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Does the spacing effect depend on prior knowledge? Evaluating the role of word familiarity in learning from spaced vs. massed schedules

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Abstract

Spacing out information promotes retention more than massing information – a robust finding in psychological science. Research on the spacing effect has primarily manipulated aspects of the learning schedule (e.g., item repetitions, retention interval). Limited work has considered how familiarity with the to-be-learned information impacts the spacing effect. The current study addressed this gap by examining how word frequency/familiarity affects retention on a massed or spaced schedule. One-hundred adults were presented with 24 high familiarity (e.g., apple), low familiarity (e.g., vestige), or nonsense (e.g., blicket) words on a massed and spaced schedule. Retrieval was tested after a 5-minute delay, revealing a significant spacing effect regardless of word familiarity. Furthermore, overall performance was significantly greater for highly familiar items. These results suggest that spacing is effective regardless of general word familiarity. Future studies will assess how learners' prior knowledge of test items – as measured by a vocabulary test – impacts the spacing effect.