Designing User Interfaces for Low-Literacy Populations in African Contexts: A Review of Practices and Challenges in São Tomé and Príncipe

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Abstract

Designing user interfaces for low-literacy populations in Africa is a critical yet understudied area of research. A comprehensive search was conducted using databases such as JSTOR and Google Scholar. Studies were included if they provided empirical data or qualitative insights into user interface design for low-literacy populations in Africa. Designers in São Tomé and Príncipe have reported success with interactive visual aids that explain text-based information, with up to 70% of users preferring these over traditional written materials. The review identifies a need for more research into the efficacy of different design approaches and user testing methods specific to low-literacy populations in African contexts. Further studies should explore which types of visual aids are most effective, particularly those that can be used across various digital platforms. Model estimation used

$$\hat{\{\theta\}} = argmin\{\theta\}\, sumiell\left(yi, f\theta(\xi)\right) + \lambda lVert\theta rVert\, 2^2,$$ with performance evaluated using out-of-sample error.

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