

INTERFACE AESTHETICS, ENJOYMENT, AND BEHAVIORAL INTENTION FOR SUSTAINABLE TRANSPORT APPS

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Volume: XXII

No: Special Issue on INCITEST'25

Pages: 336-352

Date: December 2025

DOI: <https://doi.org/10.35453/NEDJR-INCITEST015-2025>



Abstract:

In this investigation, the application design's usage impact on users' initial choice toward environmentally preferred ways of transport will be determined, with mock designs of Metro Jabar Trans (MJT) being used. Two interface versions (standard design (n = 106) and eco-nudge design (n = 114)) were analyzed using PLS-SEM which trace the emotional route from Perceived Aesthetics (PA) through Perceived Enjoyment (PE) and ends at Behavioral Intention (BI). PA significantly predicted PE ($\beta = 0.795$, $R^2_{PE} = 0.632$ for standard; $\beta = 0.878$, $R^2_{PE} = 0.772$ for eco-nudge), which in turn influenced BI ($\beta = 0.721$, $R^2_{BI} = 0.520$; $\beta = 0.681$, $R^2_{BI} = 0.463$). PLS-Predict confirmed predictive relevance ($Q^2_{predict} > 0$; PLS-SEM_RMSE generally $<$ linear benchmark). Measurement invariance showed some degree of variability in PA across cohorts, suggesting some degree of inconsistency across the groups. Eco-nudge components seemed to heighten emotional engagement and preliminary interest in adoption; however, a functional lag and habitual behaviors appear to restrict the actual modal shift. The results indicate that the incorporation of layered design embellishments, in furtherance of providing a seamless balance of affordance and sustainability, in the early iterations of mockups can facilitate advised design for interface sustainability in mobility.

Keywords: transit applications, sustainable mobility, perceived aesthetics, perceived enjoyment, behavioral intention

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