The impact of video-based instruction on students' task knowledge and summarizing skills

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The impact of video-based peer modeling

The instructional videos
- Camtasia/Morae
- Models = 'actors'
- Scripts < think-aloud protocols

The writing task
- New
- Academic writing task
- Synthesizing multiple sources (empirical studies)
- Source material: index cards

How to tie your shoes
How to tie your shoes (manual)

Observational learning can take place at any stage of life.
Are you tying your shoes correctly?

Albert Bandura
Social Cognitive Theory

Albert Bandura
Social Cognitive Theory

Person ➔ Behavior ➔ Outcome

Efficacy Expectations
Outcome Expectations
Undergraduate students often simplify the writing of literature reviews. They organize their papers source-by-source.
The intervention studies

Reason for the studies

Only a minority of the students at undergraduate level construct reviews that meet academic standards.

2012 Participants

• 199 freshmen Applied Economics
• 77 women & 122 men

2012 Writing task

• 3 index cards
• Topic: “parental influence on alcohol consumption”

2012 Purpose of the study

• Effects of explicit strategy instruction
• Enhancing retention of task approach
• Channeling attention by use of an acronym (TRACE) and visual aids

2012 Learning activities

• TRACE-strategy
The intervention studies

### 2012 Image of the peer model

<table>
<thead>
<tr>
<th>Explicit strategy instr</th>
<th>Implicit strategy instr</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Trustworthiness ($\alpha = .82$)</td>
<td>5.31</td>
</tr>
<tr>
<td>Expertise ($\alpha = .81$)</td>
<td>5.29</td>
</tr>
<tr>
<td>Attractiveness ($\alpha = .86$)</td>
<td>5.25</td>
</tr>
</tbody>
</table>

### 2012 Retention of model’s writing approach

- 2 open ended questions
- "Help your best friend"

### 2012 Retention of TRACE1

- \( \chi^2 = 29.02 \)
- \( df = 2 \)
- \( p < 0.001 \)

- \( \chi^2 = 6.61 \)
- \( df = 2 \)
- \( p < 0.05 \)
2012 Retention of TRACE1

\[ \chi^2 = 4.97 \]
\[ df = 2 \]
\[ p > 0.05 \]

2012 Retention of TRACE1

\[ \chi^2 = 101.86 \]
\[ df = 2 \]
\[ p < 0.001 \]

2012 Retention of TRACE1

\[ \chi^2 = 43.73 \]
\[ df = 2 \]
\[ p < 0.001 \]

2012 Retention of TRACE2

\[ T \chi^2 = 27.58 \]
\[ df = 2 \]
\[ p < .001 \]
\[ R \chi^2 = 24.93 \]
\[ df = 2 \]
\[ p < .001 \]
\[ A \chi^2 = 15.06 \]
\[ df = 2 \]
\[ p < .01 \]
\[ C \chi^2 = 64.09 \]
\[ df = 2 \]
\[ p < .001 \]
\[ E \chi^2 = 25.56 \]
\[ df = 2 \]
\[ p < .001 \]

2012 writing performances

- 3 writing tasks (200 – 250 words)

Study 1 | Study 2 | Study 3

The intervention studies

2005 Participants

- 144 freshmen Applied Economics
- 57 women & 87 men
2005 Purpose of the study

- Effects of observational learning through video-based models in an academic writing course

2005 Writing task

- Literature review < index cards
- New

2005 Procedure: intervention

- Three 1-hour sessions: session 1 (reading syllabus)
  - APA-reference guidelines
  - Index cards
  => cloze test

- Three 1-hour sessions: session 2 (learning-by-doing)
  - 4 index cards "television violence: fear reactions"
  - 4 short writing exercises

- Three 1-hour sessions: session 3 (learning-by-doing)
  - 5 index cards "television violence: aggression"
  - 1 writing exercise

- Three 1-hour sessions: session 2/3 (observ. learning)
  - Observation of pairs of video-based peer models
  - Exercise 5 learning-by-doing condition
2005 Procedure: intervention

- Three 1-hour sessions: session 2/3 (observ. learning)
  - 6 video fragments (8 – 15 min.)
  - workbook: 6 exercises

- compare approach and text of good and weak writer

- ex. 1: reading the information on the index cards
- ex. 2: making an outline
- ex. 3: combining similar studies

- ex. 4: integrating studies with conflicting results
- ex. 5: inserting a quote
- ex. 6: revising the first draft of the text
**The intervention studies**

**2005 Procedure: intervention**
- same teaching goal
- same writing activities
- different learning process

**2005 writing performances**
- 1 writing task (750 words)

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**2005 writing performances**

- Text Structure
- Text Content
- Text Reference to source

Effect Size

-0.22

0.54*

0.43*