Influence Testing Relational Item on and of a and mziat@nmu.edu sensorial modality. the potters adapted very quickly to the task and succeeded the cutaneous contact with the clay. The results showed that Nitrile gloves of 15 mil (0.381 mm) that reduce significantly the potter’s wheel, and 3) participants of group 3 were wearing of 62dB to prevent them from hearing the sound produced by group 2 were wearing earplugs and headphones with a NRR creation. In this study, we compared the potters’ performances to shape a round ceramic cylinder when deprived of a and BRIAN KAKAS, MOUNIA ZIAT, CHERYL KONIECZNY Ceramic students were asked to shape the clay but also on the tactile contact with the clay and the sound produced by the potter’s wheel during the process of creation. In this study, we compared the potters’ performances to shape a round ceramic cylinder when deprived of a sensorial modality. Ceramic students were asked to shape the clay and were divided into groups: 1) participants of group 1 were blindfolded to remove the visual input, 2) participants of group 2 were wearing earplugs and headphones with a NRR of 62dB to prevent them from hearing the sound produced by the potter’s wheel, and 3) participants of group 3 were wearing Nitrile gloves of 15 mil (0.381 mm) that reduce significantly the cutaneous contact with the clay. The results showed that the potters adapted very quickly to the task and succeeded to shape the cylinder despite the deprivation of one of their sensorial modality. Email: Mounia Ziat, mziat@nmu.edu

• TESTING EFFECTS II •

(4012) When Testing Does and Does Not Enhance Learning: The Case of Spelling. STEVEN C. PAN, BENJAMIN R. RUBIN and TIMOTHY C. RICKARD, University of California, San Diego—The two most commonly used methods for teaching spelling are testing with feedback and repeated writing. Those techniques were compared in three experiments that involved a training session and a retest one week later. A testing advantage was observed for the number of words recalled, but not for the proportion of words spelled correctly. In a fourth experiment, testing with feedback was compared to the more usual reading control, and a clear testing advantage was observed both for the number of words recalled and the proportion of words spelled correctly. These results raise the possibility that, in spelling as well as other domains, the reading control may not always be the most potent study reference against which to evaluate testing. The equivalent efficacy of testing and repeated writing for learning to spell raises the possibility that the two techniques engage the same learning mechanisms. Email: Timothy Rickard, trickard@ucsd.edu

(4013) Incongruency Reveals the Brittleness of the (Pre)Testing Effect. JOSHUA F. DOXTATOR and GARY L. BRADSHAW, Mississippi State University—Testing facilitates long-term retention even when the test is given prior to the to-be-learned material. One experiment examined the congruency of pre-test, studied material, and post-test using a text describing the processes of mitosis. In the congruent condition, pre-test questions matched the phrasing in the text and in the post-test questions. In the incongruent condition, pre-test questions reversed the propositional focus of the text and the post-test. The congruent pre-test group performed better than the incongruent condition, revealing a striking limitation on transfer for the pre-test effect. Curiously, the pre-test effect vanished when the textual material had a different propositional focus than the post-test, regardless of the congruency between the pre-test and post-test. This experiment suggests that the pre-test effect is brittle and favors memorization over meaningful learning. Email: Gary Bradshaw, glb2@psychology.msstate.edu

(4014) The Influence of Testing on Relational and Item-Specific Information. JOCelyn BRETON, SAMANTHA WASSERMAN, HILARY WOODWORTH, JULIANNE WIEBOLDT, HANNAH NEWMAN, MARIAM BOXWALA, NUTTIDA RUNGRATSAMEETAWEEMANA and JASON ARNDT, Middlebury College—We examined the effect of testing on item-specific and relational processing in a paradigm where participants learned English-Swahili word pairs. Word pairs were presented and either were repeatedly restudied or participants were prompted to recall the English word given the Swahili word as a retrieval cue. After a two-day retention interval, participants completed either a test of relational memory (associative recognition) or item memory (recognition of English and Swahili words in isolation). Results demonstrated that prior cued recall (testing) enhanced associative memory as well as item memory. Notably, testing enhanced item memory for both the to-be-recalled item (English words) and the recall cues (Swahili words). These results suggest that testing has wide-ranging effects that are not limited to enhancing only items that were retrieved from memory. Rather, testing also enhances memory for items that serves as cues for retrieval. Implications for theories of the testing effect will be discussed. Email: Jason Arndt, jarndt@middlebury.edu

(4015) The Role of Temporal Context in Retrieval Practice Effects. JOSHUA W. WHIFFEN and JEFFREY D. KARPICKE, Purdue University—A series of experiments tested the predictions made by the Temporal Context Theory (TCT) in regards to retrieval practice effects. Experiment 1 tested the prediction that retrieving the temporal context, accomplished with a list discrimination (LD) task, should lead to improved recall over a reread condition. This hypothesis was supported and further analyses with Adjusted Ratio of Clustering scores revealed temporally organized recall, which would be expected from a TCT perspective. Experiment 2 compared