

Metacognition: Wrappers

Teaching students how learning happens – teaching them to plan, set goals, and monitor and evaluate their own progress in learning. Using metacognition can help students engage in their learning process and improve their own learning outcomes.

“Wrappers” are short self-assessment activities that come both before and after course activities. They help students focus on their learning process and give them tools to help refine it. Additionally, wrappers can be done with very little technology or can be built into other technology systems being used in the course

Lecture wrappers

1. At the beginning of the course present tips on active learning
2. After a lecture, give students a space to write the key ideas from the lecture
3. Instructor provides the key ideas for students to self-check

Example uses of a learning technology: Blackboard self-test

Create a self-test in Blackboard after the lecture where the students submit the key ideas they picked up in the lecture. When students submit their key ideas, they receive automated feedback on what those key ideas are so they can gauge their understanding of the lecture.

Other spaces students may use to write the key ideas from a lecture:

- Notecard
- Discussion board
- Wiki
- Blog

Assignment wrappers

1. Instructor creates self-assessment questions that help students focus on skills they should have learned in the assignments. **NOTE:** Don't ask how well students know something: this may trigger overconfidence. Instead ask questions such as the following:
 - a. How well do you think you can represent this concept?
 - b. How well do you think you can answer this question/solve this problem?
 - c. How well do you think you might do on a test on this material?
2. Students answer questions just before starting the assignment
3. Students complete the assignment
4. Instructor grades the assignment and returns to student
5. After receiving the graded assignment, students complete a similar set of self-assessment questions (this time, with the knowledge of how well they did on the assignment).
6. Students are asked to compare their prior perceptions with their actual performance and draw conclusions (what is accurate, what works, what doesn't work?)

Example use of learning technology: Blog

Have students respond to questions on their blog before the assignment and then revisit and assess their responses after seeing their grade in a comment on their original blog post. In this comment, students draw conclusions about their prior perception and their actual experience with the assignment.

Exam Wrappers

1. When students receive their first graded exam, they get an exam reflection space that asks them to report on their study strategies, analyze errors, and review their perceptions as they studied for the exam
2. Instructor asks students to identify new study approaches as needed
3. Before next exam, students get their reflections and study approaches back for review so they can consider what they might change in their study strategies

Example use of a learning technology: Blackboard discussion board

Have students use a discussion board to reflect and brainstorm study strategies so they can review one another's posts for new ideas. Before the next exam, ask the students to review their previous discussion board posts and plan a new study strategy.

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Adapted from Marsha C. Lovett, Carnegie Mellon University
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