



# E-learning Platforms and Computer Literacy Among Older Adults in Lagos, Nigeria: A Longitudinal Assessment

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### Abstract

E-learning platforms have emerged as a promising tool for enhancing computer literacy among older adults in developing countries like Nigeria. Despite their potential to bridge digital divides and improve access to technology training, empirical evidence on their effectiveness is limited. A mixed-methods approach combining quantitative surveys with qualitative interviews was employed. Data were collected from a sample of 300 participants over two years to evaluate platform engagement and learning outcomes. Among the surveyed participants, 75% reported increased computer proficiency after engaging with e-learning platforms compared to baseline levels (95% CI: [68%, 82%]). While initial results suggest significant improvements in computer literacy via e-learning platforms, further longitudinal studies are needed to confirm these findings and explore factors influencing engagement. Investments should be directed towards developing culturally relevant and user-friendly e-learning materials tailored for older adults. Future research could investigate the long-term impacts of such interventions. 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 diaspora, digital divide, longitudinal study, computer literacy, e-learning, training efficacy, aging populations

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