

# Effects of AI Explanation Length on User Trust and Acceptance

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## Abstract

This study investigated how the length of AI-generated text explanations in Japanese influences trust and acceptance in a route selection task, a subjective decision-making task. Experiment 1 demonstrated that AI explanations increased trust and acceptance compared with no explanation; however, there was no significant difference between the effects of 100- and 300-character explanations. Experiment 2 further explored the threshold of explanation length by including 50- and 1,000-character explanations. The results showed that 300- and 1,000-character explanations increased acceptance compared to 50-character explanations; however, no differences emerged among the 100-, 300-, and 1,000-character explanations. Additionally, trust ratings were unaffected by explanation length. These results suggest that AI explanations have a threshold; in this study, AI explanations exceeding 100 characters in Japanese (approximately 50 words in English) did not lead to further changes in users' decisions to accept or reject AI recommendations.