



Designing User Interfaces for Mali's Low-Literacy Populations: An African Perspective

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Abstract

User interface design for low-literacy populations in Mali is a growing field with increasing challenges due to limited literacy rates and resource constraints. User interface designs were developed through a participatory approach involving focus groups and surveys targeting Mali's illiterate and semi-literate populations. A mixed-methods analysis was employed to validate design principles across different demographic segments. Design themes emerged with clear direction, such as the importance of visual cues and simplified language for effective communication, accounting for at least 70% of user feedback. The findings indicate that a tailored approach is essential in designing user interfaces for low-literacy populations, highlighting specific design elements that improve accessibility and engagement. Recommendations include the development of localized language resources and regular updates to accommodate changing literacy levels and technological advancements. User Interface Design, Low-Literacy Populations, Mali, Participatory Research Model estimation used $\hat{\theta} = \operatorname{argmin}_{\theta} \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi_i)) + \lambda \|\theta\|_2^2$, with performance evaluated using out-of-sample error.

Keywords: *African, Anthropology, Interaction, Low-literacy, User, Design, Contextual*

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