

CAN INSTRUCTIONS AT TEST CAUSE A SHIFT IN ENCODING STRATEGY?

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Introduction

Previous research has shown that older adults demonstrate a memory benefit when asked to provide remember/know (R/K) judgments in associative recognition tests (Naveh-Benjamin & Kilb, 2012). However, the purpose of collecting R/K judgments is to determine whether participants are using recollection- or familiarity-based processes during recognition (Tulving, 1985), and the use of RK responses was not initially intended to be a mnemonic aid.

One possibility is that the R/K instructions create a shift in learning strategy. Specifically, the R/K instructions could be drawing participants' attention to learning the context when given additional study opportunities. To test this hypothesis, we offered participants a second opportunity to learn a study list after they were asked to provide R/K responses.

Hypothesis

If R/K instructions create a shift in encoding strategies, then older participants should perform better after being given the instructions and a second opportunity to view the study list.

Method

The participant sample consisted of 53 undergraduate students from Plymouth State University and 22 older adults recruited from around the community. All participants were presented with a study list of 80 word pairs, followed by a series of associative recognition tests in which they were asked to discriminate between 10 intact and 10 recombined pairs (see example below). Participants were given a second chance to view the study list preceding the final test.

| <u>Study list</u> | <u>Associative test</u> |
|-------------------|-----------------------------------|
| book-hat | book-hat → intact pair |
| cat-pen | cat-rose → recombined pair |
| desk- rose | |

Experimental Group

At test, participants were sometimes asked to provide R/K judgments. If a pair was recognized, they provided an additional response as follows:

| | |
|-----------------|---|
| <i>Remember</i> | Seeing the word pair triggers a unique memory that occurred during study |
| <i>Know</i> | You are confident that you saw the word or pair, but you are not sure why |
| <i>Guess</i> | You believe there is a 50/50 chance that you are correct |

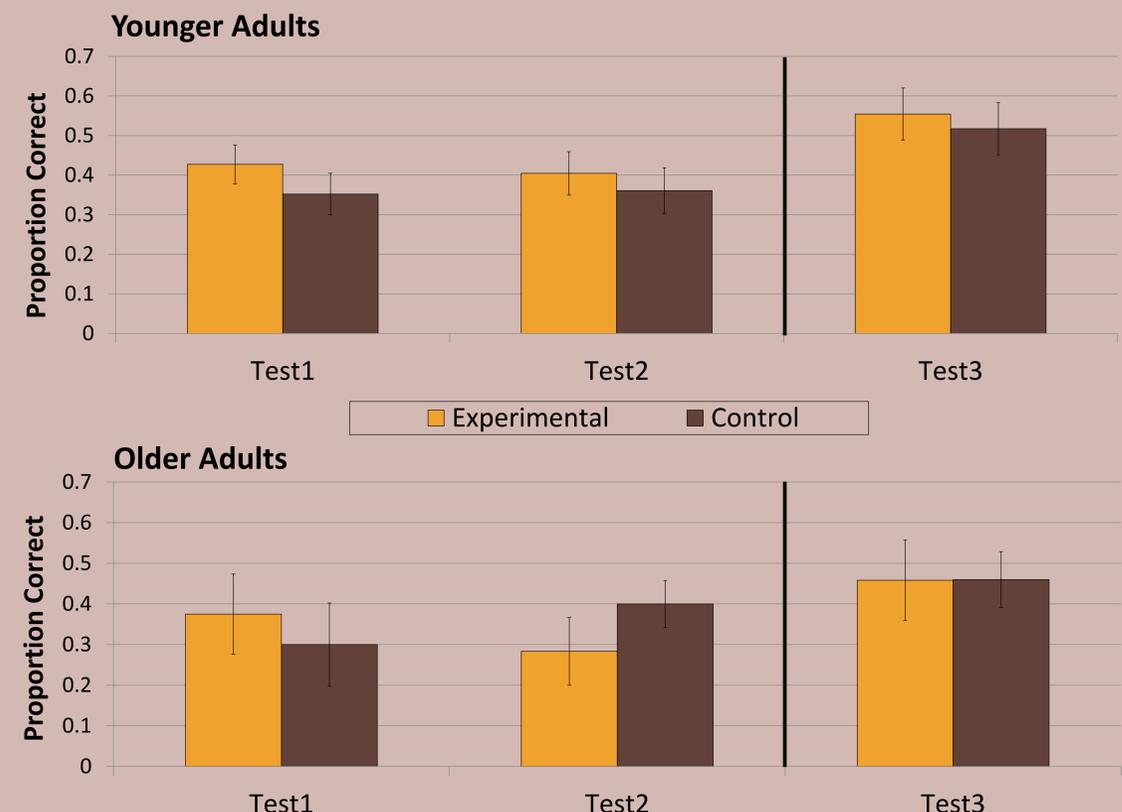
The procedure occurred in the following order:

- **Study phase:** Learning with no knowledge of R/K instructions
- **Test 1:** Testing with no knowledge of R/K instructions
- **R/K instructions were described**
- **Test 2:** Testing with R/K instructions
- **Study Phase 2:** A second chance to view the same study list
- **Test 3:** Testing with knowledge of R/K instructions

Control group

Participants were given the same procedure as the experimental group except they were never instructed in how to provide R/K judgments.

Results



- Overall performance increased from Test 2 to Test 3 in young but less so for older adults.
- Critically, older adults in the experimental group benefited more from the repeated study list than the control group.

Discussion

- Our results indicate a memory benefit from the use of R/K instructions in older adults but not in younger adults.
- These results replicate previous research by Naveh-Benjamin & Kilb (2012) showing a benefit of R/K responses in older adults that was not present in the younger sample.
- These results suggest that the reason older adults benefit from R/K instructions is that it changes their learning strategies so that they pay more attention to the context.

References

- Naveh-Benjamin, M. & Kilb, A. (2012). How the measurement of memory processes can affect memory performance: The case of remember/know judgments. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 38, 194-203.
- Tulving, E. (1985). Memory and consciousness. *Canadian Psychology/Psychologie canadienne*, 26, 1-12. doi:10.1037/h0080017