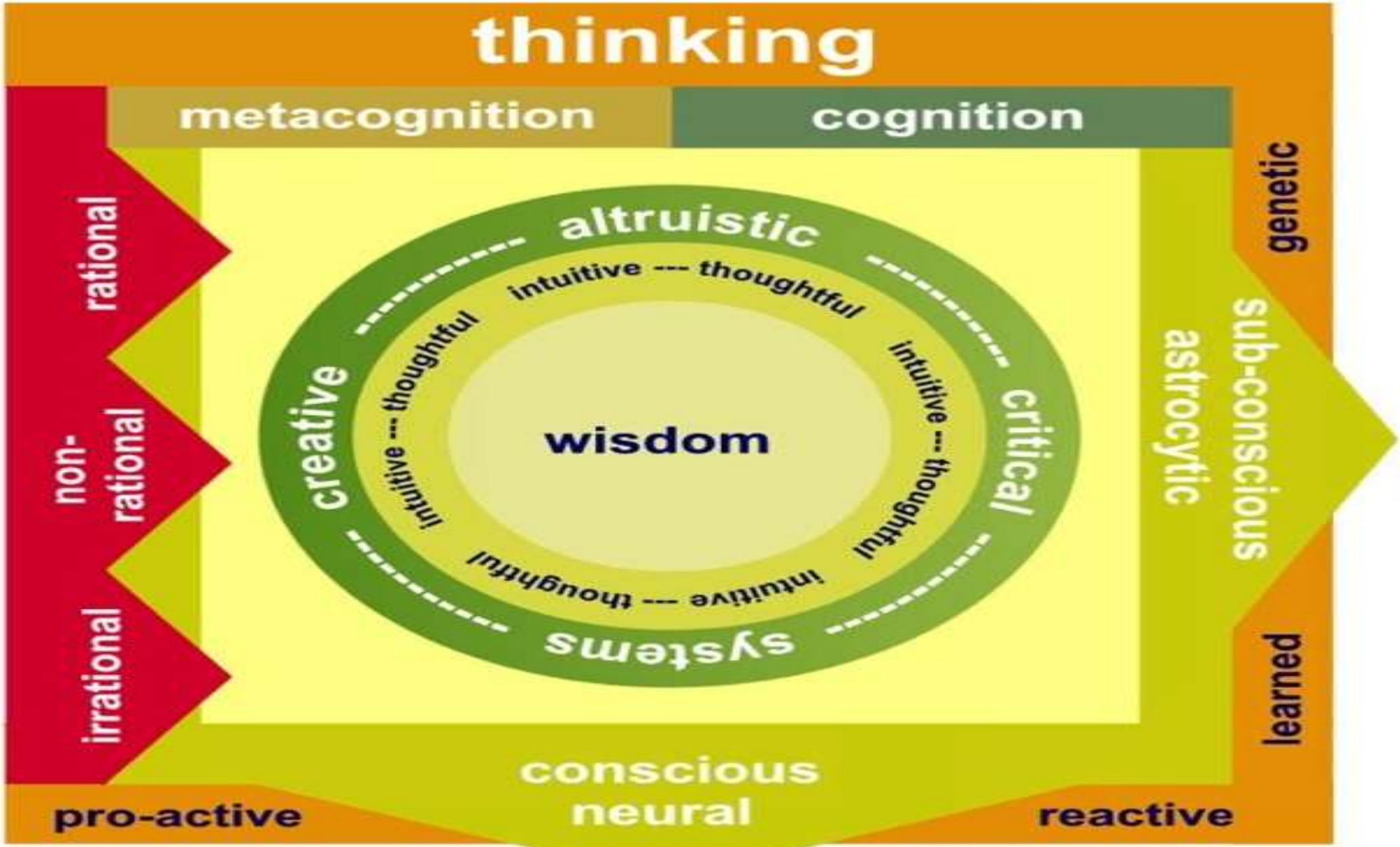
Metacognition: Supporting a Thinking Classroom

LESSON Four

Thinking is Complex



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Cognition- knowledge or skill to carry out a task.

Objectives:

1. What is metacognition?
2. How do I teach my students about metacognition?
3. What metacognitive strategies should I use?

Student Metacognitive Strategies

Which statement best describes you? Assess yourself.

I am a Novice

- **I am just starting to learn this and I don't really understand it yet.**

I am an Apprentice

- **I am starting to get it, but I still need someone to** coach **me through it.**

I am a Practitioner

- **I can mostly do it myself, but I sometime mess up or get stuck.**

I am an Expert

- **I understand it well and I could thoroughly teach it to someone else.**

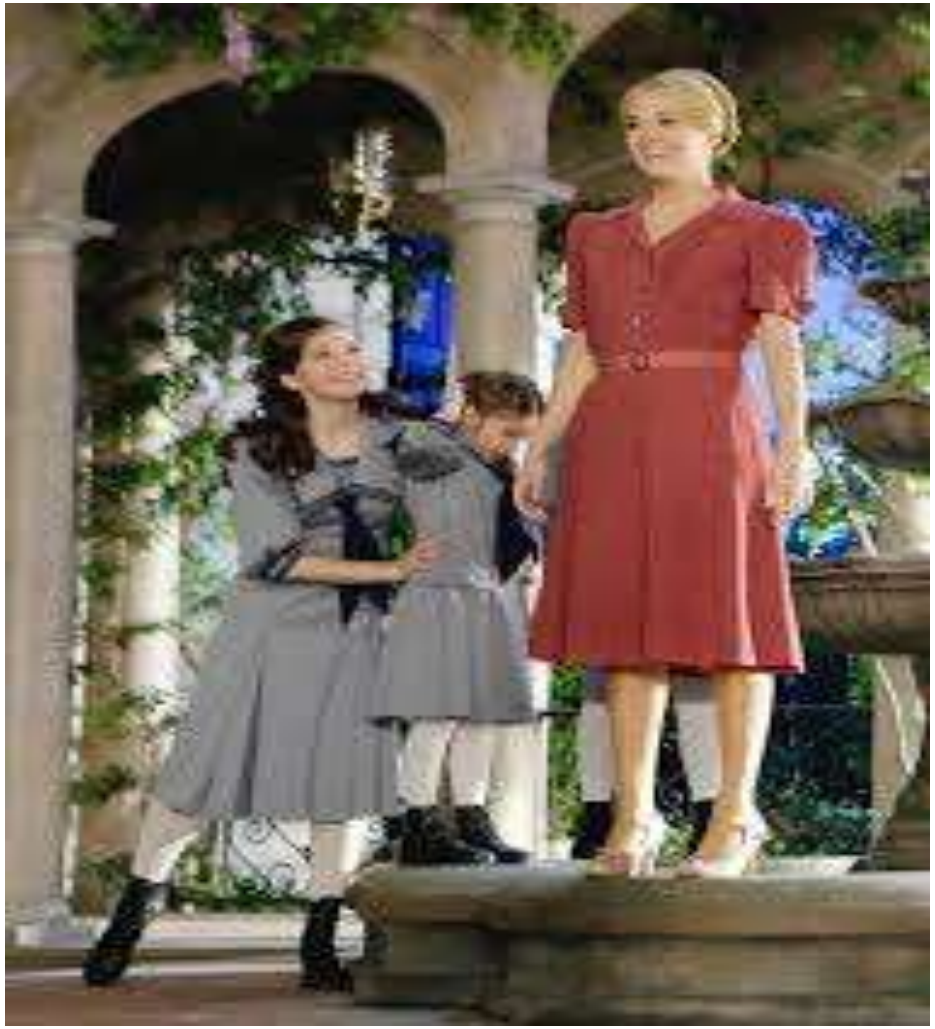
Learners can think before they enter a classroom.

Educator’s role is to teach them to think in different ways and to think more effectively.

Why: Confronted with Real World

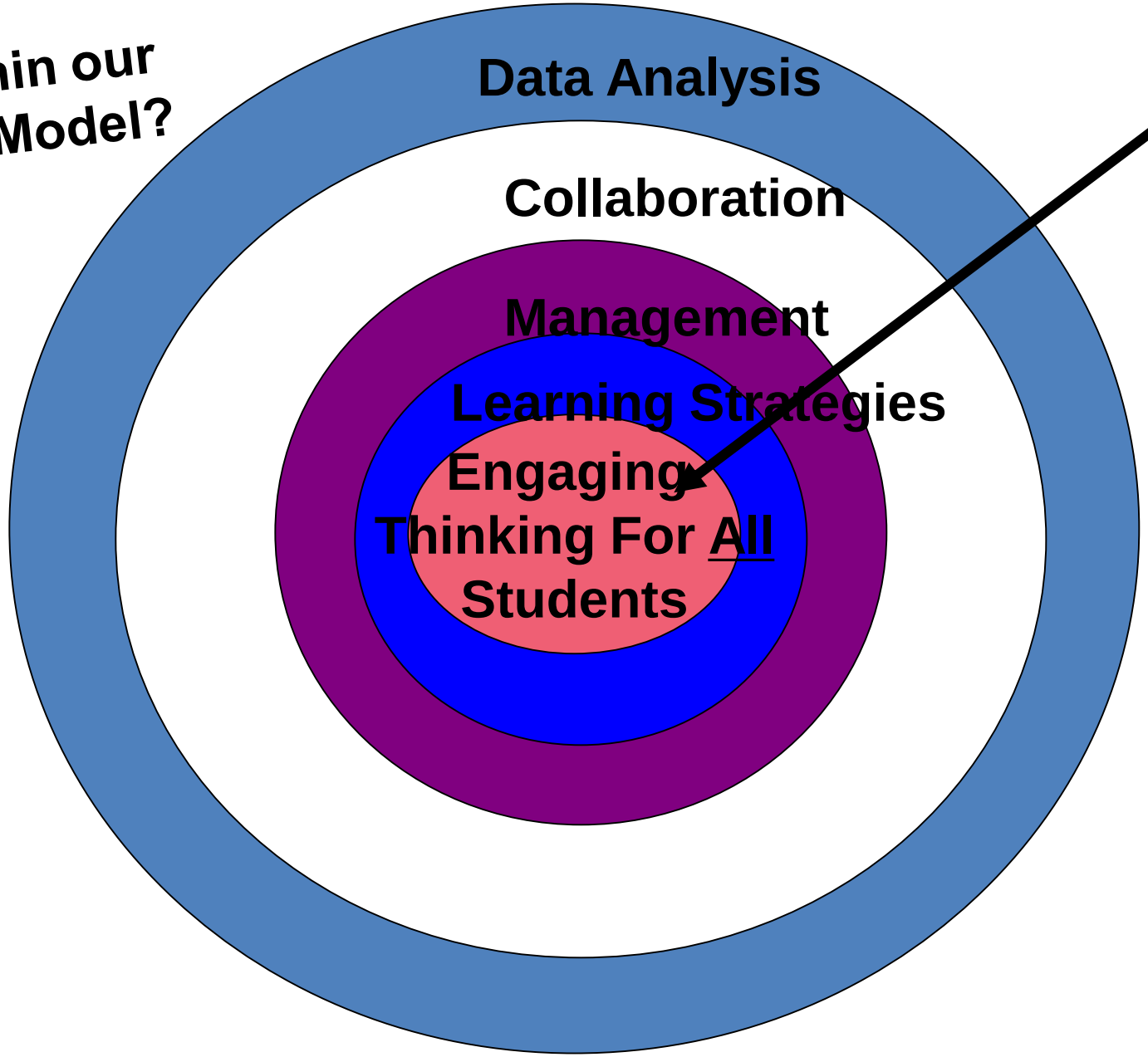
So, what can teachers do to support student thinking?

-Problem Solvers
-Critical Thinkers
-Precise
-Persevere
-Think with others
-Utilize limited resources



Complex problems
can't be solved by making
random moves

Embeded within our Instructional Model?



Target

Teach all students Metacognitive Strategies

Tezella G. Cline, 2006

What is Metacognition? "thinking about your thinking"

Our ability to know what we know and what we do not know; how I think; and what helps me learn.

- **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;

For example: **"I know that I** (person variable) **have difficulty with word problems** (task variable), **so I will answer the computational problems first and save the word problems for last** (strategy variable)."

What is Metacognition?

"how to **regulate** your thinking"

What I do to help me think and learn:

- plan a strategy for producing what information is needed
- monitor the steps and strategies during the action of problem solving; and
- reflect on and evaluate the productiveness of our own thinking.

(Dirkes,1985)

Who practices Metacognition?

- **Plan** the lesson (content, instructional strategy, checking for understanding) to keep you on track.
- **Monitoring** the plan over a period of time –to make adjustments.
- **Reflect** back to make judgments
- **Evaluate** the plan upon its completion to determine future changes.

Who else?

Not everyone

- 50% to 66% of the world's population engage in metacognition

  John Flavell, 1979

- Some children have no ideas of what they should do when they confront a problem and are often unable to explain their strategies of decision making

  Sternberg and Wagner, 1982

Not everyone

Teacher asks

“How did you solve that problem?

“ What strategies did you have in mind?

“Tell us what went on in your head to come up with that conclusion?

“What part do you not understand?

Student response “I don’t know, I just did it.”

“ Students without metacognitive approaches are essentially **learners without direction** or opportunity to review their progress, accomplishments, and future directions.”

O’Mally, Chamot, Stewner-Mazanaares, Russo, & Kupper, 1985, p.56

Benefits to Students with Learning Disabilities

- When metacognitive strategies are explicitly taught they can support students **information retrieval.** (Lenz, Ellis, & Scanlon, 1996).

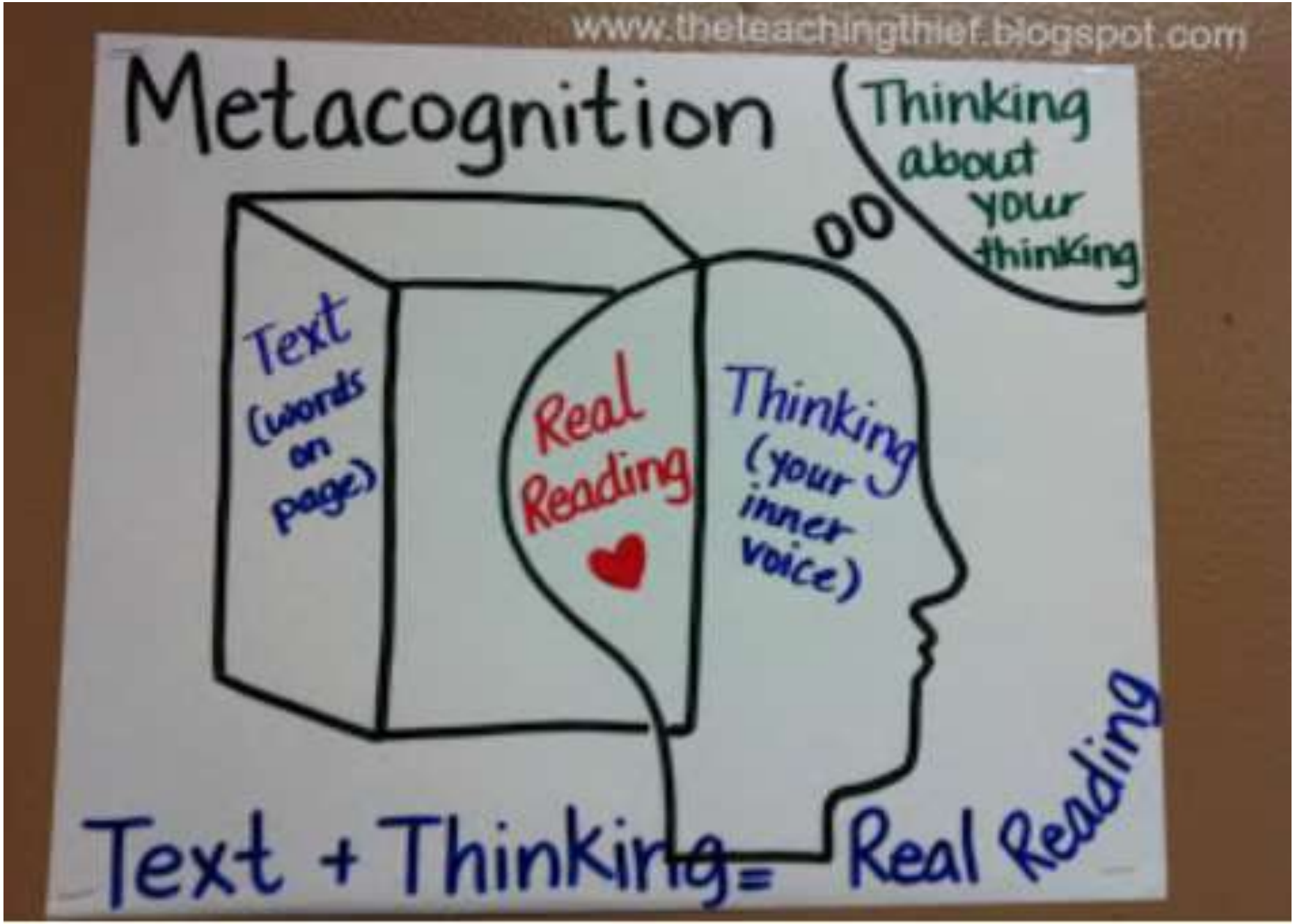
- Moreover, students possess a powerful learning tool that builds **learning independence.** Confronted with a problem-solving situation, students can **implement metacognitive strategies when they have difficulty remembering** how to solve a particular problem.

- As students learn, practice, and independently use metacognitive strategies, these strategies often become integrated into these **students' learning repertoires**.

(Mercer & Mercer, 1993

Reading Comprehension and Metacognition

Awareness and monitoring are in itself what it means to be metacognitive during the process of reading.


www.theteachingthief.blogspot.com
Metacognition
Thinking about your thinking
Text (words on page)
Real Reading
Thinking (your inner voice)
Text + Thinking = Real Reading

Reading Task

Reading a passage and our minds wander from the pages. We see the words but no meaning is being produced. Suddenly we realize that we are not concentrating and that we've lost contact with the meaning of the text. How do we recover?

The inner awareness and the strategy of recovery are components of metacognition.

What do you do? Who taught you to do those things?

Capacities of a Literate Individual

1. They **demonstrate independence**.
2. They **build** strong **content knowledge**.
3. They **respond** to the **varying demands** of audience, **task**, purpose, and discipline.
4. They **comprehend** as well as **critique.**
5. They **value evidence.**
6. They **use technology** and digital media strategically and capably.
7. They come to **understand other perspectives** and cultures.

GREAT THANKS