

Exploring the Synergistic Effects of Artificial Intelligence and Augmented Reality on Consumer Purchase Decisions

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Abstract

Augmented reality (AR) is attracting more attention from retailers due to its diverse applications, such as virtual try-ons, which assist consumers in making purchasing decisions by integrating virtual products into the real world in real-time. To advance this area, there is increasing research advocating for the integration of Artificial Intelligence (AI) into AR to enhance how consumers process and understand AR content, in line with their evolving needs. However, research into the effectiveness of this AI-AR integration and optimal implementation strategies is still limited, which restricts insights for both retailers and scholars. For example, AI recommendation systems are frequently used to generate personalized suggestions; what impact might they have within immersive AR environments? Drawing on the Heuristic-Systematic Model (HSM), this research aims to address this gap. We conducted a lab study (N=154) to assess behavioral purchase outcomes and designed subsequent studies using both commercially available and custom-developed AI-powered AR tools to examine their effects on purchasing behavior and the underlying mechanisms. The initial findings suggest that AI-powered AR tools enhance purchase outcomes, such as decreasing return intentions and increasing the propensity to purchase higher-priced products, compared to AR alone. The subsequent studies will explore the mediating effects and test the boundary conditions. Our research contributes to the AR and AI fields and offers suggestions for retailers looking to develop or enhance their AR strategies.

Track: Retailing & Omni-Channel Management