Individual Differences in the Effectiveness of Structured Retrieval Activities
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Introduction

• A popular hypothesis regarding learning styles is the matching hypothesis, which says instructional activities should be matched to students’ learning styles to produce the best performance.

• However, there is little evidence to support the matching hypothesis.

• One individual difference that sometimes interacts with activity format is locus of control, which is a personality style referring to the belief one has about the outcome of various situations where external refers to one who puts responsibility on others while an internal is one who takes responsibility for the outcome of a situation.

• The present study looks at whether effectiveness of retrieval activities changed as a function of locus of control.

• In the structured condition, students retrieved by filling in a partially completed map. In the unstructured condition, students retrieved by creating a map without structure.

Methods

Subjects. 72 Purdue University undergraduates.
• Prescreened 1,596 people with the Internal Control Index (ICI), a 28-item scale with scores ranging from 28 (more external) to 140 (more internal)
• Took one standard deviation above the median (84) to identify internals and one SD below to identify externals
• 36 externals (mean ICI=75, range 56-79), 36 internals (mean ICI=100, range 96-113)

Materials. 3 texts from Cook & Mayer (1988).
• Blood (word length, 236)
• Digestion (word length, 268)
• Homeostasis (word length, 262)

Design and Procedure. Within subjects, 3 conditions.
• Study: read-math-read-math-final
• Structured: read-recall-read-recall-final
• Unstructured: read-recall-read-recall-final
• Counterbalanced so that text order was held constant

Conclusions

• When collapsed across locus of control, both retrieval practice activities produced superior recall relative to the study only condition.

• Externals performed best in the structured retrieval condition, while internals performed best in the unstructured retrieval condition, suggesting locus of control can influence the effectiveness of different retrieval activities.

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