PROMOTING STUDENT SUCCESS WITH METACOGNITION

Sara Ducey, College-wide Chair, Integrative Studies
Angela Lanier, Instructional Designer, ELITE
Outcomes
(This course satisfies one of the requirements for the Integrative Learning Pathway)

- Define metacognition
- Communicate the benefits of practicing metacognition on student success
- Evaluate various metacognitive strategies and activities
- Plan at least two metacognitive activities to use in class
- Consider how to use the Reflection and Self-Assessment segment of the AAC&U Integrative Learning VALUE rubric to evaluate student work
WARM UP REFLECTION

Reflection on a class that went well and one that was challenging.
What do we mean by metacognition?

- Thinking about thinking
- Learning about and understanding how to learn
- Having an awareness of what you know and how you know it
- Regulating one's own learning
What do we mean by metacognition? (Kolencik & Hillwig, 2011)

TACIT  AWARENESS  STRATEGIC  REFLECTIVE
What Do We Mean by Metacognition?
(Flavell, 1979)

**Person variables:** What one recognizes about his or her strengths and weaknesses in learning and processing information.

**Task variables:** What one knows or can figure out about the nature of a task and the processing demands required to complete the task.

**Strategy variables:** The strategies a person has “at the ready” to apply in a flexible way to successfully accomplish a task.
What Do We Mean by Metacognition?

**AAC&U VALUE Rubric**

**Benchmark**
Describes own performance, giving a general description of success and failure

**Milestone 1**
Articulates strengths and challenges to increase effectiveness in different contexts

**Milestone 2**
Evaluates changes in own learning over time, recognizing complex contextual factors

**Capstone**
Envisions future self
Makes plans that build on past experiences across different contexts
Why Teach Metacognitive Skills?
*(Teaching Excellence in Adult Literacy, 2010)*

Students who become skilled at using metacognitive strategies are:

- more confident, independent learners
- better able to think through a problem, approach a learning task, select appropriate strategies and make decisions to successfully perform a task
- capable of "talking with themselves" about their learning, the challenges they encounter and how to self-correct and continue learning
- better performers on exams and complete work more efficiently, using the right tool for the job and modifying learning strategies as needed.
THE STRATEGIES

Engaging in metacognition requires a repertoire of strategies at the ready.
Categories of Metacognitive Strategies

- Planning
- Self-monitoring
- Reflection
Planning Strategies

◦ Previewing information or tasks
◦ Creating a study or project plan
◦ Breaking down complex tasks to manageable chunks
◦ Determining time required to complete tasks
◦ Developing timelines
◦ Assessing prior knowledge
◦ Asking Self-Questions

Self-Questions for Planning (Volk, 2017):
◦ How do you plan on preparing for the upcoming exam? Why?
◦ What resources are available to support you? How will you make sure to use these?
◦ What concepts have you found most confusing so far? What has been clearest? Given this, how could you best spend your time preparing for the exam?
◦ Based on your performance on the first exam, write a memo to yourself with advice about preparing for the next exam.
◦ Other
Self-Monitoring Strategies

- Checking progress against a plan
- Monitoring comprehension, engagement, and progress
- Adjusting strategies
- Identifying knowledge or skill gaps
- Self-instructing
- Troubleshooting and problem solving, independently

Self-Questions (Volk, 2017)

- What did you think the question was asking?
- What process did you use to arrive at your answer? Why did you choose “b,” for example?
- What were the main reasons you didn’t choose “a” or “c”?
- Compare your ideas with your discussion partner.
- What most confused you about this question?
- How confident are you in your answer? Why? What more would you need to increase your confidence?
- Other
Reflection Strategies

- Self-assessment and evaluation
- Identifying and determining success of strategies and processes used to complete a task
- Making connections around skills (transfer)
- Making connections around content (synthesis)
- Forward planning
- Imaging and creative thought around content and skills

Self-Questions for Reflection/ Evaluation

- Pose three questions you had about the concepts you explored in this assignment that you still can’t answer.
- Describe at least two ideas related to this assignment that you found confusing.
- Do you agree that you “learned a lot” from the assignment? Why? Why not?
- Think about how you approached completing this assignment and compare it with the way that you completed the last assignment.
- What advice would you have for yourself based on what you know if you were just beginning the assignment?
- Other
REFLECTION 2

I used to think...now I think
Metacognition in Action

KW(H)L Charts help students:

- access prior knowledge
- communicate what they want or need to know and what resources will help them fill in the gaps
- reflect on what they learned to determine if it met their needs.
3. Now that you have looked over your graded assessment, which of the following caused you to make mistakes? Check off all of these that apply.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>I didn’t show my work.</td>
<td>I didn’t follow step format or didn’t solve an equation correctly.</td>
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<tr>
<td>I made a calculation error.</td>
<td>I didn’t write an equation that represents the problem.</td>
</tr>
<tr>
<td>I didn’t interpret a word problem correctly.</td>
<td>I never studied the information.</td>
</tr>
<tr>
<td>I didn’t study the information enough or effectively.</td>
<td>I did not read the question carefully or correctly.</td>
</tr>
<tr>
<td>I rushed through my work.</td>
<td>I didn’t pace myself, so I ran out of time.</td>
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<tr>
<td>Other: ________________________________</td>
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Metacognition in Action

Time Management is one of the biggest barriers to student success. Planners and help students organize, prioritize and track where their time is going.

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Metacognition in Action

Think Aloud/Talk to Text (annotation) strategies help students verbalize or visualize their thinking, which promotes better comprehension.
How do we build a *culture* of metacognitive habits? (Tanner, 2012)

- Cultivate a classroom environment where students feel comfortable expressing confusion.
- Include reflection and metacognitive tasks into course assignments.
- Model for students the kind of thinking used in the discipline—"Think like a biologist, or think like an accountant."
- Model and practice should always be in context.
Assessing Metacognition
Using the AAC&U VALUE Rubric

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SELF-ASSESSMENT:

REFLECT ON YOUR OWN METACOGNITIVE PRACTICE

(SEE HANDOUT – WITH REFLECTION QUESTIONS FROM TANNER ARTICLE)
Share self-reflections of metacognitive practices
Bibliography


SESSION FEEDBACK

Please complete the workshop evaluation form and check out other Integrative Learning workshops: