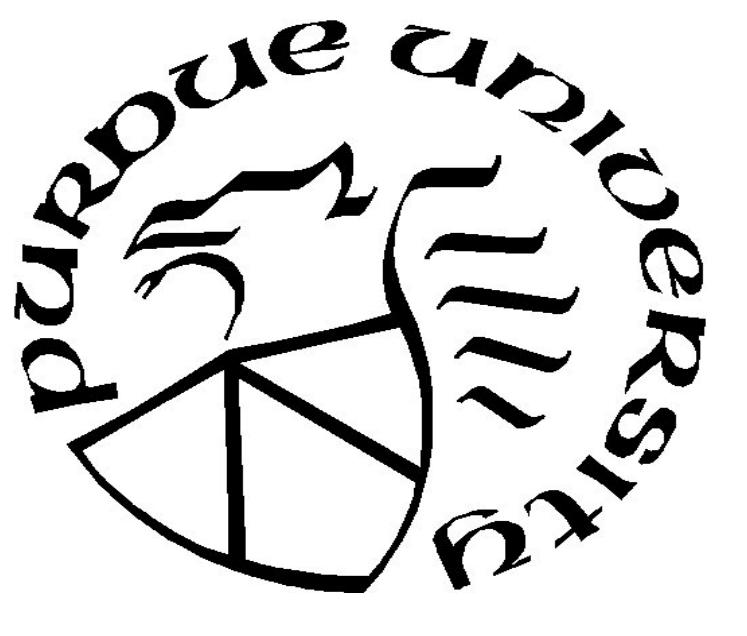




Does Self-scoring Enhance Learning?

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Introduction

- Retrieval practice is an effective learning activity, but the traditional retrieval practice paradigm involves restudying, which does not always improve learning (Roediger & Karpicke, 2006).
- Rereading the material after self-testing seems inauthentic as students frequently engage in self-scoring after completing a retrieval-based learning activity such as a practice test (Dunlosky & Rawson, 2015).
- Students struggle with accurately self-scoring their responses, and are often overconfident in the quality of their responses. (Dunlosky et al., 2011).
- Yet, self-scoring has been purported to improve memory (Sanchez et al., 2017).
- The present experiments examined the efficacy of self-scoring one's own retrieval practice responses as an alternative to restudying.

Method

Experiment 1

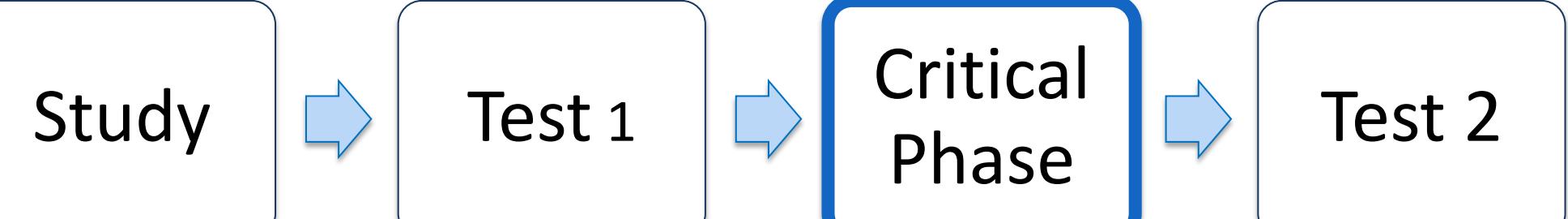
Participants:

Ninety people completed this experiment using Amazon Mechanical Turk

Materials:

15 psychology terms and their definitions from OpenStax Psychology

Design:



Critical Phase – 3 between-subjects conditions ($n = 30$):

- Restudy Full Definition
- Restudy Full Definition + Test 1 Response
- Self-score Test 1 Responses

Experiment 2

Participants:

Forty people completed this experiment using Amazon Mechanical Turk

Materials:

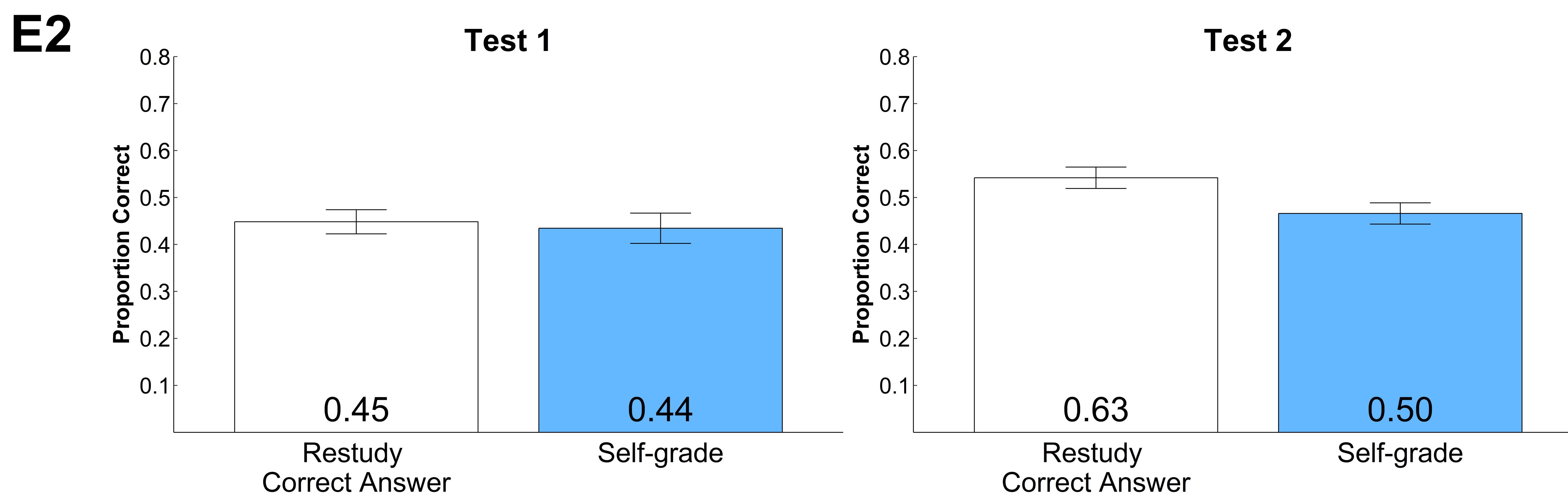
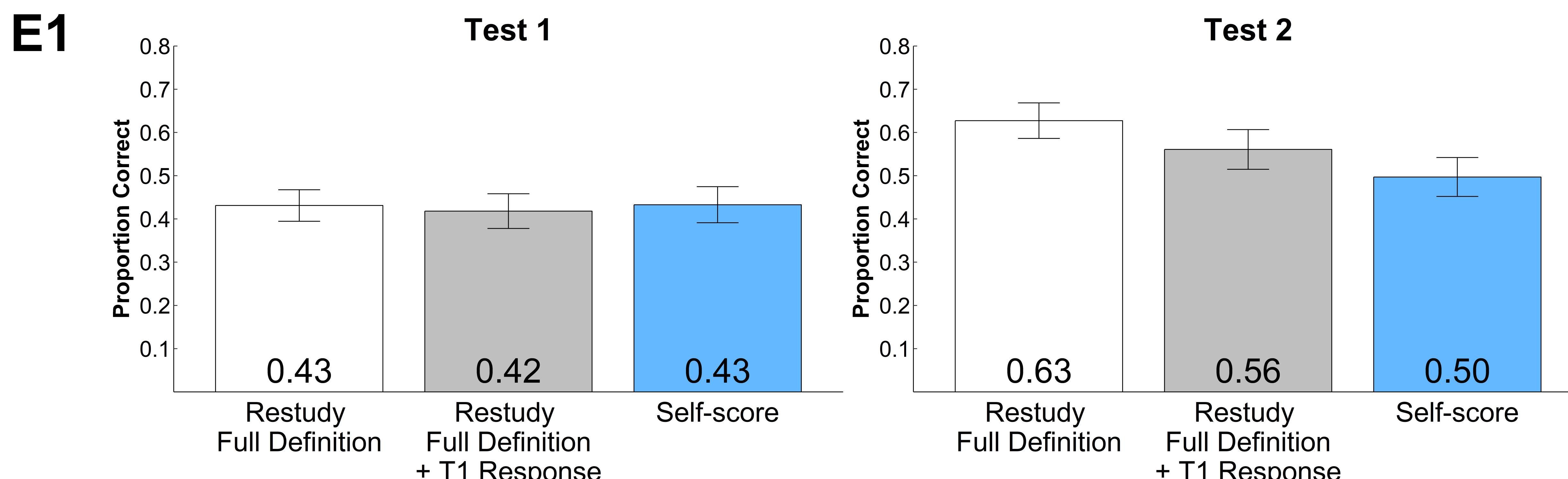
Two lists of 10 psychology terms and their definitions from OpenStax Psychology

Design:

Experiment 2 was identical to Experiment 1 with two key changes:

1. The Restudy Full Definition + Test 1 response condition was removed
2. Experiment 2 used a within-subjects design
 - a. For List A, the critical phase involved restudying
 - b. For List B, the critical phase involved self-scoring
 - c. List Order and Learning Activity were fully counterbalanced

Results



Self-scoring Performance

Experiment	Calibration	Correlation w/ T2	Resolution	Correlation w/ T2
1	0.16	-0.52	0.68	0.17
2	0.16	-0.24	0.52	-0.16

Conclusions

- Self-scoring after an initial retrieval attempt did not improve memory on an immediate, cued-recall test.
- Participants struggled with accurately self-scoring and exhibited severe overconfidence.
- However, more accurate self-scorers tended to outperform more overconfident self-scorers on the final test.