METACOGNITION AND EXAM-WRAPPERS

Time:
30 minutes

Audience:
new
Learning Fellows

Overview:

Metacognition is “thinking about thinking,” and it is an essential part of the learning process. While Learning Fellows are good students and already excellent learners themselves, it can be challenging to teach others how to learn. What works for one student may not work for all students. Teaching students about their own learning, and helping students recognize their weaknesses and strengths, is one of the most important aspects of a Learning Fellow’s job.

Learning Objectives:

- Introduce the concept of metacognition.
- Develop strategies for encouraging metacognition among students.
- Practice questions that help students consider the processes behind learning.
- Write a metacognitive “exam-wrapper” that could be used after an in-class exam.

Reading:

Tanner, K.D. (2012). Promoting student metacognition. *CBE - Life Sciences Education*, 11, 113-120.

Activity:

- Ask the Learning Fellows to read the two scenarios in the introduction to the paper by K.D. Tanner (above). The scenarios are in italics. Ask the Learning Fellows to also read the scenario described at the top of page 118, beginning with “A teaching colleague of mine…” about five sentences down.

- Help the Learning Fellows to summarize their readings so far. What questions do they have after reading the scenarios?

continued on the next page

More inspiration:

Jose Antonio Brown provides a template for making exam-wrappers on the website *Teaching Naked*: www.teachingnaked.com/cognitive-wrappers

DARTMOUTH LEARNING FELLOWS

Activity, continued:

- Ask the Learning Fellows to look at Tables 1 & 2 in the paper. These tables provide examples of questions and prompts that encourage student metacognition.
- In pairs or small groups, ask the Learning Fellows to write three questions specific to their students or to their course, modeled after Tables 1 & 2 in the paper. Invite the Learning Fellows to share their proposed questions with the huddle.
- Introduce the concept of exam-wrappers, also called cognitive-wrappers. Exam-wrappers are short handouts distributed to students after they have completed an exam. The wrappers ask questions that help students reflect on their learning habits in class, and how these habits may affect their performance. Instructors usually review exam-wrappers before returning them to students. (An example of an exam-wrapper is included below.)
- Help the Learning Fellows write a potential exam-wrapper for the students in their course. Then, submit the exam-wrappers to the course instructor for review.

Example of an exam-wrappers:

This example is derived from an example from the Eberly Center of Carnegie Mellon University, which houses several examples (hwww.cmu.edu/teaching/designteach/teach/examwrappers/).

Please answer the questions honestly; your responses will have no impact on your grade.

1. How much time did you spend preparing for this exam? _____

2. When you were preparing for the exam, what percentage of your study time did you spend on each of these activities?
   a. Reading the textbook _____
   b. Reviewing homework solutions _____
   c. Solving new problems for practice _____
   d. Reviewing your notes _____
   e. Reviewing the lecture materials _____
   f. Other (please specify): _____

3. Looking over your graded exam, check the area where you lost the most points on the exam.

   ☐ Errors in calculations ☐ Did not know how to approach the problem

☐	Errors with interpreting diagrams	☐	Made careless mistakes
☐	Did not understand the concept	☐	Other (please specify):

4. Now that you have reviewed your exam, what is one thing you will do differently when studying for the next exam?