Sorry! You lost me at restudy: The power of engagement during successive study

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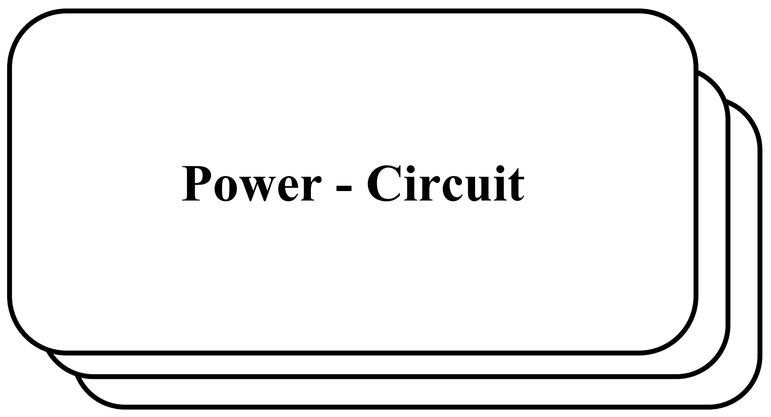
Introduction

Testing oneself on previously learned material leads to higher rates of recall and faster retrieval times (RT) compared to passive restudy. This effect is especially pronounced after *repeated rounds* of testing. However, past research fails to consider if participants in repeated passive restudy (the nearly ubiquitous control in retrieval practice literature) are engaging with the to-be-learned material. Passive restudy does not require engagement with the material. Hence, current literature may overestimate the benefits of testing over restudy due to lack of engagement during restudy.

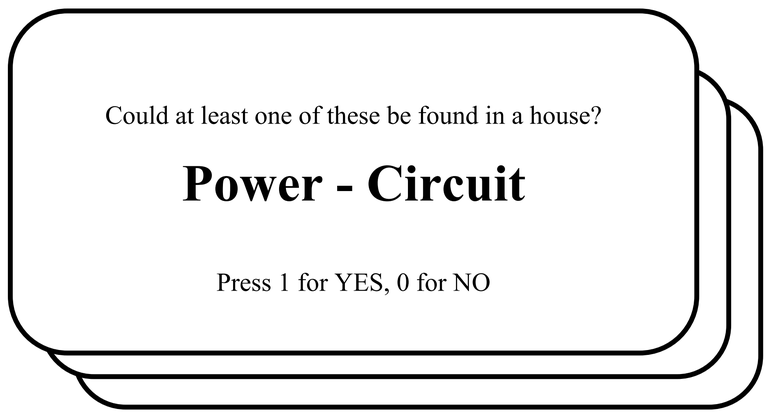
Research Question: *Will inducing semantic engagement during restudy leads to a higher level of recall and faster retrieval times compared to passive restudy?*

Materials and Procedure

- N=56 undergraduate participants
- Completed remotely using a desktop computer or laptop
- 76 word-pairs drawn from the Free Association Norms database
  - Similar average forward (.027) and backward (.029) associative strength
- Participants studied each word-pair over four rounds using Passive Restudy or Engaged Restudy before being given a final cued recall test



Passive Restudy Screen



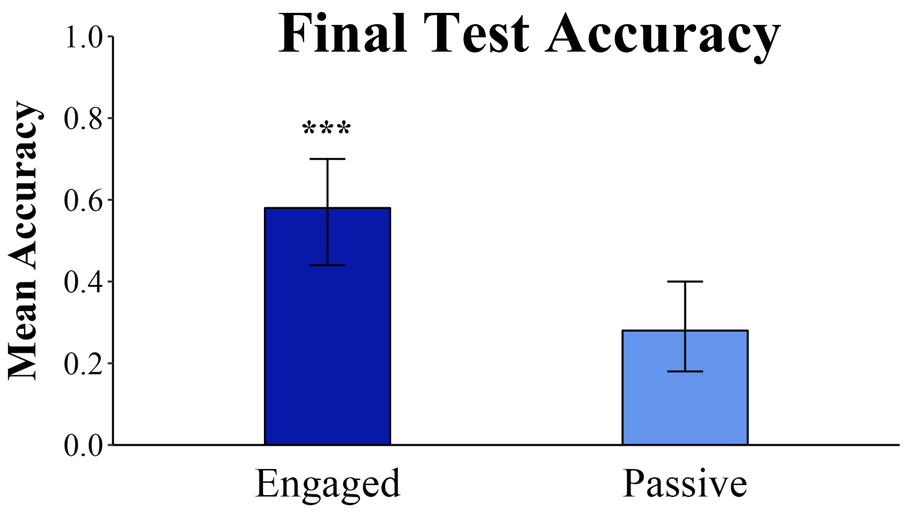
Engaged Restudy Screen

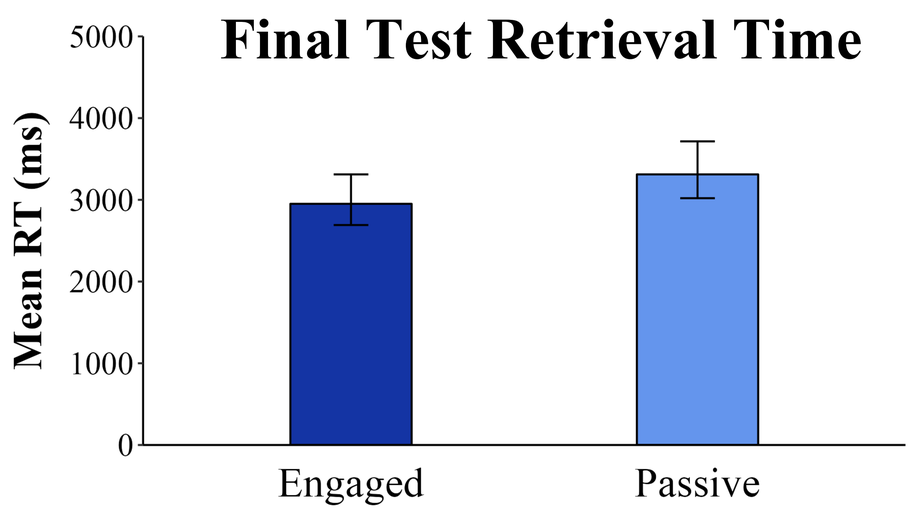
SEMANTIC ENGAGEMENT

Participants answer 4 yes/no semantic questions about each word-pair (one in each round of study):

1. "Could at least one of these [words] be found in a house?"
2. "Is at least one of these manufactured by humans?"
3. "Could at least one of these be given as a gift?"
4. "Is it possible to purchase one of these from a supermarket?"

Results and Discussion





- Semantic engagement during restudy boosted memory performance compared to Passive Restudy
- Retrieval times between Passive and Engaged Restudy had no significant difference suggesting that RT benefits are a product of retrieval practice
- Our results indicate that study can be modified to induce greater levels of memory retention
  - Cued recall testing may not be as superior a learning mechanism as the literature suggests
- Future research will focus on comparing Engaged Restudy to retrieval practice, using other forms of engagement during restudy, and how the number of rounds effects Engaged Restudy

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