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LEARNING EFFICIENCY: Is it Generalizable? Is it Durable? *Justin Vincent*

Mentors: Kathleen McDermott, Elizabeth Schechter, and Christopher Zerr

Recent work has shown that individuals who learn material more quickly also remember it better at different delays. This interaction between speed of learning and goodness of retention is referred to as learning efficiency; more efficient learning represents quicker, more durable learning. This thesis includes two experiments to address two general questions in the domain of learning efficiency. Experiment 1 sought to address the generalizability of efficient learning across different types of material. We compared participants' efficient learning of stimuli representing two domains of learning: phonetic Lithuanian-English word pairs and visuospatial Chinese-English word pairs. A key finding of Experiment 1 is that Learning Efficiency scores, which address both learning rate and retention in one metric, positively correlate between types of stimuli. Therefore, we conclude the construct is generalizable. Experiment 2 investigates whether quicker learners maintain a better memory than slower learners at longer retention intervals by comparing learning rates of Lithuanian-English word pairs with performance on cued recall tests at delays of 48 hours and one week. The fastest learners of the stimuli retained their retentive advantage over the other participants at both delays. From this finding, we conclude the construct is durable to delays between study and test phases. Expanding our understanding of the learning efficiency construct is important for learning and memory research, as the construct has theoretical and practical value for future experiments. It is possible that investigating this rate can elaborate on the apparent distinction between slow and fast learners.