SUMMARY Rohrer, D., Taylor, K., Pashler, H., Cepeda, N. J., & Wixted, J. T. (2005). The effect of overlearning on long-term retention. *Applied Cognitive Psychology, 19*, 361-374.

Introduction

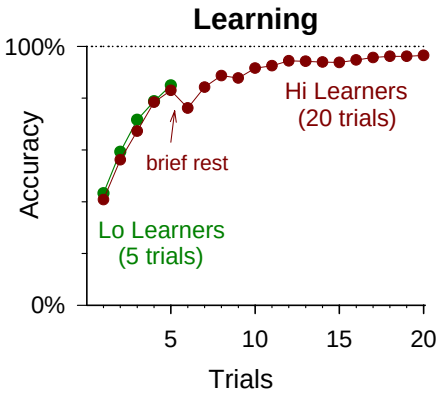
Overlearning requires the immediate continuation of practice beyond the criterion of one perfect trial. For example, if a student cycles through a deck of vocabulary flashcards until each definition has been recalled once, any further study constitutes overlearning. Although overlearning is widely advocated, its effects on long-term retention are not clear.

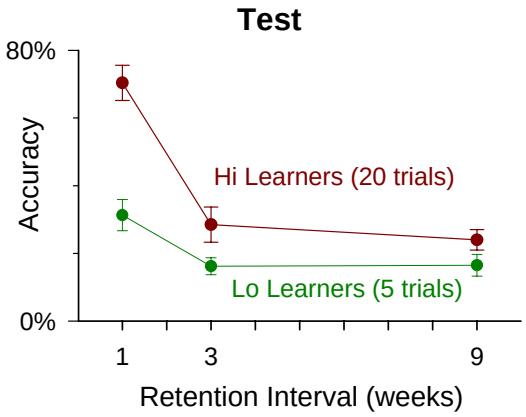
Experiment 1

Students studied 10 city-country pairs (e.g., *Doba-Chad*). The amount of study time was manipulated. The Hi Learners completed 20 learning trials, and the Lo Learners completed 5 learning trials.

Method. 130 USF students participated. The learning session began with a 1-min exposure to all 10 pairs (e.g., *Doba-Chad*), followed by test-with-feedback trials (e.g., *Doba- ?, …Chad*). Each trial included all 10 pairs. The Hi Learners completed 20 trials, and the Lo Learners completed 5 trials. Students were tested one, three, or nine weeks later.

Results



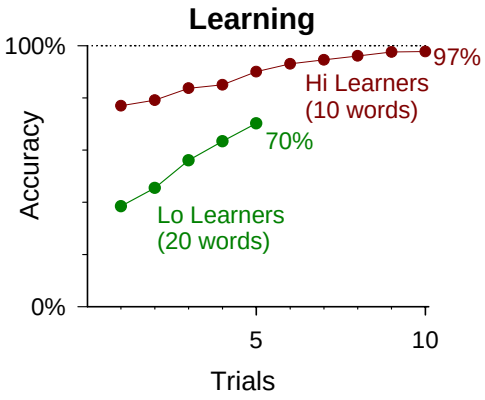


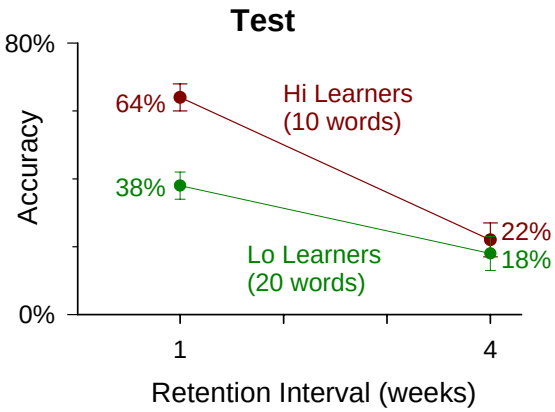
Experiment 2

Students studied word-definition pairs (e.g., *cicatrix-scar*). Total study time did not vary, but the number of pairs was manipulated. The Hi Learners studied 10 pairs, and the Lo Learners studied 20 pairs.

Method. 88 USF students participated. The learning session included a 2-min exposure to all pairs (e.g., *cicatrix-scar*) and 10 minutes of test-with-feedback trials (*cicatrix-?, …, scar*). The Hi Learners completed 10 trials, each with 10 words. The Lo Learners completed 5 trials, each with 20 words. Students were tested one or four weeks later.

Results





Discussion

In both experiments, the additional study time required of the Hi Learners boosted scores on the test given one week after learning, but this benefit dissipated quickly within a few weeks. Because virtually all of the Hi Learners achieved at least three perfect learning trials, these data suggest that overlearning is an inefficient strategy for students seeking long-term retention.