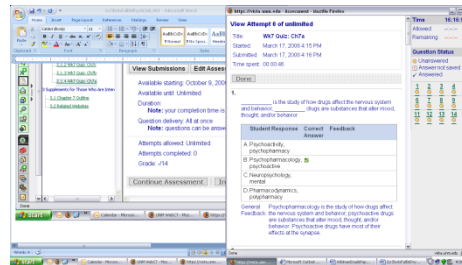


Repeated Quizzing Facilitates Learning of Core Content in an Undergraduate Neuroscience Course

Janis L. Anderson,^{1,2} Christina Weywadt,¹ Mark A. McDaniel³
 University of New Mexico,¹ Harvard Medical School,²
 Washington University St. Louis³

Tests often are viewed only as tools for assessing student learning. However, laboratory research has shown test-taking improves retention of information (such as word pairs) relative to studying. We experimentally evaluated the mnemonic benefits of testing in an online 15-week undergraduate psychology *Brain and Behavior* course by comparing effects of multiple-choice (MC) or short-answer (SA) quizzing to effects of additional study without quizzing (QR) using a within-subjects design. Each student could take his or her quiz multiple times and view correct answers, and had an incentive to take each quiz at least four times. Results from 29 students across five exams showed quizzed content was correctly answered more than study-only content; all of these produced better performance than not exposing content in a testing context. The results suggest that computer administered and scored testing can enhance learning in applied settings such as an undergraduate neuroscience course.



Testing Program – Student's View

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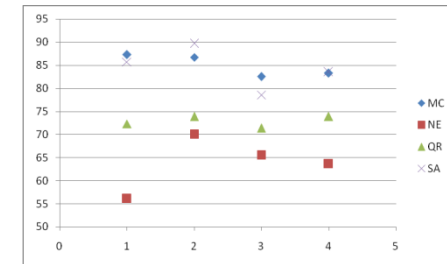


Figure 1. Percent Correct on Same-Stem Exam Item by Unit for Items quizzed as multiple choice (MC), read only (QR), short answer (SA), or not quizzed (NE) across 29 subjects.

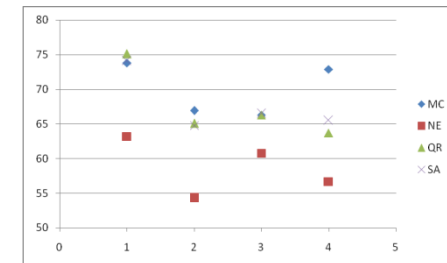


Figure 2. Percent Correct on Different-Stem Exam Item by Unit for Items quizzed as multiple choice (MC), read only (QR), short answer (SA), or not quizzed (NE) across 29 subjects.