Strategies for Accelerated Success in Graduate School: A fresh Vision for Metacognitive Sophistication!

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Frank L. Christ Outstanding Learning Center Award
Presidential Recognition
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The Story of Two Students

- **Travis**, junior psychology student
  47, 52, **82, 86**  
  B in course

- **Dana**, first year physics student
  80, 54, **91, 97, 90 (final)**  
  A in course
How’d They Do It?

- They used *metacognitive strategies*
- They began *thinking about their thinking*
- They focused on *learning instead of grades*
Metacognition*

The ability to:

• think about one’s own thinking

• be consciously aware of oneself as a problem solver

• monitor and control one’s mental processing (e.g. “Am I integrating all of the components?”)

• accurately judge one’s level of learning

*term coined by Flavell in 1976
Travis, junior psychology student
47, 52, 82, 86

Problem: Reading Comprehension

Solution: Preview text before reading*
Develop questions*
Read one paragraph at a time and paraphrase information

*Develop anticipatory set
First Voyage of Christopher Columbus

WITH HOCKED GEMS FINANCING HIM/ OUR HERO BRAVELY DEFIED ALL SCORNFUL LAUGHTER/ THAT TRIED TO PREVENT HIS SCHEME/ YOUR EYES DECEIVE/ HE HAD SAID/ AN EGG/ NOT A TABLE/ CORRECTLY TYPifies THIS UNEXPLORED PLANET/ NOW THREE STURDY SISTERS SOUGHT PROOF/ FORGING ALONG SOMETIMES THROUGH CALM VASTNESS/ YET MORE OFTEN OVER TURBULENT PEAKS AND VALLEYS/ DAYS BECAME WEEKS/ AS MANY DOUBTERS SPREAD FEARFUL RUMORS ABOUT THE EDGE/ AT LAST/ FROM NOWHERE/ WELCOME WINGED CREATURES APPEARED/ SIGNIFYING MOMENTOUS SUCCESS

Problem: Memorizing formulas and using www.cramster.com

Solution: Solve problems with no external aids and test mastery of concepts
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Began work with CAS and the Writing Center in October 2005
How’d They Do It?

They became expert learners by using *metacognition*!

They learned to think about their own thinking, and they studied to LEARN, not just to make the grade!
Reflection Questions

• What’s the difference, if any, 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
To Ace Courses (and everything else!)

• Stay in learn mode, not study mode

• Work as if you have to teach the material, not just make an A on the test
Counting Vowels in 45 seconds

AEIOU

How accurate are you?
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 first attempt and the second attempt?
1. We knew what the task was

2. We knew how the information was organized
Research findings about learning

• Active learning is more lasting than passive learning
  -- Passive learning is an oxymoron*

• Thinking about thinking is important
  – Metacognition**

• The level at which learning occurs is important
  – Bloom’s Taxonomy***


Bloom’s Taxonomy

- **Remembering**: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
- **Understanding**: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
- **Applying**: Carrying out or using a procedure through executing, or implementing.
- **Analyzing**: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure.
- **Evaluating**: Making judgments based on criteria and standards through checking and critiquing.
- **Creating**: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing.

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.

http://www.odu.edu/educ/lbschult/blooms_taxonomy.htm
How do you move higher on Bloom’s Taxonomy?

Use the Study Cycle*

*adapted from Frank Christ’s PLRS system
**The Study Cycle**

**Preview**

*Preview before class* – Skim the chapter, note headings and boldface words, review summaries and chapter objectives, and come up with questions you’d like the lecture to answer for you.

**Attend**

*Attend class* – GO TO CLASS! Answer and ask questions and take meaningful notes.

**Review**

*Review after class* – As soon after class as possible, read notes, fill in gaps and note any questions.

**Study** – Repetition is the key. Ask questions such as ‘why’, ‘how’, and ‘what if’.
- Intense Study Sessions* - 3-5 short study sessions per day
- Weekend Review – Read notes and material from the week to make connections

**Assess**

*Assess your Learning* – Periodically perform reality checks
- Am I using study methods that are effective?
- Do I understand the material enough to teach it to others?

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**Intense Study Sessions**

1. **Set a Goal** (1-2 min)
   - Decide what you want to accomplish in your study session
2. **Study with Focus** (30-50 min)
   - Interact with material- organize, concept map, summarize, process, re-read, fill-in notes, reflect, etc.
3. **Reward Yourself** (10-15 min)
   - Take a break – call a friend, play a short game, get a snack
4. **Review** (5 min)
   - Go over what you just studied

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Concept maps develop ability to think critically.

And there are many different forms of concept maps.
Compare and Contrast

Thermodynamic Control

Kinetic Control

How are they similar?

How are they different?
Time Management
Is Life Management
Tools for organizing your life:

• Fixed Schedules
  – “Semester-at-a-Peek”
  – “Week-at-a-Peek”

• Planners

• To Do Lists
  – Today
  – This Week
  – Sticky Notes
Time Management Tips from Students

- Have a vision—Set goals
- Know YOUR unique time management style
- Study when the sun is out
- Avoid napping
- Develop patterns “This is what I do”
- Think of yourself as a Professional Student
- Kill the TV, cell phone, video game…
- Email/chat/Facebook…only as a reward
- Exercise
- Eat well
- Drink water
- Take breaks
- Have fun
It’s Crucial to Develop the Right Mindset


Mindset* Matters!

- **Fixed Intelligence/Ability Mindset**
  Intelligence/ability is static
  You have a certain amount of it

- **Growth Intelligence/Ability Mindset**
  Intelligence/ability can be developed
  You can grow it by your actions

Mindset determines reactions to

- **Challenges** – avoid vs. embrace
- **Obstacles** – give up easily vs. persist
- **Tasks requiring effort** – fruitless vs. path to mastery
- **Criticism** – ignore vs. learn from
- **Success of Others** – feel threatened by vs. find lessons and inspiration in
ABC’s of Excellence

• Adopt the right ATTITUDE

• Exhibit appropriate BEHAVIOR

• Consistently make a COMMITMENT
Attitude

“It’s your attitude, not your aptitude, that determines your altitude.”

Zig Ziglar
Expect Obstacles

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

It’s the difference between knowing and doing that determines success.

Anonymous

Don’t let other folks hijack your future!
Commitment

It’s not over ‘til it’s over, and YOU determine when it’s over!

Change strategies when necessary, but never give up your goals. If you can dream it, you can achieve it!
So, What Can You Do, Starting Now, to Ensure Success in Grad School and Beyond?

• Spend more time studying (at least 2 hrs/wk for every hour in class)
• Aim for higher learning levels and 100% understanding
• Use office hours and study groups productively
• Use the Study Cycle with Intense Study Sessions
• Use Metacognition to Study Smarter!!!
Writing Exercise

What behavior will you change for the next three weeks?
If you don’t start it within the next 48 hours...

... you probably never will.
Final Note

Please visit our website at www.cas.lsu.edu.
We have on-line workshops and information that will teach you more effective study strategies. I wish you a fantastically successful future!

Dr. Saundra McGuire