

# How to Turn Your Exams Into Learning Opportunities

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Hello, and welcome to Teaching, a weekly newsletter from *The Chronicle of Higher Education*. Today, Dan shares one strategy that can help your exams foster learning, he and Beckie outline some recent research, and we close with your responses to a recent question about whittling down content to focus on learning.

## Two-Stage Exams

Some faculty members lament that exams can be missed opportunities to cultivate learning because worries about grades consume students' attention. What if there were a better way?

A few years ago, I traveled to Vancouver, British Columbia, to report a story about [classroom observations](#), and I happened to watch Brett Gilley, who was a subject of that story, administer a collaborative two-stage exam. It is a teaching tool he has used and [studied](#).

Here's how it works: Students take an exam individually, in this case a multiple-choice midterm in earth and ocean science. After they submit their answers, they split into groups of three to five students and go over the test together to hash out the answers.

To see how effective a learning tool these exams are, Gilley and a colleague, Bridgette Clarkston, conducted an experiment, the results of which they described in a paper that was published in a 2014 [issue](#) of the *Journal of College Science Teaching*. To measure the effects of this method, they administered a surprise quiz three days later, testing the students individually on the material that they had focused on in the experiment. The quasi-experimental crossover design of the study isolated the effects of the collaborative group stage and mitigated against the effects of [retesting](#), which can bolster retention of information.

On average, the researchers found, students who tested collaboratively learned the correct answers to more than one-third of the questions they had initially answered incorrectly on the tests they had taken individually. And, when students were tested three days later, the knowledge largely stuck. "The fact that students' scores on the learning test followed closely what the groups scored suggests that the learning was on a deeper level than simple rote memorization," Gilley and Clarkston wrote.

Why? Exams seem to present an unusually ripe opportunity to foster learning. And, the researchers wrote, two-stage exams “exploit what can be a highly productive learning environment, including high student motivation, high incentives for collaboration and communication, and immediate feedback on individual performance.”

Thanks for reading Teaching. If you have suggestions or ideas, please feel free to email us at [dan.berrett@chronicle.com](mailto:dan.berrett@chronicle.com), [beth.mcmurtrie@chronicle.com](mailto:beth.mcmurtrie@chronicle.com), or [beckie.supiano@chronicle.com](mailto:beckie.supiano@chronicle.com). If you have been forwarded this newsletter and would like to sign up to receive your own copy, you can do so [here](#).

— Dan and Beckie