Retrieval practice based on recognition memory: testing the retrieval effort hypothesis
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Experiment 1: recognition memory vs. restudying

- Between-subjects design, N = 76
- Recognition memory: typical Old/New task
- Matching for Age, Education, FSIQ, Verbal Memory
- Manipulation of the intervening tasks:
  - 2 successive study trials
  - Study + Group
  - 2 successive test trials
  - Test + Group
- Main outcome: Performance at final test (25 min. delay)

Results 1

- Before final test, study duration was on average 11 minutes in the "Study-Test" group, 7.4 minutes in the "Study" group and only 6.3 minutes in the "Test" group.
- Still, "Study-Test" & "Test" conditions yielded better long-term memory (A,B), without increase in False Alarms (C), and "Test" condition led to better 25 minutes – retention (D).

Discussion

- Experiment 1 shows that the retrieval practice effect can be observed when retrieval is based on recognition memory rather than recall. This learning does occur during recognition testing.
- Importantly, both experiments show that the benefits of memory retrieval based on recognition memory are immune to negative side effects like extra false alarms.
- When retrieval is constrained to fast and automatic processes (around 320 ms), thus being mostly familiarity-based, the generation of elaborative retrieval cues and/or effortful (controlled) processing are quite unlikely. Even then, extensive restudying does not outweigh retrieval practice. Repeated automatic retrieval yields similar learning levels than extensive restudying, up to 6 months delay.
- Familiarity-based recognition memory can support a retrieval practice effect, and resists to a 6 months delay similarly to restudying, thus challenging a core prediction of the "Retrieval Effort Hypothesis".

References