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**Error Correction in Older and Younger Adults**  
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### Background

#### Hypercorrection Effect
- Confidently-held errors are more likely to be corrected after feedback than errors held with low levels of confidence (Butterfield & Metcalfe, 2001)

#### Prior Knowledge and Error Correction
- Prior knowledge is a better predictor of error correction than subjective confidence for both younger and older adults (Sitzman et al., 2015)
- Older adults may revert back to incorrect prior knowledge after a delay despite correcting errors on an immediate test (Okun & Rice, 1997)

### Research Question
- Do participants forget their initial error after it has been corrected or do they remember their initial incorrect response?
- How does memory for the original error change over time?

### Study #1

**Participants:**
- 56 Older adults  
- 69 Younger adults

**Materials:**
- 119 General Knowledge questions (easy, medium, & hard)

**Judgments:**
- Confidence judgments: 0 (not confident at all) – 100 (Completely confident)
- Knew-it-all-along judgment (KIAA): 1 (that’s new to me) – 7 (I knew that all along)

#### Test 1
1. Answer question (self paced)
2. Rate Confidence (self paced)
3. Receive feedback (correct answer) (5 sec. each)
4. Make a knew-it-all-along judgment (KIAA): 1 (that’s new to me) – 7 (I knew that all along)

#### Retention Interval
- 6 minutes or 1 week

#### Test 2
1. Answer questions from Test 1
2. Rate confidence

### Study #2

**Participants:**
- 6 Minutes: 21 younger adults  
- 1 Week: 13 younger adults

**Materials:**
- 120 General Knowledge questions (easy, medium, & hard)

**Judgments:**
- Confidence judgments: 0 (not confident at all) – 100 (Completely confident)
- Knew-it-all-along judgment (KIAA): 1 (that’s new to me) – 7 (I knew that all along)

#### Test 1
1. Answer question
2. Rate Confidence
3. Receive feedback (correct answer) (5 sec. each)
4. Make a knew-it-all-along judgment (KIAA)
5. Retain initial answer

#### Retention Interval
- 6 minutes or 1 week

#### Test 2
1. Answer questions from Test 1
2. Rate confidence

### Discussion
- Older adults largely maintain error correction over a delay, a short delay, and a 1 week delay
- Younger adults retain fewer corrected errors after a 1-week delay
- Prior knowledge is more strongly related to error correction than confidence
- Prior knowledge did not impair older adults from maintaining corrected errors
- Out of all the errors corrected younger adults remember their initial incorrect response seventy five percent of the time in the six minute condition
- Memory for initial errors decreased in the one week condition
- Future research will explore older adults memory for their incorrect responses

### References