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#### **Author**

Yang, Yiqiong

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# Feedback-related and Task-dependent Post-error Slowing

Yiqiong Yang

University of Cambridge, Cambridge, Cambridgeshire, United Kingdom

## Abstract

Post-error slowing describes a delayed response in action after error commission. PES is a key metric of error monitoring that individuals possess self-reflective information processing, which is crucial for adaptive behaviour in learning. Studies seeking to ascertain the relationship between learning, feedback and PES remain rare. The current study aims to investigate the role task and feedback played in the magnitude of PES. Participants ( $N = 487$ , Mage = 23.77 years,  $SD = 5.8$ ) performed three cognitive tasks: Flanker, Numeric and Science knowledge task. A 2 (Type of trial)  $\times$  3 (Task)  $\times$  2 (Feedback) mixed ANOVA estimated by REML was conducted; participant was treated as a random effect. We found a significant PES effect where the post-error RT is slower than the post-correct RT. We also found a significant effect of task, feedback, and Task  $\times$  Feedback interaction.