

## A Study of Vocabulary Learning at Massed and Spaced Intervals

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### Abstract

Vocabulary learning typically involves three stages: meaning exploration, memory consolidation, and automatic production. Language educators have proposed many techniques and strategies for each stage in the hope to produce the best learning outcomes. The effects of many of their suggestions have been endorsed with experiments and those of some others remain indecisive. Among factors influencing the effectiveness of these techniques and strategies is the temporal variable, often referred to as massed/spaced learning intervals.

Although there is substantial evidence in the cognitive psychology and general education literature that distributed learning is favored over massed learning, many studies have provided empirical support for the positive effect of massed learning programs. What appears to influence the research results is whether the measurement is declarative or procedural. Studies of how massed/distributed instructions influence proficiency are longitudinal in nature, while studies of how these two approaches affect verbal learning are mostly cross-sectional. There is little longitudinal massed/distributed research conducted on verbal development.

The current study documents a semester-long vocabulary learning process. The participants were 4<sup>th</sup> to 6<sup>th</sup> graders, attending an after-school EFL program. During the experiment period, all of them were engaged in 9 massed vocabulary learning activities and 9 distributed vocabulary learning activities, trying to learn 211 lexical items, among which 166 were target words. Unlike many similar studies, the current study not only compared the two groups' performance of different temporal variables, but also examined individual students' performance when they were engaged at massed and spaced intervals. The findings routinely include results of immediate posttests and delayed posttests. In addition, an end-of-semester comprehensive posttest sheds light on the long-term effects of the two temporal learning intervals.