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Designing User Interfaces for Low-Literacy Populations in Guinean Contexts: An Intervention Study

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Abstract

Low-literacy populations in Guinea face significant barriers to accessing digital services due to inadequate user interfaces that do not accommodate their reading and comprehension levels. A mixed-methods approach was employed, including surveys ($n = 120$) $\wedge$ *focus groups* ($n = 8$), *complemented by usability testing sessions conducted among a sample populatio* levels. Data were analysed using descriptive statistics to identify patterns and inferential statistics for significance tests. The analysis revealed that users with lower literacy levels preferred simpler, more visual interfaces rather than text-heavy designs, indicating a clear preference for intuitive graphical elements over textual instructions (direction: 85% vs. 15%). This study underscores the importance of user-centric design principles in addressing digital inclusion challenges within low-literacy communities. Policy recommendations include incorporating user interface guidelines that prioritise visual simplicity and accessibility, alongside ongoing research to validate these findings across broader Guinean demographics. User Interface Design, Digital Literacy, Low-Literacy Populations, Guinea

Keywords: *African, Anthropology, Usability, Literacy, Design Science, Human-Computer Interaction, Participatory Design*

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