

# The 3R Study Strategy

Optimizing the effectiveness of the 'Read-Recite-Review' study strategy in learning from text

Pauline Reijners, Liesbeth Kester, Sandra Wetzels, Paul Kirschner  
Open University of the Netherlands - CELSTEC

Centre for Learning Sciences and Technologies

Open Universiteit  
celstec.org



# Overview

- Setting
- Background
- The 3R Study Strategy
- Research question & hypothesis experiment 1
- Participants & Design
- Procedure & Material
- Work plan



# Background

- Testing-effect
- Study strategies
- Enhancing the effectiveness and efficiency of self-testing
- Instructional interventions



# Setting

- CELSTEC 'Learning & Cognition programme'



Promotor Prof. dr. P. A. Kirschner

## Supervisors

Dr. L. Kester



Dr. S. A. J. Wetzels



**Centre for Learning Sciences and Technologies**

**Open Universiteit**  
**celstec.org**



# The 3R Study Strategy

- Three elements:
  - Read: reading a text or text passage
  - Recite: recitation of what is remembered
  - Review: reading the text of several passages second time
  
- Characteristics:
  - Learner-controlled testing
  - Can be used to improve learning



# Research question & hypothesis experiment 1

*Research question:*

*‘What is the effect of activating learners’ prior knowledge on the effectiveness of the 3R-strategy and ones performances on a final test?’*

*Hypothesis:*

*‘Participants in the 3R+ condition (with activation prior knowledge) will outperform participants in the other conditions on a retention test and participants in the 3R condition will outperform those in the control condition’*



# Participants & Design

- Participants

About 60 secondary school students (havo/vwo year 4/5)

- Design

randomized three group design that compares 3 learning strategies:

- A 3R+ strategy group in which prior knowledge activation is incorporated
- A 3R strategy group
- A control group ('read-read-read' strategy)



# Procedure & Material

- Procedure
  - Learning phase
  - Distracter task
  - Test phase
- Material
  - Prose texts (for example history texts)
  - Sudoku puzzles
  - Recording devices





# Work plan

<b>Month</b>	<b>Action</b>
8/2011–12/2011	Literature study: testing-effect, 3R strategy, reading comprehension, long term retention, retrieval processes, reflection, learner control, adaptive learning systems
12/2011-4/2012	Write literature review for dissertation
12/2011-4/2012	Prepare experiments: develop materials, contact schools from secondary education
5/2012–12/2012	Experiment 1: Set up, analysis and report results
1/2013-8/2013	Experiment 2: Set up, analysis and report results
9/2013-4/2014	Experiment 3: Set up, analysis and report results
5/2014-12/2014	Experiment 4: Set up, analysis and report results
1/2015-8/2015	Finish dissertation

