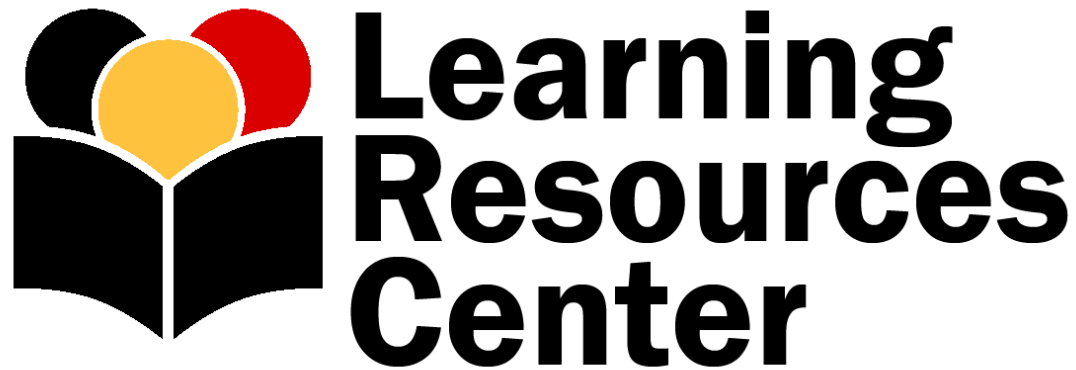


Metacognition: The Key to Acing Courses and Life!



Delana Gregg

Shared by: Sandra Y. McGuire, Ph.D.
Ret. Assistant Vice Chancellor & Professor of Chemistry
Director Emerita, Center for Academic Success
Louisiana State University

Expect Obstacles

Remember that stumbling blocks and stepping stones may look identical; YOU determine which role they will play!

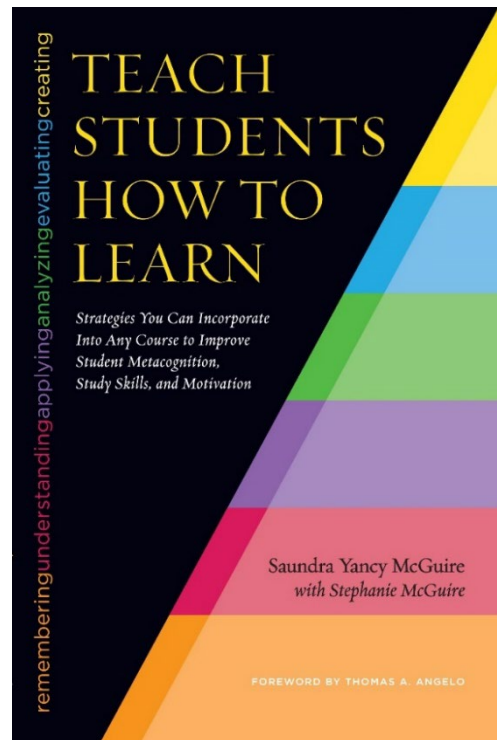


What we will cover today

- Why university students may be inefficient learners
- Metacognitive learning strategies that work, and why they work

How do I KNOW These Strategies Work?

Sandra McGuire wrote the book on it!
And I have examples to prove that it works!



McGuire, S.Y. (2015). *Teach Students How to Learn: Strategies You Can Incorporate into Any Course to Improve Student Metacognition, Study Skills, and Motivation*. Sterling, VA: Stylus

Reflection Questions

- What's the difference between *studying* and *learning*?
- For which task would you work harder?
 - A. Make an A on the test
 - B. Teach the material to the class

Metacognition

The ability to:

- think about your own thinking
- be consciously aware that you are a problem solver
- monitor, plan, and control your mental processing (e.g. “Am I *understanding* this material, or just *memorizing* it?”)
- accurately judge your level of learning
- know what you know and what you don’t know

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp.231-236). Hillsdale, NJ: Erlbaum

Effective Homework Strategy

- **Study material first**, before looking at the problems/questions
- **Work example problems** (without looking at the solutions) until you get to the answer
- **Check** to see if **answer** is correct
- If answer is not correct, **figure out where mistake was made**, without consulting solution
- **Work homework** problems/answer questions **as if taking a test**

How to Make the Homework Strategy Work Best

- Start the problems early--the day they are assigned
- **Do not flip back to see example problems; work them yourself!**
- Don't give up too soon (<15 min.)
- Don't spend too much time (>30 min.)

A Reading Strategy that Works: SQ5R

- **Survey** (look at intro, summary, bold print, italicized words, etc.)
- **Question** (devise questions survey that you think the reading will answer)
- **Read** (one paragraph at a time)
- **Recite** (summarize in your own words)
- **Record or wRite** (annotate in margins)
- **Review** (summarize the information in your words)
- **Reflect** (other views, remaining questions)

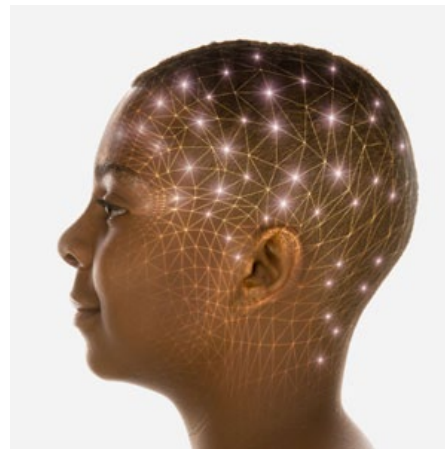
Why is using the textbook so important?

An activity will demonstrate this

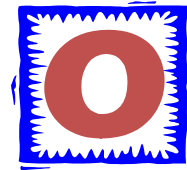
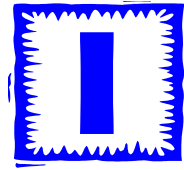
- What word comes to mind when you see c_t?
- Would this word have come to your mind if we lived in a culture that had no cats and you'd never seen the word?
- Our brains automatically fill in missing information if we're very familiar with the content (txt msgs)
- Does your brain have the info to fill in what's missing in graduate courses?
- Will the test be written from what YOUR brain or the professor's brain sees in the notes?

How can I learn more from my studying?

It's all about the *strategies*, and
engaging our brains!



Counting Vowels in 45 seconds



How accurate are you?

*Count all the vowels
in the words on the next slide.*

Dollar Bill

Dice

Tricycle

Four-leaf Clover

Hand

Six-Pack

Seven-Up

Octopus

Cat Lives

Bowling Pins

Football Team

Dozen Eggs

Unlucky Friday

Valentine's Day

Quarter Hour

**How many *words* or *phrases*
do you remember?**

Let's look at the words again...

**What are they arranged
according to?**

Dollar Bill

Dice

Tricycle

Four-leaf Clover

Hand

Six-Pack

Seven-Up

Octopus

Cat Lives

Bowling Pins

Football Team

Dozen Eggs

Unlucky Friday

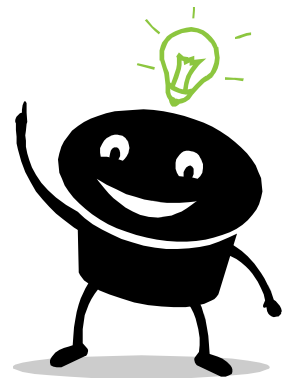
Valentine's Day

Quarter Hour

**NOW, how many words or phrases
do you remember?**

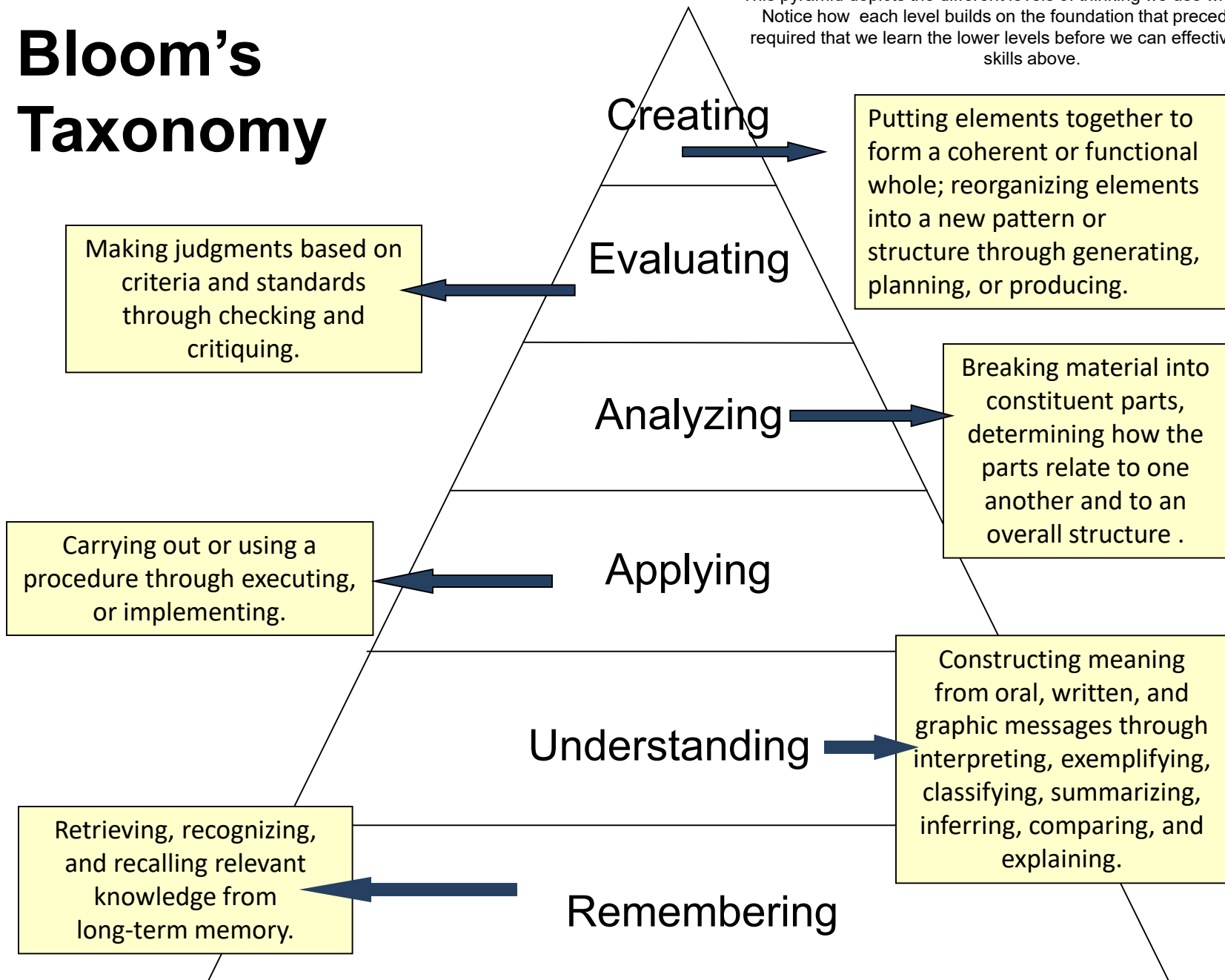
What were two major *differences* between the two attempts?

- 1. We knew what the task was**
- 2. We knew how the information was organized**



Bloom's Taxonomy

This pyramid depicts the different levels of thinking we use when learning. Notice how each level builds on the foundation that precedes it. It is required that we learn the lower levels before we can effectively use the skills above.



At what level of Bloom's did you have to operate to make A's or B's in high school?

1. Remembering
2. Understanding
3. Applying
4. Analyzing
5. Evaluating
6. Creating

At what level of Bloom's do you think you'll need to operate to make A's in college?

1. Remembering
2. Understanding
3. Applying
4. Analyzing
5. Evaluating
6. Creating

How do you move yourself higher on Bloom's Taxonomy?

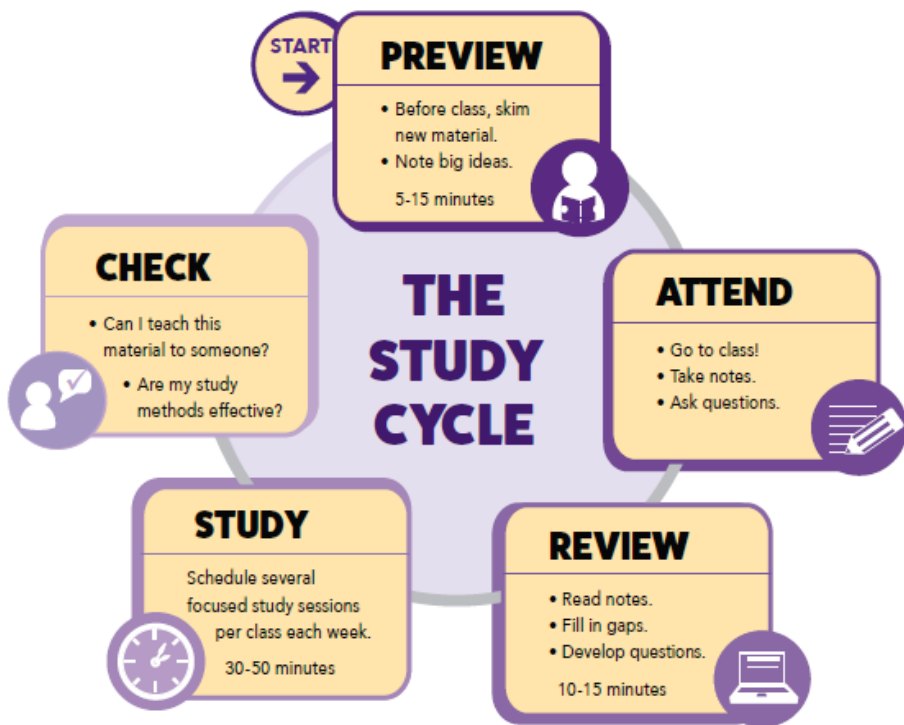
Use the Study Cycle*



**adapted from Frank Christ's PLRS system*

THE STUDY CYCLE

The Path to Improving Study Techniques



Adapted from Frank Christ's PLRS system.
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FOCUSED STUDY SESSIONS



CENTER for ACADEMIC SUCCESS

Focused Study Sessions (FSSs) are designed to work with the way your brain learns best: in short, focused increments.
Schedule several focused study sessions per class each week.



Recap of Effective Metacognitive Strategies

- **Always solve homework problems without looking at an example or the solution**
- **Memorize everything you're told to memorize**
- **Always ask why, how, and what if questions**
- **Test understanding by giving "mini lectures"**
- **Spend time on every subject every day (even if it's only 15 or 20 minutes)**
- **Use the Study Cycle with Intense Study Sessions**
- **Take advantage of academic assistance**
- **Use the textbook and other resources**
- **Aim for 100% mastery, not 90%!**

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[Drop-in tutoring](#) for Spanish at the Spanish Tutoring Lab (1st floor, AOK Library)

[Appointment tutoring](#) for many first and second year courses is available in the LRC (Sherman Hall, 3rd floor, B-Wing)

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Writing Exercise

What behavior will you commit to implementing, starting this weekend?

**If you don't start it within
the next 48 hours...**

... you probably never will.