Improving Meta-Cognition with Exam Wrappers?
by Emily O. Gravett

Spring Break is almost here. We can make it!

In _Creating Self-Regulated Learners_ (2013), author Linda Nilson describes strategies for helping students become more "metacognitive," that is, more self-aware and reflective of their own learning processes and skills, with the ability to assess their own needs, plan a strategy, apply the strategy, determine how well that strategy worked, and adjust, if need be. (On the benefits of self-regulated learning, see also Zimmerman's helpful 2002 overview.)

To encourage meta-cognition, an instructor might consider, on or after an exam, asking questions that prompt students to specifically:

- reflect on how they prepared (e.g., how much time they spend studying, what strategies they used to study, which spaces they studied in, etc.);

- assess discrepancies between their expected performance and their actual performance;

- fix their incorrect answers; or even

- make an action plan for the next time.

Some instructors at JMU, for instance, provide students with a list of study strategies on the exam and ask students to indicate how they prepared. Then the instructor can calculate correlations between specific study strategies and students' exam scores. With enough data, the instructor can show the class the results, which can lead to immediate, observable changes in student behaviors.

All of these approaches have the potential to "transform mistakes into valuable learning opportunities" (Nilson, 64). This kind of structured activity—focusing students on what study skills they used to prepare, what types of mistakes they made, and what modifications they might make to improve their test performance next time—is often called, in the literature, an "exam wrapper."

Nilson argues that exam wrappers can promote self-regulated skills by helping students take stock of how they prepared for the exam; once they get their grades/scores back, they can then determine "whether their exam preparation strategies are working" (68-69). Other educational scholars (like Weimer, _Learning-Centered Teaching_, 2002) have suggested asking students to develop a "study game plan" for the next time, based upon self-reflections, increased awareness of their study habits, and the results of the previous exam. Over the semester, students may develop several such plans and, ideally, improve their performance.

Yet, in a _Faculty Focus_ piece (2017), Maryellen Weimer took a look at the evidence for exam

wrappers, focusing on a recent, well-designed study (Soicher and Gurung, 2017). While other studies mentioned in Soicher and Gurung have demonstrated gains as a result of exam wrappers, theirs, which queried whether exam wrappers would improve students' metacognition and academic performance in only one course per term, found no improvements on any of the three exams, final grades, or metacognitive ability. As Weimer recognizes, "What instructors most want to know about any strategy is whether it works…. We'd like the answer to be clear cut." I share these results underscore, as Weimer does, that "how instructional strategies affect learning is anything but simple, and our thinking about them needs to reflect this complexity." Rarely are there clear-cut answers in teaching. We are all just doing the best we can.

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