



Maastricht University

*Leading
in Learning!*

STUDY SMART

How can we help students
develop effective learning strategies?



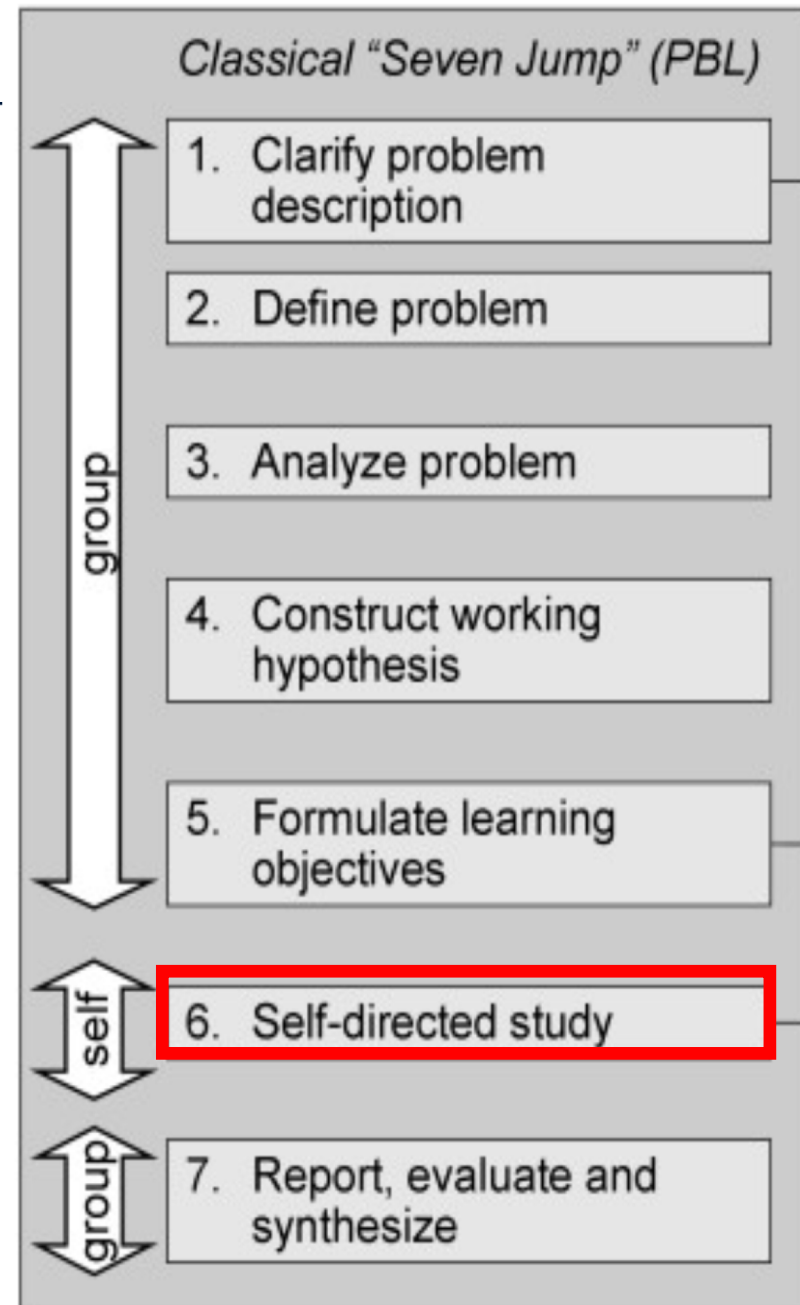
NRO

NATIONAAL REGIEORGaan
ONDERWIJSONDERZOEK

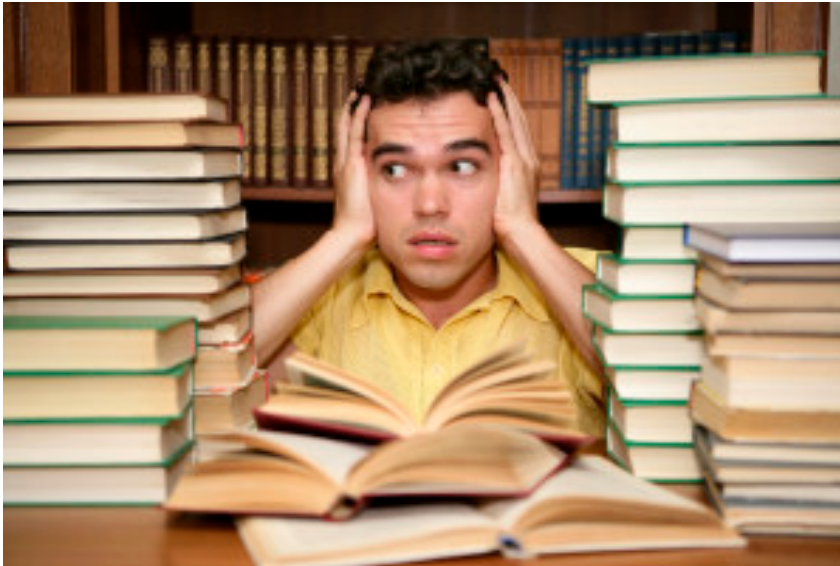


Anique de Bruin
Felicitas Biber

School of Health Professions Education
Maastricht University - The Netherlands



60-90% low effective strategies



What are effective learning strategies?

(those that promote long-term retention
& comprehension)



Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology

Psychological Science in the
Public Interest
14(1) 4–58
© The Author(s) 2013
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1529100612453266
<http://pspi.sagepub.com>


**John Dunlosky¹, Katherine A. Rawson¹, Elizabeth J. Marsh²,
Mitchell J. Nathan³, and Daniel T. Willingham⁴**

¹Department of Psychology, Kent State University; ²Department of Psychology and Neuroscience, Duke University;

³Department of Educational Psychology, Department of Curriculum & Instruction, and Department of Psychology, University of Wisconsin–Madison; and ⁴Department of Psychology, University of Virginia

Idiosyncratic ideas & resistance to change

- ‘My strategies are effective’
- ‘These strategies don’t work in my case’

EDUCATIONAL PSYCHOLOGIST, 48(3), 169–183, 2013
Copyright © Division 15, American Psychological Association
ISSN: 0046-1520 print / 1532-6985 online
DOI: 10.1080/00461520.2013.804395

 Routledge
Taylor & Francis Group

Do Learners Really Know Best? Urban Legends in Education

Paul A. Kirschner

*Centre for Learning Sciences and Technologies
Open University of The Netherlands*

Jeroen J. G. van Merriënboer

*Department of Educational Development & Research and Graduate School
of Health Professions Education
Maastricht University*

Summarizing:

Write down main points

Distributing study/practice

repeat over study sessions

Interleaved practice:

Mix learning of related topics

Rereading

Self-explanation:

during reading; how does it relate to what I know?

Highlighting/underlining

Elaborative interrogation:

Ask yourself 'why' questions about facts

Self-testing:

Take a practice test

Exercise



Highly effective	Moderately effective	Not effective

Make three piles:

- Learning strategies that highly effective for improving understanding and for promoting long term learning
- Learning strategies that are moderately effective
- Learning strategies that are not effective

- *You decide how big each pile is!*

Self-explanation

Effective learning strategies

- **Cognitive effect:** Active retrieval of knowledge
- **Metacognitive effect:** Provide direct & undeniable feedback to students

Summarizing

Distributed

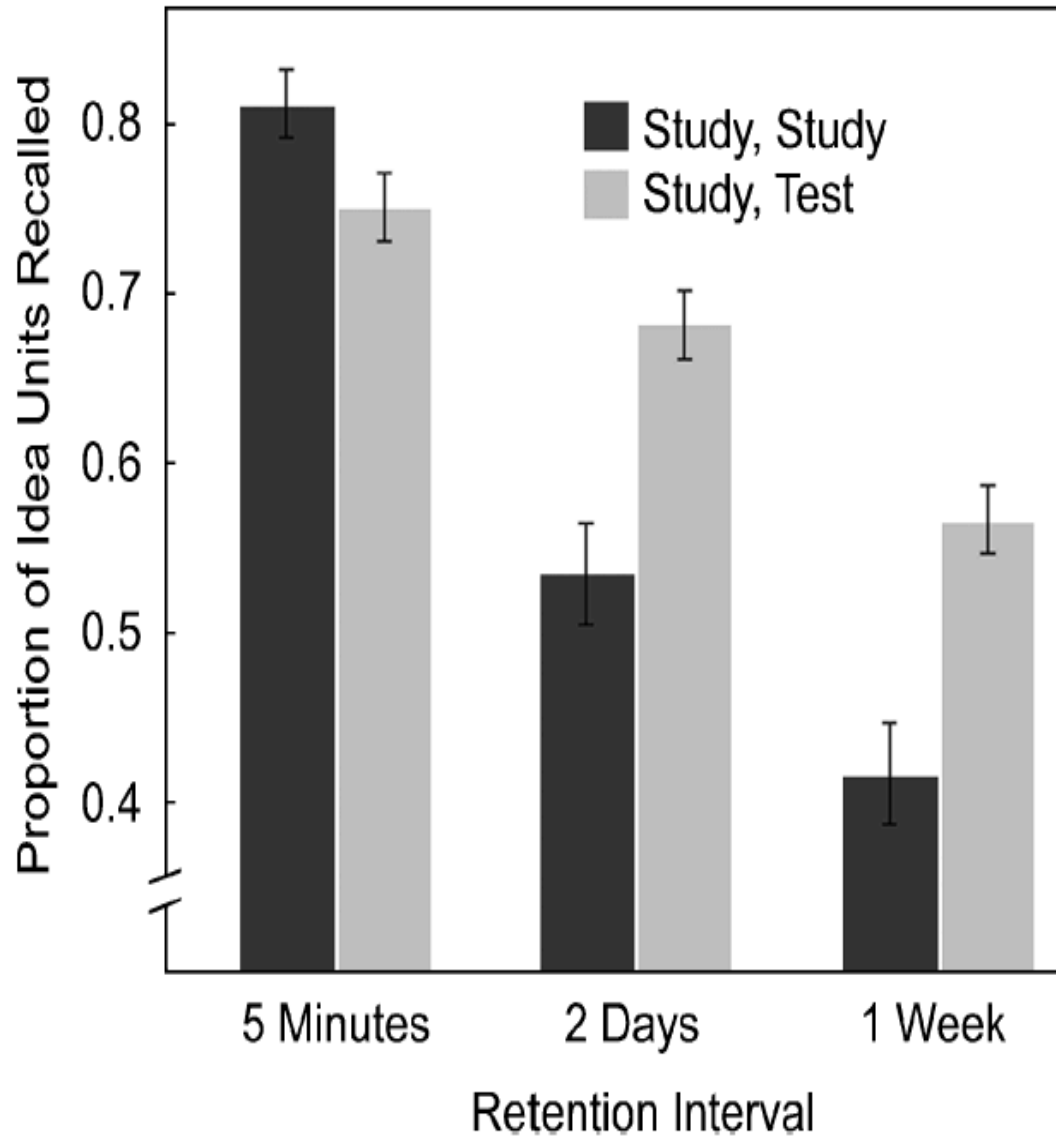
Interleaved

Underlining

Elaboration

Rereading

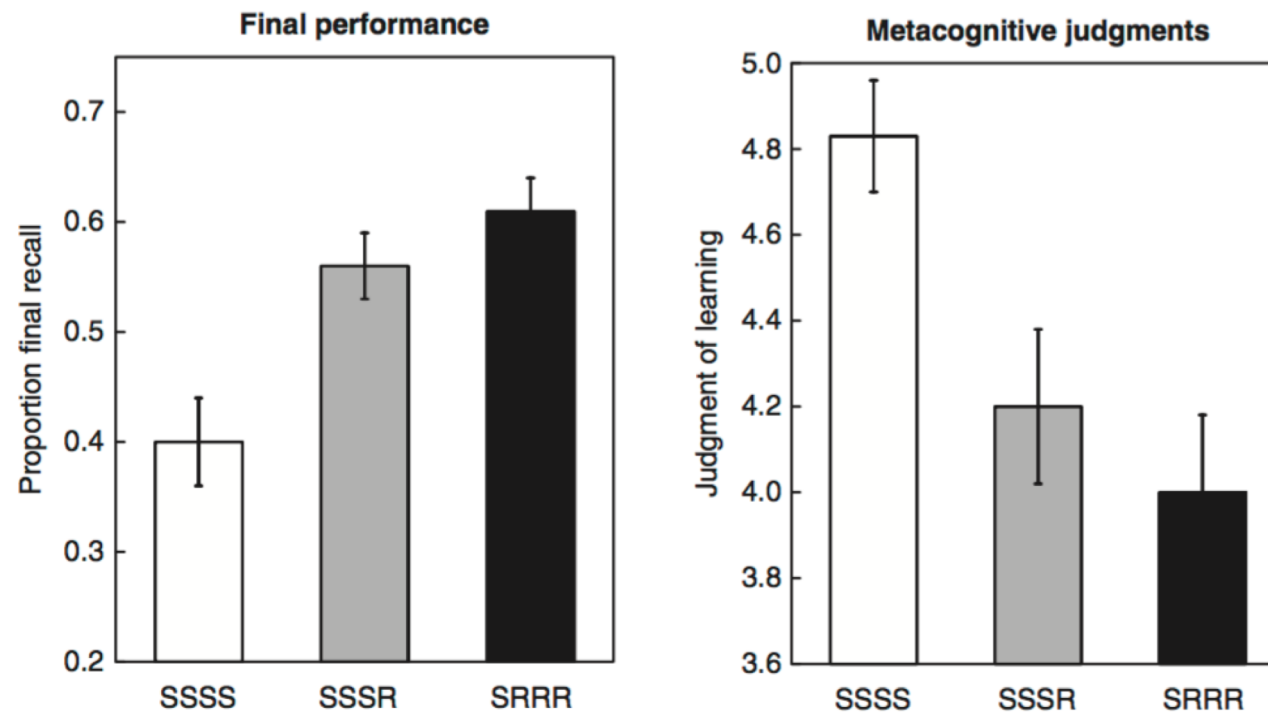
Self-testing



**Source:
Roediger &
Karpicke,
2006**

EXPERIENCED LEARNING differs from ACTUAL LEARNING

Study versus practice test (retrieval)



Source:
Nunes &
Karpicke, 2015

- **Preliminary results reveal: More practice testing reported, less rereading**
- **Next steps:**
 - **from self-report to behavioral measures**
 - **measuring effort regulation on effective strategies**



Goal

1. **Develop an effective learning strategy training**
2. **Train the trainer program**
3. **Research**
4. **Higher education innovation community**





**Thanks to
Gino Camp – Walter Jansen –
Pauline Aalten – Irma Kokx-
Mirjam Oude Egbrink – Harm
Hospers – SRL EDLAB project
team**

Thanks for your attention!

anique.debruin@maastrichtuniversity.nl