

METACOGNITIVE STRATEGIES FOR THE COLLEGE CLASSROOM

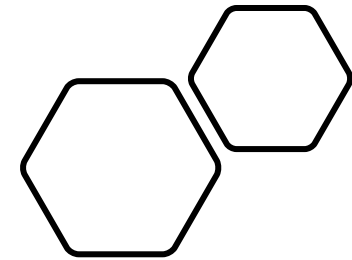
Jen Garrett-Ostermiller [She/Her], Director
Center for Teaching & Learning Innovation



when your teacher says



define metacognition



WHAT IS METACOGNITION?



To actively:

Think about your own thinking.

Be consciously aware of yourself as a problem solver.

Monitor, plan, and control your mental processing.

Accurately judge your level of learning.

Know what you know and what you don't know.

Think about the courses you teach. Which aspects of this definition would be most helpful for students to develop skills with to be (even more) successful?

To actively:

1. Think about your own thinking.
2. Be consciously aware of yourself as a problem solver.
3. Monitor, plan, and control your mental processing.
4. Accurately judge your level of learning.
5. Know what you know and what you don't know.

What are some consequences for *teaching and learning* when metacognitive skills aren't developed? What about consequences for *students* in general?

To actively:

Think about your own thinking.

Be consciously aware of yourself as a problem solver.

Monitor, plan, and control your mental processing.

Accurately judge your level of learning.

Know what you know and what you don't know.



OVERCONFIDENCE

How do students develop metacognition skills?

To actively:

Think about
your own
thinking.

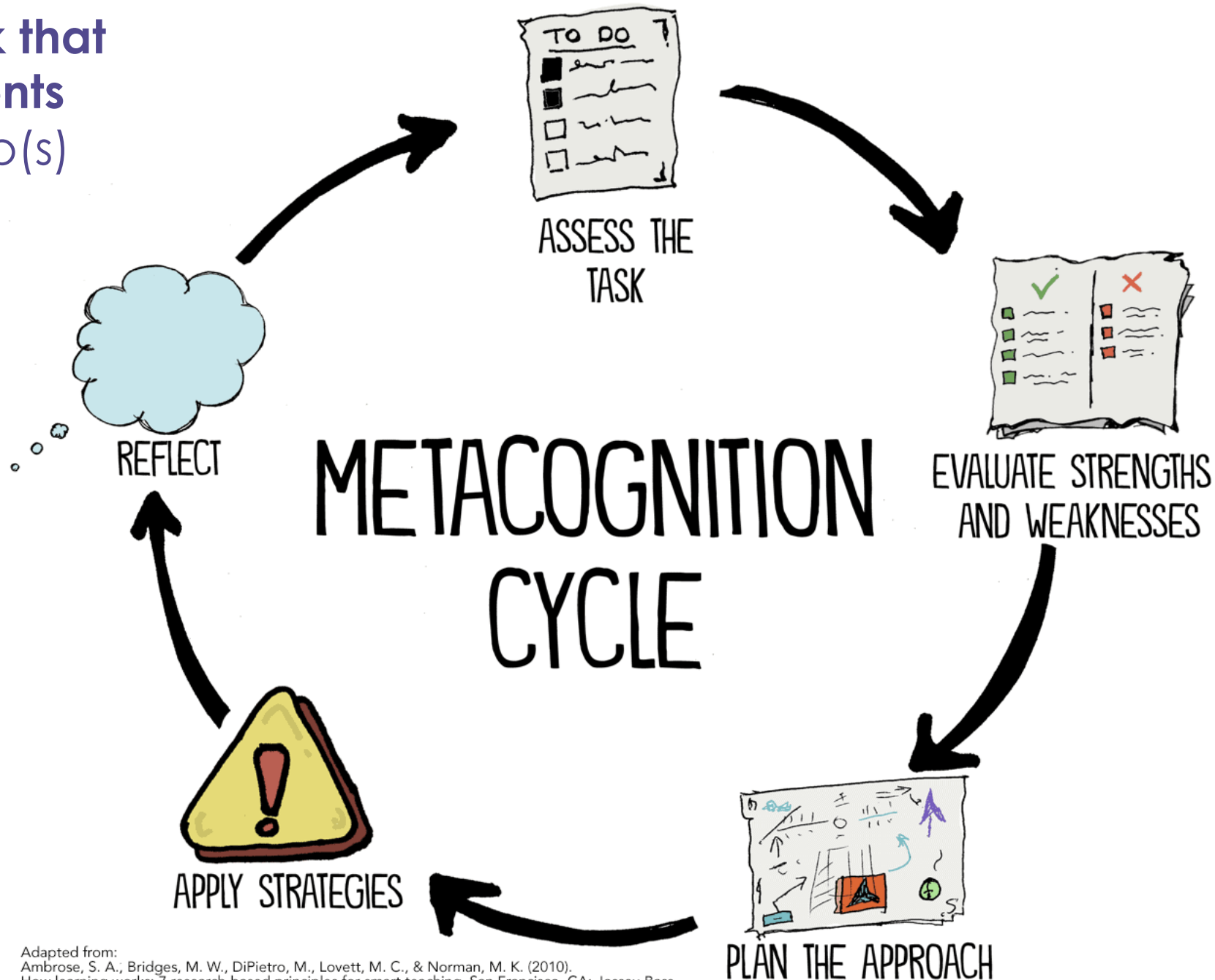
Be
consciously
aware of
yourself as
a problem
solver.

Monitor,
plan, and
control
your
mental
processing.

Accurately
judge your
level of
learning.

Know what
you know
and what
you don't
know.

Think about a learning task that is often a struggle for students in your class(es). What step(s) of the cycle do students perhaps typically skip or stumble on?



Adapted from:
Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010).
How learning works: 7 research-based principles for smart teaching. San Francisco, CA: Jossey-Bass.

[Sketch by John Spencer](#)

ASSESS THE TASK: *THINK-PAIR-SHARE* IN-CLASS ACTIVITY (10-30 MINS)

Think

Write down the steps to complete this [assignment, reading, project, etc.] and estimate time for each step.

Pair

Talk with a classmate (or two) and compare your ideas. What steps did you not consider? What time commitments did you not think of? Modify your steps/timing based on the conversations.

Share

What did you learn from a classmate that was particularly helpful in thinking about being successful with this [assignment, reading, project, etc.]?

EVALUATE STRENGTHS AND WEAKNESSES: EXAM WRAPPER IN-CLASS ACTIVITY (15 MINS)

Part 1

Before an exam, ask students to write down responses:

The content with which I am MOST comfortable is:_____.

The content about which I am still confused or unable to apply is:_____.

Using the scale below: If I were taking exam NOW – I would expect to get....

F

D

C

B

A

Cannot define terms | *Can explain content to others* | *Can apply content to new situations*

What do you plan to do (specifically) between now & exam time?:

EVALUATE STRENGTHS AND WEAKNESSES: *EXAM WRAPPER* IN-CLASS ACTIVITY (15 MINS)

Part 2

After an exam, ask students to write down responses:

For each question on which you did not receive full points, identify the reason why:

- Misremembered (I confused the facts)
- Unprepared (I didn't study/review/practice that concept or skill enough)
- Misunderstood (it never "clicked," so I need to talk to my teacher)
- Misread (I didn't follow directions or I didn't give specific support)

Write down the specific things you did to get ready for the exam. From the list, what worked well and what was less effective?

How did your timeline for preparing for the exam help you and how could it be improved?

PLAN THE APPROACH: *KNOW – DON'T KNOW – DO CHART*

IN-CLASS ACTIVITY (10-30 MINS)

All students fill in (anonymously) rows in a shared KDD chart.

Know	Don't Know	Do
<p>The Jim Crow Era was after the Civil War and before the Civil Rights Movement.</p>	<p>There were important U.S. Supreme Court cases, but when did they happen and why were they significant?</p>	<p>I'll use my textbook and a free online timeline tool to map out and annotate the most significant cases. I'll then pair up with 3 classmates so we can study the timeline and quiz each other on the details of the cases.</p>

APPLY STRATEGIES: *NUMBERED NOTES FOR READING*

IN-CLASS ACTIVITY (20-40 MINS)

Provide students with a page of reading, comparable to what they will do for homework. Then have them practice numbered notes. Have them pair up to quiz each other. Debrief afterwards.

1. Determine your reading goals (information? analysis? personal connection? combo?).
2. After you finish reading a paragraph, decide if any information in that paragraph is worth highlighting or underlining (based on your reading goals). Then, highlight or underline only the most important key words or phrases.
3. Write a number (starting with #1) in the margin of the text next to marked materials.
4. Put the same number in your notebook/document and write a question based on the information you have just highlighted or underlined in the reading. You do not have to write the answer in your notes since it's highlighted in the reading.
5. Proceed with reading, and every time you find important information, assign it a number and follow the same process.
6. Test your retention of what you have just learned by going over the questions in your notes and answering them from memory, or pair up with a classmate to quiz each other.

REFLECT: CLASSROOM ASSESSMENT TECHNIQUES

IN-CLASS ACTIVITY (5-15 MINS)

Content-Focused

3-2-1

3 things you learned from the [lecture, homework, discussion, text, activity, film, reading, etc.].

2 things that you found particularly interesting.

1 question you still have.

Process-Focused

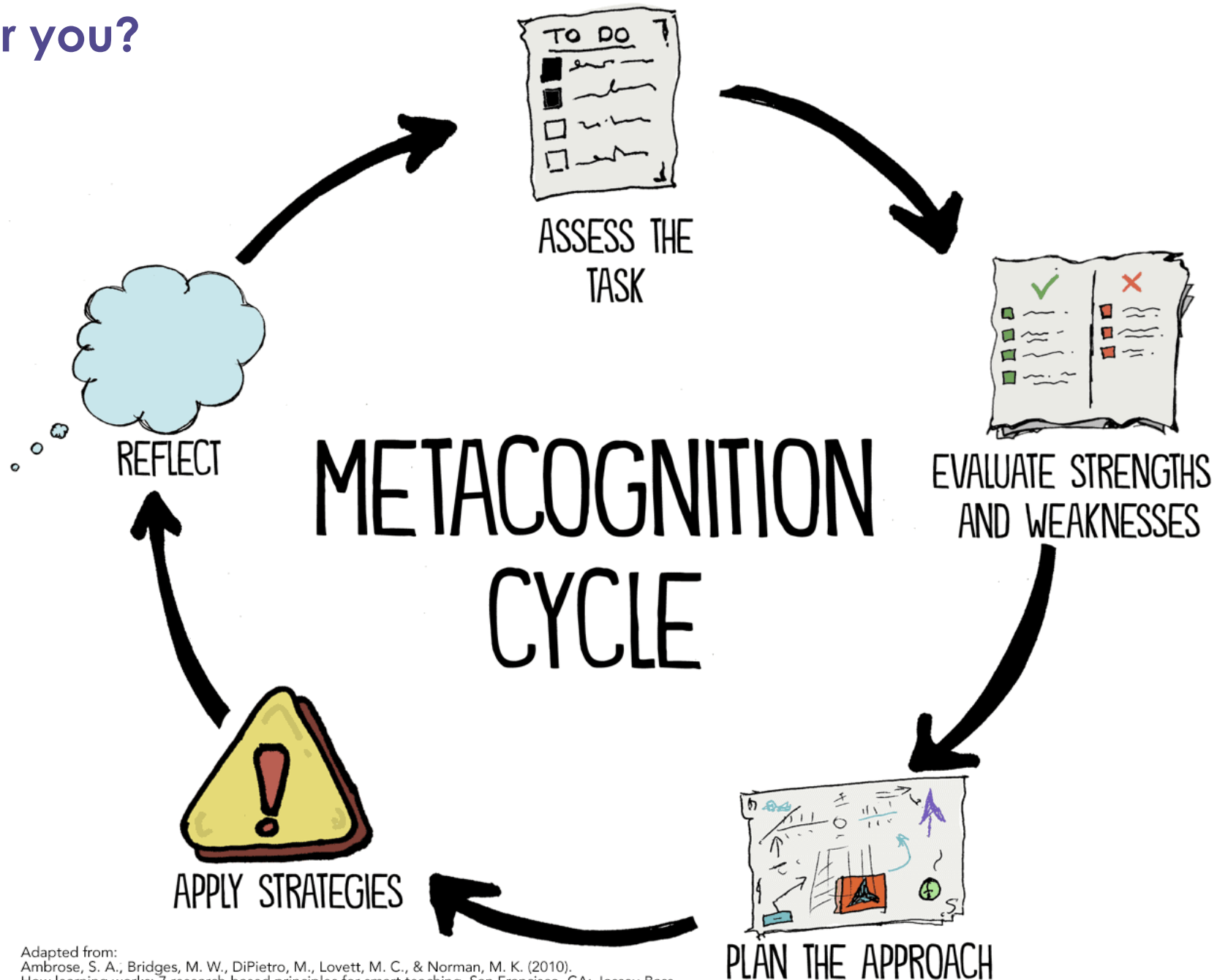
Reading Survey

How carefully and/or completely did you read this assignment?

How useful was this reading assignment in helping you understand the topic and why?

Would you recommend I use this reading in future classes? Why or why not?

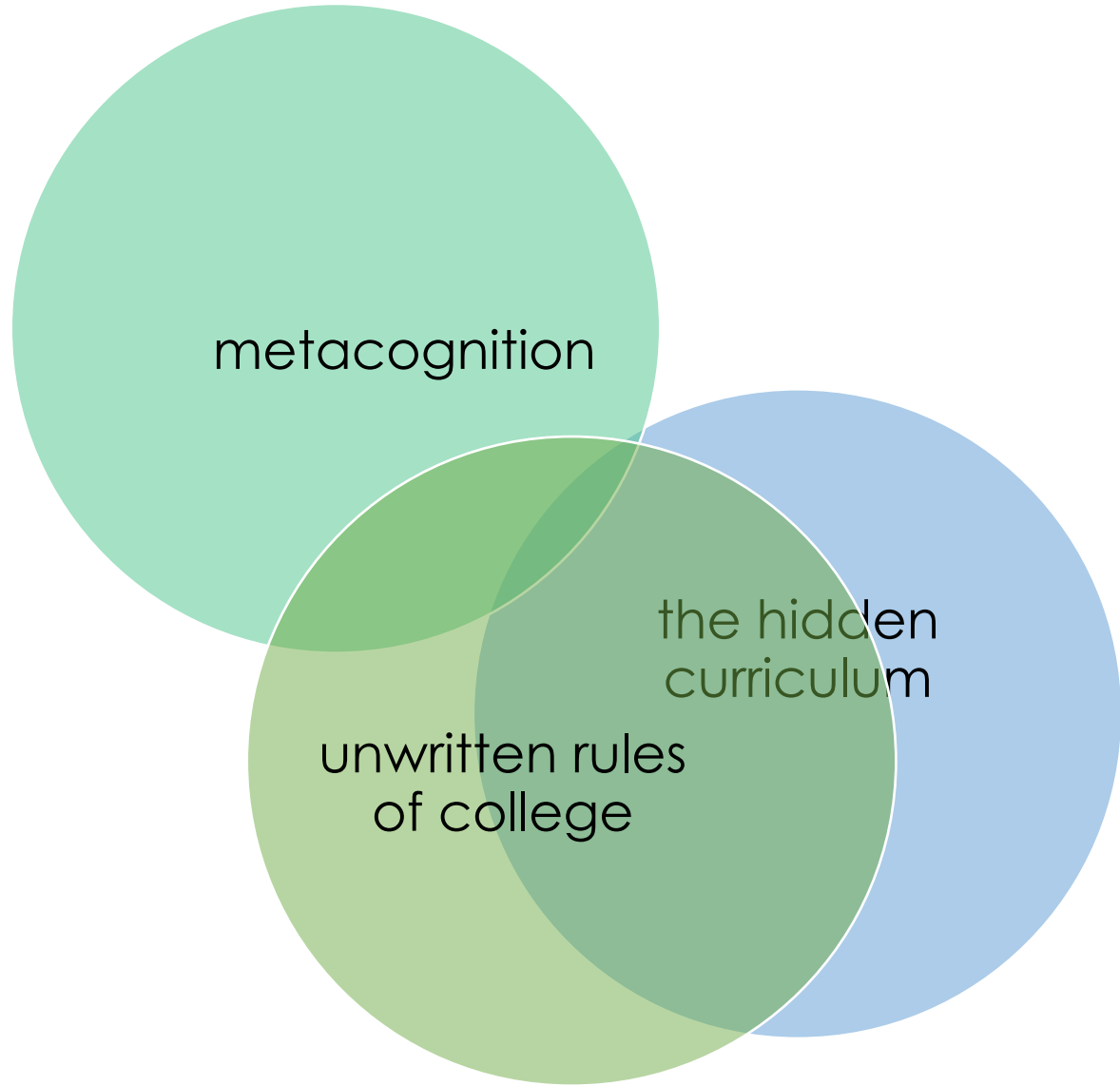
What ideas are sparking for you?



Adapted from:
Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010).
How learning works: 7 research-based principles for smart teaching. San Francisco, CA: Jossey-Bass.

[Sketch by John Spencer](#)

QUESTIONS ABOUT STRUCTURAL EQUITY



- How do we make transparent what learning and success looks like?
- How do we critique and dismantle the aspects of the hidden curriculum that perpetuate oppression?
- How do we continuously empower students' agency?

OPEN DISCUSSION



3-2-1

- What are 3 key ideas you don't want to forget?
- What are 2 strategies you'd like to implement with your students?
- What is 1 question you'd like to pursue after today?

