The testing effect reloaded

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Preface

Second and third study of my PhD-trajectory

- Experiment 2: Repeated and new questions
- Experiment 3: Judgements of learning
Testing

- University students see test as a means to....
  - Diagnose: “A test provides insight in what I not yet master”.
  - Learn: “By making a test I remember much more”.
  - Instruct: “A test provides insights in the exam (difficulty, type of questions)”.
Testing effect

Testing effect research mainly focuses on repeated factual knowledge questions.

<table>
<thead>
<tr>
<th>Learning Phase</th>
<th>Post-test</th>
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<tbody>
<tr>
<td>Read text</td>
<td>Initial test</td>
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<td>1. What is the name of the Dutch Queen?</td>
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<td>2. When was the Queen born?</td>
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Blooms Taxonomy

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation
Experiment 2

1) Can the testing effect be replicated for new questions?

2) Can the testing effect be replicated for application questions?
Method and procedure

- 38 participants (22 male, 16 female)
- Between 15 and 16 years old ($M = 15.91; SD = 0.67$)
- Two conditions: LLLL; LTLT
- Expository text (899 words) about probability calculations
- Post-test: four types of questions: repeated facts, new facts, repeated application, new application
Conclusion

• Retrieving information through testing fosters remembering of retrieved facts, but not non-retrieved facts.

• Retrieving information through testing fosters application of the knowledge.

• Answering application questions seems to foster repeated and new application questions.
Experiment 1

1) Helps retrieving information through testing to make more accurate judgements of learning?
2) Helps retrieving information performance?
Method and procedure

• 42 participants (20 males, 22 females)
• Between 15 and 16 years old (M = 15.53; SD = 0.63)
• Two conditions: LLLL+; LTLT+
• Expository text (899 words) about probability calculations
• Post-test with factual knowledge and application questions
• Judgements of learning
Conclusion

• Retrieving information through testing leads to less overestimation of factual knowledge

• Retrieving information through testing leads to underestimation of application of the acquired knowledge

• Testing leads to increased performance on application questions
Future...