

# The Effects of Retrieval Practice Across Levels of Thinking and Retention Interval on Reading Comprehension

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**Abstract:** The present study examined the effect of different types of retrieval practice on reading comprehension across levels of thinking and retention interval in a classroom setting. One hundred undergraduates divided into two retention interval groups (short- and long-retention interval) were asked to read a passage on a topic in Cognitive Psychology and were then required to engage in a retrieval practice learning strategy using the two types of question format (production test and recognition test) and different levels of thinking (lower-order thinking and higher-order thinking). A three-way mixed ANOVA statistical test was used to analyse the data and found no significant differences in reading comprehension across the different types of retrieval practice, suggesting that the performance when using the recognition test is equivalent to when using the production test. The difference in reading comprehension between the different types of retention interval also was not observed, indicating that students in the short-retention interval group retained just as much information as those in the long-retention interval group. Additionally, the present study observed a significant difference in students' reading comprehension between different levels of thinking, signifying that the students' performance for the lower-level thinking questions was better than that for the higher-level thinking questions. The present finding contributed to the existing body of knowledge in which it suggested that the performance in reading comprehension when using a recognition test, particularly a well-constructed one, with competitive alternatives was equivalent to when using a production test.

**Keywords:** Levels of thinking, Question format, Reading comprehension, Retention interval, Retrieval practice

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