UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Learning from errors: Effects of feedback timing and warnings on cueâ€“target and errorâ€“target recall

Permalink

https://escholarship.org/uc/item/3r83x8wc

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 47(0)

Authors

Folger, Isabel

Hausman, Hannah

Publication Date

2025

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at https://creativecommons.org/licenses/by/4.0/

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Learning from errors: Effects of feedback timing and warnings on cue–target and error–target recall

Isabel Folger
University of California, Santa Cruz, Santa Cruz, California, United States

Hannah Hausman
University of California Santa Cruz, Santa Cruz, California, United States

Abstract

Erroneous guessing with corrective feedback enhances recall, with immediate feedback often outperforming delayed feedback. According to the errors-as-mediators hypothesis, immediate feedback strengthens error–target associations, improving recall. Alternatively, the semantic encoding and episodic discrimination hypothesis posits that immediate feedback facilitates strategic inhibition of errors, enhances target encoding, or both.

This study examines how feedback timing (Immediate vs. Delayed) and post-error warnings (Warning vs. No Warning) impact recall. Participants studied weakly related word pairs (e.g., "swim–float") by guessing the target and receiving feedback either immediately, after a 5-minute delay, or with an immediate warning and delayed feedback.

In Experiment 1, delayed feedback reduced cue–target recall, while warnings modestly mitigated this effect without reaching statistical significance. Experiment 2 revealed that delayed feedback improved error–target recall, while warnings nonsignificantly impaired recall.

These findings challenge the errors-as-mediators hypothesis, suggesting that immediate feedback optimizes learning by enhancing encoding and episodic salience of the correct target.

In D. Barner, N.R. Bramley, A. Ruggeri and C.M. Walker (Eds.), *Proceedings of the 47th Annual Conference of the Cognitive Science Society* ©2025 the author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY).