

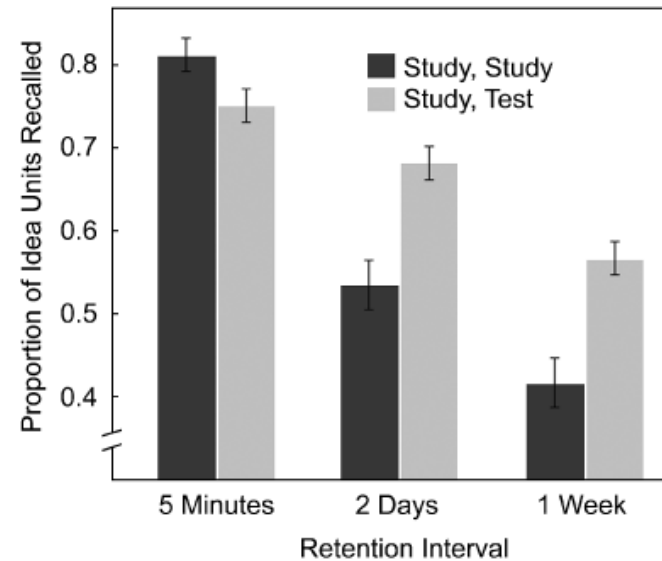
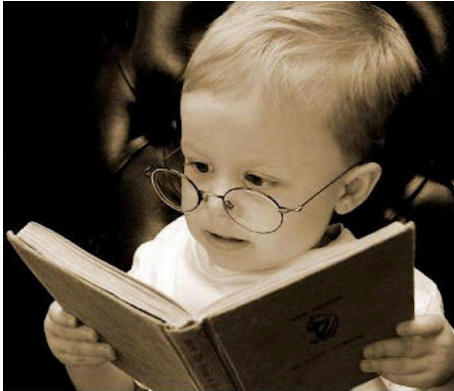
Summarizing as Retrieval Strategy versus Re-reading. Which Learning Activity Works Best?



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The Testing Effect

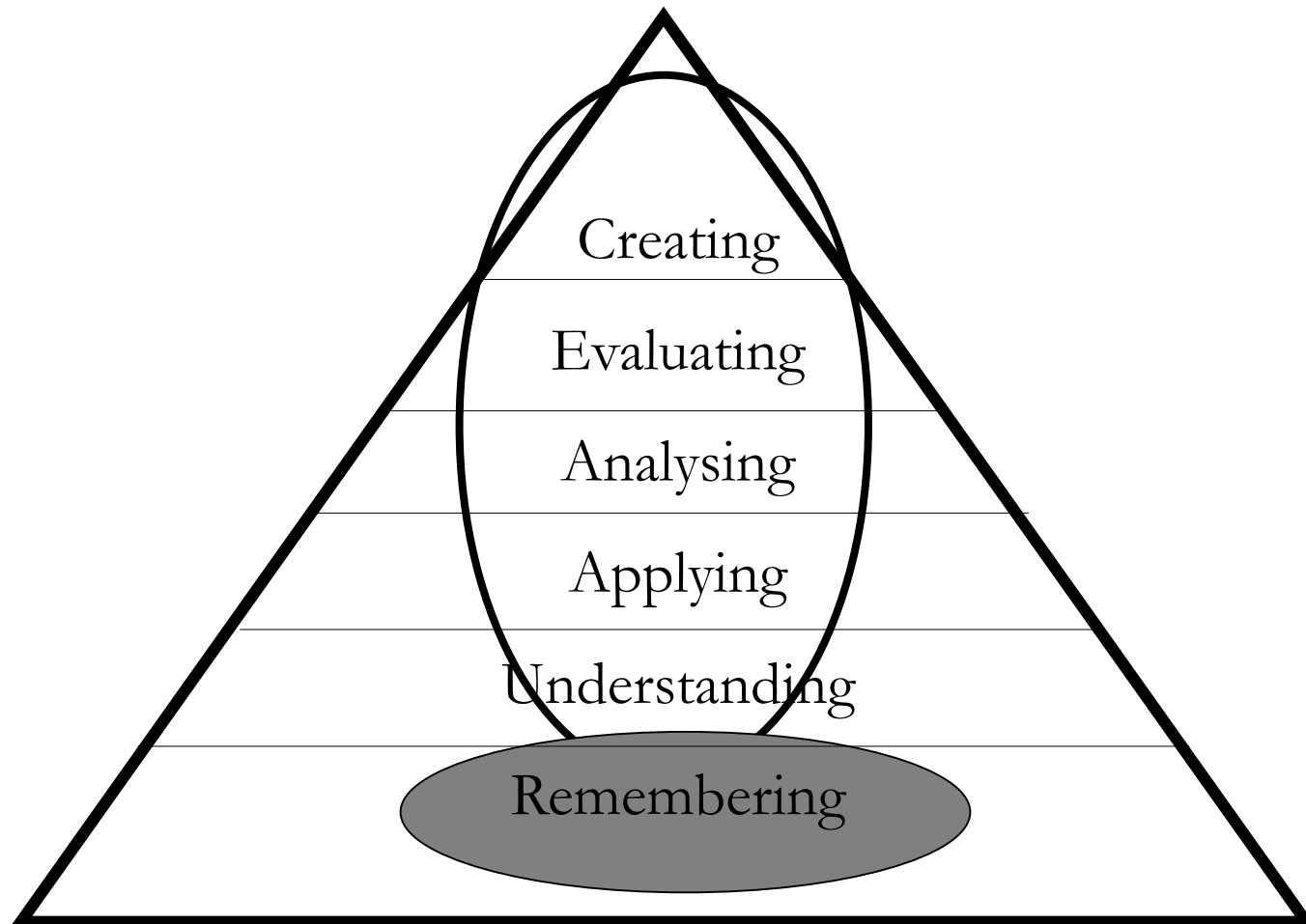


Roediger and Karpicke
(2006)

The Testing Effect

- Long research history (Gates, 1917; Rothkopf, 1960; Spitzer, 1939)
- Wordlists of unrelated wordpairs
- In 2006 renewed interest for the testing effect (Roediger and Karpicke, 2006)
- Since then also interest for learning from expository texts and ecological settings
- But still focus on retention of factual information/ verbatim text
- However.....

The Testing Effect and Modern Education



Bloom et al., 1956

Research Question

Can the testing effect be replicated for more higher order learning goals (i.e., understanding/comprehension) using summarization as retrieval activity?

Method and Procedure

- 32 fourth-year secondary school students
- Within-subject design
- 2 expository texts (\pm 500 words)
- General Question test with 10 questions (Andre, 1979)

Method and Procedure

Learning Phase	Test Phase
<ul style="list-style-type: none">• Read text 1 (6 minutes)• Sudoku puzzle• Re-read or Summarize text 1 (6 minutes)• Sudoku• Read text 2 (6 minutes)• Sudoku puzzle• Re-read or Summarize text 2 (6 minutes)	<ul style="list-style-type: none">• General question tests (10 questions; 12 minutes)

Examples

- In order to measure comprehension a general question test was constructed using the categorization of Andre (1979). The questions required participants to combine information from more than one idea unit.
- Question 1: ‘Explain how the liver can recover from steatohepatitis’.
- Question 2: ‘The author says in the text that people often eat more food than they need. Can you explain why this surplus food is stored and not excreted?’

Scoring

- Relevant Idea Units

Expert summary; Divided in Idea Units; How much of these Idea Units were included in the students' summaries?

- Post Test Idea Units

All Idea Units of the general questions test; How much of these Idea Units were included in the students' summaries?

Results (1)

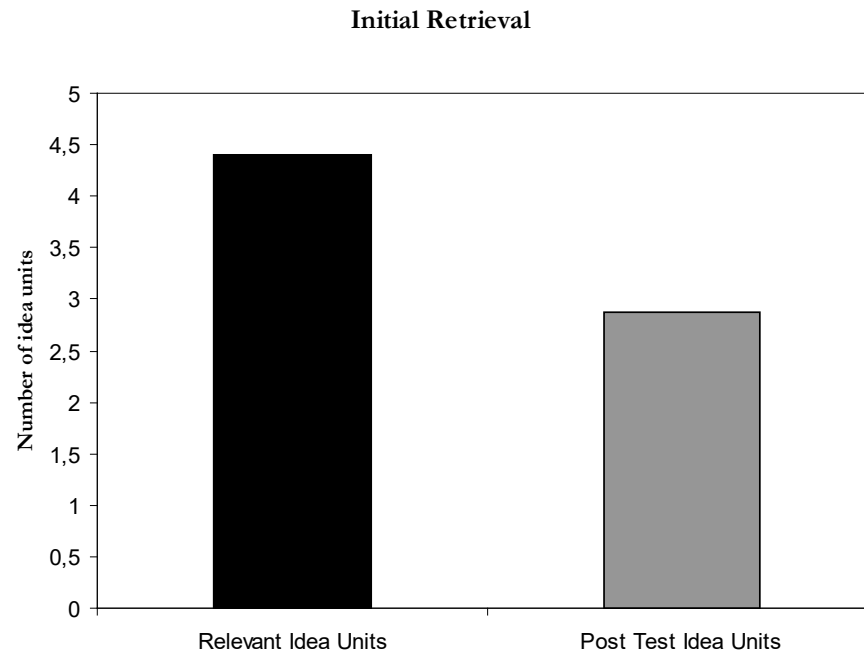


Figure 1. Mean number of idea units retrieved during summarization

Results (2)

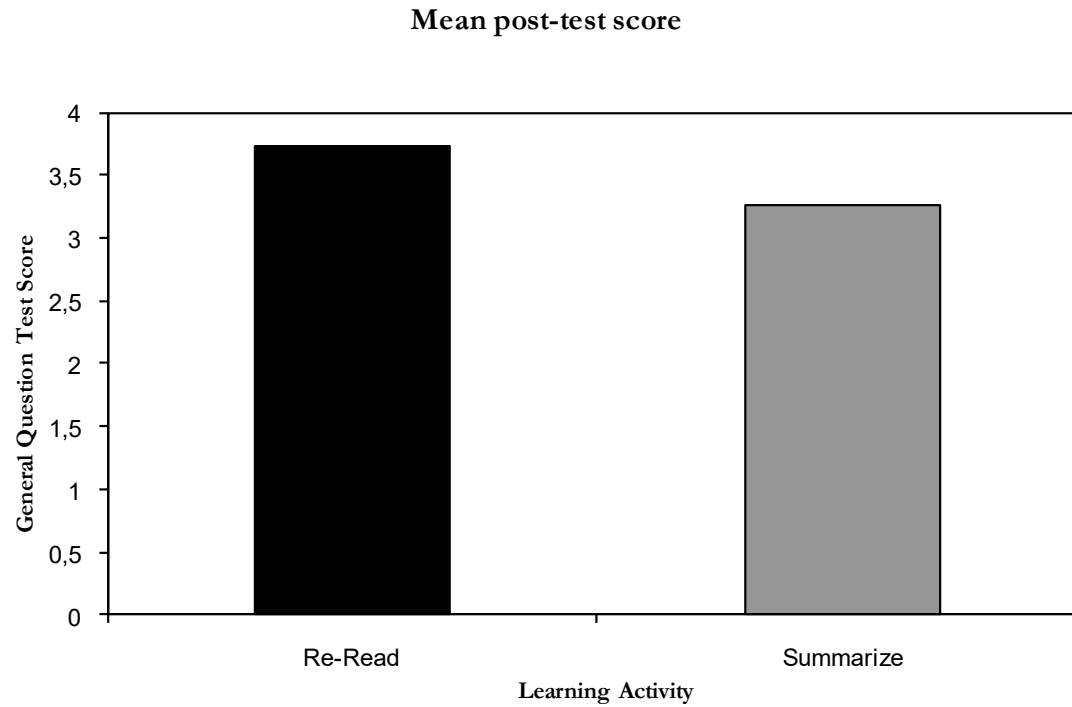


Figure 2. Mean general question test score

Discussion

- The summaries of students were of low quality (verbatim)
- Initial retrieval was low
- Might training help?
- Do students need more time?
- Or is the testing effect not applicable to higher order learning goals?

- I invite you to attend my EARLI presentation
- **When:** Today; 11.00-12.30 o'clock
- **Where:** Building 1, Seminar Room F
- **What:** A presentation of my 2nd study in which we trained students, gave them more time and also investigated the effect on traditional learning goals (knowledge)