Does Reading a Background Text Enhance Retrieval Practice?
Kyle A. Ward and Jeffrey D. Karpicke
Purdue University

Introduction

- Repeatedly recalling information (i.e., retrieval practice) has been shown to greatly improve long-term retention relative to repeated study. (Karpicke & Grimaldi, 2012)

- Reading relevant background texts prior to studying individual concepts has also been shown to improve learning. (Rawson & Kintsch, 2002)

- In the present study, we examined whether reading a background text prior to retrieval practice of individual concepts improves the mnemonic benefits of retrieval.

- We also examined how individuals' metacognitive judgments are affected by reading the text.

Method

Participants and Design. 2 (text vs. no text) x 2 (study vs. retrieval) between-subjects design. We also included a text-only control condition. 15 subjects were randomly assigned to each condition.

Materials. One 259-word text on the human ear. We identified 11 important concepts in the text and 27 key words.

Procedure. Session 1: Subjects assigned to the text condition read the text for 5 minutes at the beginning of the experiment. Next, subjects learned the important concepts by alternating between study and math periods (study condition), or by alternating between study and retrieval periods (retrieval condition). Subjects in the text-only control did not re-engage with the material after reading the text. At the end of session 1, all subjects were asked to predict the number of concepts they could correctly recall in two days (Judgment of Learning).

Session 2: Two days later, all subjects completed a final cued recall test over the 11 important concepts. Afterwards, subjects performed a word-sorting task. During the sorting task, subjects were shown key words from the text and told to arrange them on the screen so that related words were close together, and unrelated words were far apart.

Discussion

- During initial learning in the retrieval condition, there was an advantage of reading the text on the first recall trial. However, this advantage did not persist beyond the first trial.

- Practicing retrieval produced the best performance on the final test, but reading the text showed no benefit to learning.

- There were no differences in sorting task performance among the conditions.

Acknowledgment

Thanks to Phillip J. Grimaldi for assistance with programming and data analysis.