Influence of Recommendation Algorithm–Based Short-form Content Consumption on User Behavior and Cognition

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Abstract:

This study investigated how engagement with short-form content driven by recommendation algorithms influences users' emotional motivation, immersion behavior, and cognitive impact. A survey of 62 university students utilized a 27-item questionnaire, and exploratory factor analysis with reliability testing produced composite scores for emotional motivation, immersion, and cognitive impact. Pearson correlation analysis revealed strong positive relationships between emotional motivation and immersion ($r = .732$, $p < .001$) and between immersion and cognitive impact ($r = .708$, $p < .001$). In mediation analysis, emotional motivation significantly predicted immersion ($B = 0.732$, $p < .001$), and immersion significantly predicted cognitive impact ($B = 0.444$, $p < .001$). However, when controlling for immersion, emotional motivation no longer had a direct effect on cognitive impact ($B = 0.092$, $p = .294$; $R^2 = .508$; Sobel $z = 5.812$, $p < .001$), indicating full mediation. There were no significant differences in cognitive impact across viewing-time categories or academic majors. These findings empirically demonstrate that recommendation algorithms amplify users' emotional motivation, which in turn drives immersion, ultimately leading to cognitive changes.

Keywords:

Recommendation Algorithm, Short-form Content, Emotional Motivation, Immersion Behavior, Cognitive Impact, Mediation Analysis.