Revisiting Recall in Relation to Reward-Based Learning:
An Investigation of the Testing Effect in Value-Directed Learning

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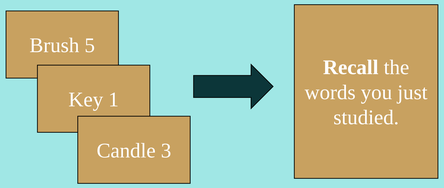
Restudying items resulted in *greater* **transfer of learning** of category-value pairs compared to **recalling** items.

Introduction

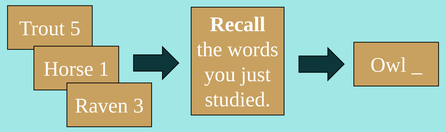
Value-Directed Remembering

People can selectively remember higher value information.[1]



Value-Directed Learning

People can use categories to learn and predict item importance.[4]



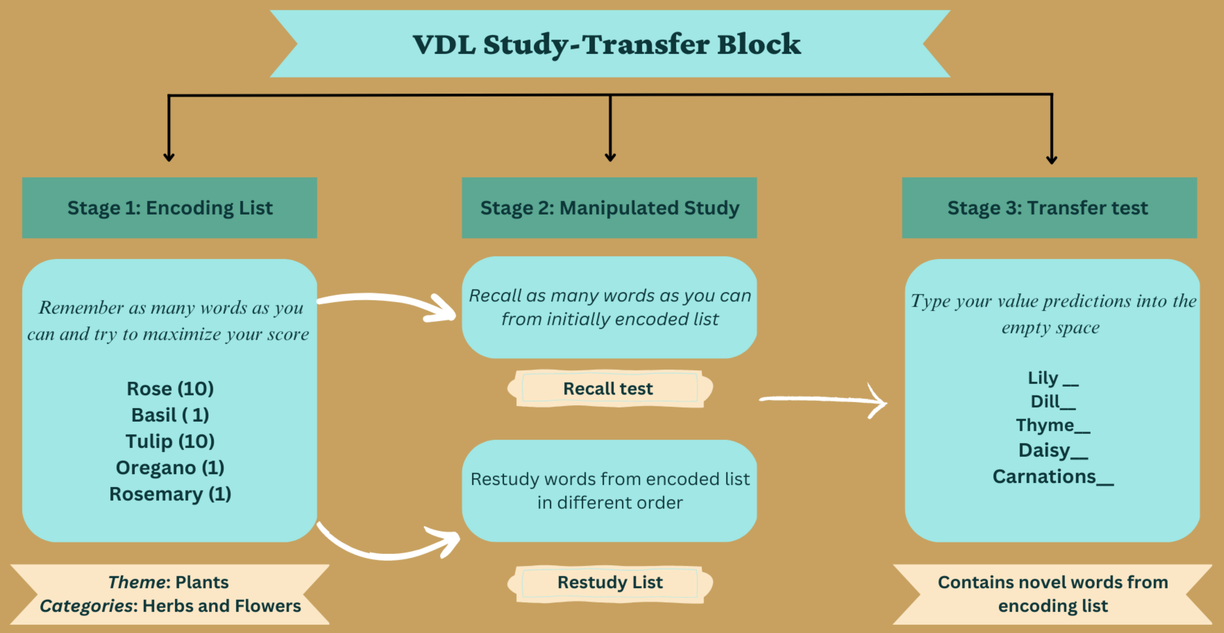
The Current Study

Research Question:
Can participants learn item values without the opportunity to recall studied items?

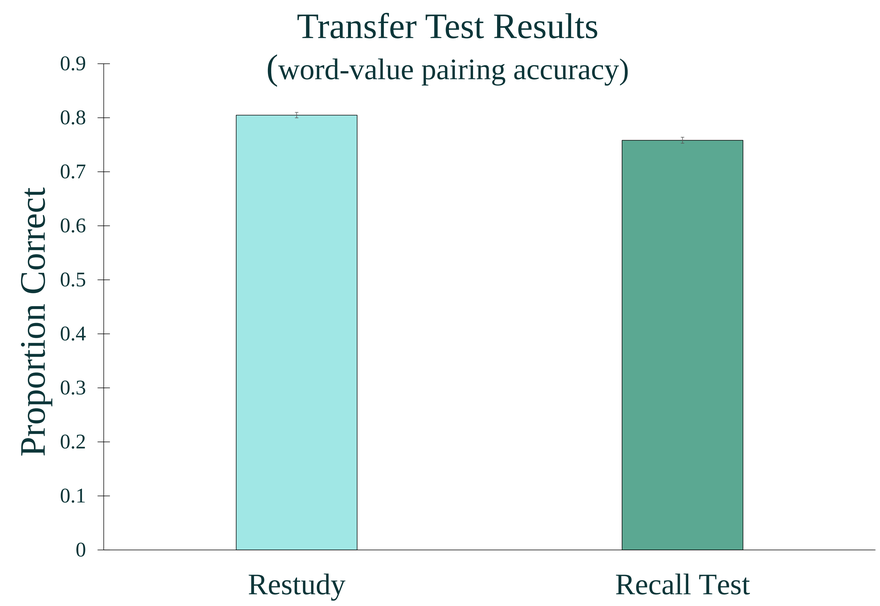
Hypothesis:
Recalling the studied items will result in higher accuracy in predicting novel item importance compared to restudying items.[2,3]

Methods

- 293 undergraduate students completed study-transfer blocks each with a unique theme
- Each block had a unique item theme and each theme had two categories
- Encoding strategy manipulated within-subjects:
  - [Initial Study, ***Recall***, Transfer] x 2 blocks
  - [Initial Study, ***Restudy***, Transfer] x 2 blocks



Results



Significant effect of encoding strategy:
t(11,878) = 45.41, *p* <.001 , *d* = 0.61
Restudied: *M* = 0.80 , *SD* = 0.40
Recalled: *M* = 0.76 , *SD* = 0.43

Discussion

- Participants had higher transfer scores when they restudied items
- This finding suggests that performance is not dependent on recall alone
- Future studies could investigate this effect between-subjects and increase the number of blocks completed for each condition

References

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2. McDaniel, M. A., Anderson, J. L., Derbish, M. H., & Morrisette, N. (2007). Testing the testing effect in the classroom. *EUROPEAN JOURNAL OF COGNITIVE PSYCHOLOGY*, *19*(4-5), 494-513,. 10.1080/09541440701326154
3. Pan, S. C., & Rickard, T. C. (2018). Transfer of Test-Enhanced Learning: Meta-Analytic Review and Synthesis. *Psychological Bulletin*, *144*(7), 710–756. https://doi.org/10.1037/bul0000151
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