenodo.18732035)

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## Abstract

The digital divide persists in urban slums, where access to technology is skewed towards wealthier segments of society, exacerbating educational disparities. In Dar es Salaam, secondary school students represent a significant population with limited exposure to digital literacy programmes. Participants were recruited from four randomly selected schools within the study area. Data was collected through pre- and post-programme surveys (N=200) assessing technology use habits and academic performance over a two-year period using a mixed-method approach combining quantitative survey data with qualitative interviews for in-depth insights. Amongst students, there was a significant positive correlation between participation in digital literacy programmes and improved grades ( $r = .45, p < .01$ ), indicating that exposure to technology enhanced their academic performance over time. However, socio-economic status played a moderating role with higher income families showing greater uptake of these programmes. While digital literacy programmes showed promise in improving student outcomes, the heterogeneity in adoption rates and its differential impact across socioeconomic groups underscored the need for targeted interventions to bridge this gap. Policy makers should invest in socio-economic equity initiatives alongside digital literacy programmes to ensure equitable access and maximise educational benefits. Future research should explore more robust longitudinal designs with diverse populations.

**Keywords:** *Digital Divide, Urban Informal Settlements, Community Engagement, Technology Adoption, Socio-Technical Systems, Longitudinal Evaluation, Participatory Action Research*

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