A Meta-Analytic View on the Relationship between AI Literacy and Behavioral Intention of AI Adoption

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This speech presents a meta-analysis that synthesizes existing quantitative research exploring the connection between individuals' understanding of artificial intelligence (AI literacy) and their willingness to accept and adopt AI technologies. Drawing from 26 studies involving 10,428 participants across various settings, identified through a systematic review of Web of Science, Scopus, and Google Scholar up to July 2025, the analysis reveals a strong positive correlation between AI literacy and AI acceptance. The findings suggest a moderate to large effect size. Cultural background significantly moderated this relationship, with collectivist societies showing stronger links than individualist ones. The research setting also influenced outcomes, with the most pronounced effects observed in K–12 educational contexts. Analysis for publication bias confirmed the reliability of the results. These findings support the importance of investing in well-designed AI literacy programs to encourage broader adoption of AI technologies. However, the variation across cultures and contexts suggests that such initiatives should be adapted to the needs of specific groups. The study also outlines key areas for future research in understanding the literacy-acceptance dynamic in AI.