

# Do Eye Movement Measures Show Testing Effects?

**Renee Shu-hua Tsai**

National Chung Cheng University

**Yuh-shiow Lee**

National Chung Cheng University

**Abstract:** Taking a test during learning enhances later retention more than spending equivalent time restudying the same materials (Roediger & Karpicke, 2006). In the study, we first recorded participants' eye movements in a paired-associate learning task while they were re-studying or tested for immediate cue recall. Testing prompted final item memory but not memory for its associated location. Participants' proportions of fixation duration were analyzed within the ROI : areas covered the cue word and two possible locations of the associated test words. Larger fixation proportions at the cue word area were found in the testing than the re-study conditions. Fixation proportions in the area covering the cue-associated word were larger in the re-study than the testing conditions. Moreover, eye movements recorded during the final cue recall didn't show significant differences between the two learning conditions. The eye movement measures revealed some differences between the testing and re-study conditions during the initial learning.