

Metacognitive Teaching

ERIC CHENG



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2018/11/28

PROBLEMS

1. Without prior notification, you were given an article to read to prepare for a test which was to be held 15 minutes later. The article was 5-page long with a topic in social science. How would you tackle the test?
2. You were given an article to read by your teacher. After 3 hours of reading you could only finish half of the article, and even worse, it seemed you did not quite understand the article. What would you do?
3. Dr. Eric Cheng conducted a study with the Hong Kong Polytechnic University students. Two groups of students were studied. One group of students spent much longer time in their studies than another group of students. Can you tell which group of students achieved higher grades in their course? Why?



Problems

4. How do the high-achieving students in your class study? List the things they generally do.

5. How do the low-achieving students in your class study? List the things they generally do.

6. How do you study? List the things you generally do.

7. How do you help low achievers to improve their school results? List the things you generally do.



What is Metacognition?

First appeared in the book “Cognitive Development” **Flavell** (1977)

Metacognition is cognition about cognition, it is part of self-consciousness and awareness of cognition,

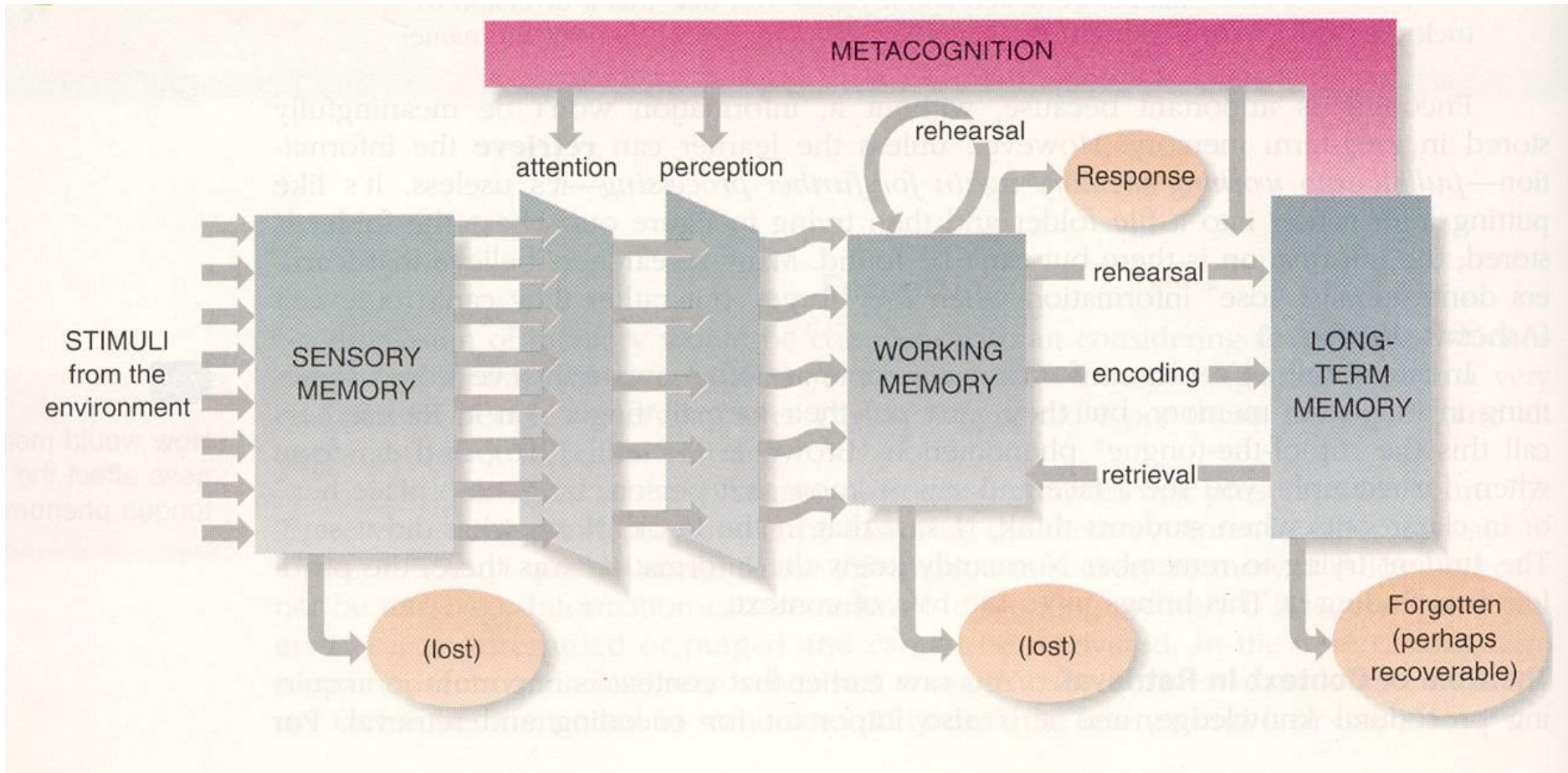


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Metacognition in the information-processing model



Sources: Educational Psychology, Windows on Classrooms. (Fourth Edition)
Paul Eggen, Don Kauchak. Merrill, Prentice Hall
2018/11/28

What is Metacognition?

Defined as :

- Thinking about thinking (i.e. knowing “what we know” and “what we don’t know”)



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Effects of Metacognition?

- Connecting new information to former knowledge
- Selecting thinking strategies deliberately



Why Metacognition?

The monitoring process allows a person to more effectively **control** his or her cognition processes, thereby affording more **efficient** and **active learning**



Metacognition comprises of Self-regulated learning

- Possessing:
 - the knowledge and awareness of one's own cognition processes (Bonds and Bonds, 1992)
 - the ability to **regulate, evaluate** and **monitor** one's **thinking** (Bonds and Bonds, 1992)



Chinese Idea on Metacognition

「學而不思則罔，
思而不學則殆。」

(孔子<<為政>>)



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KWL (Self-Questioning)

K-W-L Strategy

- (What I *Know*?)
- (What I *Want* to know?)
- (What I *Learned*?)

(Concept map)

(Think-aloud)



p.18 表 2.3 ' K-W-L 表格 '

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題目：		
K—Know 我們知道甚麼？	W—Want to Know 我們想知道甚麼？	L—Learned 我們學到甚麼？



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Strategies for Developing METACOGNITIVE BEHAVIORS through Our Teaching

1. Encouraging students to have a whole year learning plan.
2. Teaching different strategies for learning.
3. Emphasizing both the education process and outcome in our teaching.



Strategies for Developing METACOGNITIVE BEHAVIORS through Our Teaching

4. Generating questions.
5. Helping students to identify "what you know" and "what you don't know."
6. Clarifying ideas.



Strategies for Developing METACOGNITIVE BEHAVIORS Through Our Teaching (cont.)

7. Outlawing “I can’t”.
8. Asking students to keep a thinking journal.
9. Giving more feedback to their work.



Strategies for Developing METACOGNITIVE BEHAVIORS Through Our Teaching (cont.)

10. Modeling by teachers.

11. Encouraging students to self-reflection and self-evaluation on their learning.

