Metacognitive Strategies: What Works?

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Successful Transition to College for Students with Learning Disabilities
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Workshop Plan

- Discuss the academic challenges for students with LD transitioning from High School to College

- Provide an overview of the concept of Metacognition and why it is important for learning

- Describe how Metacognitive Strategies can reduce the transition difficulties
Transition from High School to College Academics
Transition from High School to College Academics

- Classroom / Teaching
- Teachers
- Homework/Assignments
- Tests
- Grades
- Time Management

Learning is the STUDENT’S Responsibility
Metacognitive Strategies: Tools for New College Students
Metacognitive Strategies: Tools for New College Student

To succeed in college, students must:

- know what tools they possess;
- know how and when to use those tools;
- know if the tools are working while they are using them.
Group Activity

Eight pennies are placed in a row on a tabletop. Every other coin is then replaced with a nickel. Every third coin is then replaced with a dime. Finally, every fourth coin is replaced with a quarter. What is the value of the eight coins now on the table?
Metacognition: What is it?

Thinking about one’s own thinking.
Metacognition: What Is It?

Metacognitive Knowledge
- Knowledge About Self
- Knowledge About Strategies
- Knowledge About Task

Metacognitive Control (self-regulation)
- Create a Plan
- Monitor the Plan
- Evaluate the Plan

Reflection
Metacognition: What Is It?

Poor Metacognition

Metacognitive Knowledge
- Does Not Know About Self
- Does Not Use Effective Strategies
- Does Not Understand the Task

Metacognitive Control (self-regulation)
- Does Not Create A Plan
- Does Not Monitor the Plan
- Does Not Evaluate the Plan

Does Not Reflect
Metacognition: What Is It?

How can students develop and improve metacognition?
Metacognitive Strategies

“…metacognitive thoughts are deliberate, planful, intentional, goal-directed, and future-oriented mental behaviors that can be used to accomplish cognitive tasks.” (Flavell, 1971)
Metacognitive Strategies

Student

Brain

Metacognitive Strategies

Task
Metacognitive Strategies

- **Self-Awareness:**
  - Learning Disability
  - Learning Strengths/Preferences
  - Goals / Motivation
Metacognitive Strategies

- Understand how learning and memory function (Information Processing):
Metacognitive Strategies

Contemporary Information Processing Model

Understand how learning and memory function (Information Processing):
- How to prepare for class;
- How to take notes;
- How to approach reading;
- How, when and how long to study.
Metacognitive Strategies

- Know what is expected of you.
  - Understand the assignment.
  - Use Critical Thinking
Metacognitive Strategies

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**
- 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 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?

*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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Metacognitive Strategies

Bloom’s Taxonomy

- **Creating**: The student can put elements together to form a functional whole, create a new product or point of view: assemble, generate, construct, design, develop, formulate, rearrange, rewrite, organize, devise.

- **Evaluating**: The student can make judgments and justify decisions: appraise, argue, defend, judge, select, support, evaluate, debate, measure, select, test, verify.

- **Analyzing**: The student can distinguish between parts, how they relate to each other, and to the overall structure and purpose: compare, contract, criticize, differentiate, discriminate, question, classify, distinguish, experiment.

- **Applying**: The student can use information in a new way: demonstrate, dramatize, interpret, solve, use, illustrate, convert, discover, discuss, prepare.

- **Understanding**: The student can construct meaning from oral, written and graphic messages: interpret, exemplify, classify, summarize, infer, compare, explain, paraphrase, discuss.

- **Remembering**: The student can recognize and recall relevant knowledge from long-term memory: define, duplicate, list, memorize, repeat, reproduce.
Metacognitive Strategies: How to Start Building the Bridge
Metacognitive Strategies: How to Start Building the Bridge

Make them aware of what to expect in college.
- Interview recent graduates.
- Have student do internet searches.
- Youtube videos.
Metacognitive Strategies: How to Start Building the Bridge

Teacher Modeling:
- Describe your own thinking process.
- Explicitly explain each step in the process.
Metacognitive Strategies: How to Start Building the Bridge

Ask the right questions:
- What do you know?
- What don’t you know?
- What do you need to know?
- How are you going to learn it?
Bibliography


