



METACOGNITIVE TEACHING STRATEGIES

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Abstract

"I cannot teach anybody anything. I can only make them think".

- Socrates

Metacognitive Strategies make to think a person. Metacognition is a concept of cognitive psychology that "focuses on the active participation of the individual in his or her thinking process" (Stewart & Landine, 1995, p. 17). A wide range of definitions and interpretations of the term metacognition have been accumulated (Manning & Payne, 1996) since it was first used by Flavell. Flavell's expanded description (1979, p. 906) included knowledge of strategy, task, and one's cognition. These three related kinds of metacognitive knowledge continue to be perceived as essential components of the learning process (Krathwohl, 2002; Pintrich, 2002). This article explains the Definition, Principles, why teach meta cognitively and some Metacognitive Strategies.

Keywords: Metacognitive Strategies, Strategic Knowledge.



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Introduction

Flavell (1979) describes metacognition as a heightened awareness of one's thought processes, that is, "Thinking about thinking" and "Knowing about knowing". Others, including Brown (1987), Barell (1991), Metcalfe and Shimamura (1994), and Zhang (2010), while basically accepting Flavell's description, have expanded the term to encompass such cognitive activities as reflection, sentience, self-regulation, self-assessment, and even executive function.

Definition

Metacognition is a concept of cognitive psychology that "focuses on the active participation of the individual in his or her thinking process" (Stewart & Landine, 1995, p. 17). A wide range of definitions and interpretations of the term metacognition have been

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accumulated (Manning & Payne, 1996) since it was first used by Flavell. Flavell's expanded description (1979, p. 906) included knowledge of strategy, task, and one's cognition. These three related kinds of metacognitive knowledge continue to be perceived as essential components of the learning process (Krathwohl, 2002; Pintrich, 2002).

Strategic knowledge refers to knowledge of strategies for learning and thinking (Pintrich, 2002). According to Pressley and Harris (1990), strategy is defined as a procedure for accomplishing an academic task. Alternatively, metacognitive strategies refer to a learners' knowledge of their cognitive processes (Dignath & Büttner, 2008). An example of strategic knowledge is when a student uses a learning strategy, such as a "think aloud" or "I learned statement" as a reflective self-assessment tool.

Principles of Metacognitive Strategies

- **All students will learn and modify their thinking process.**

The aim of teaching thinking for all students may be a belief that everyone will learn and change their cognition.

- **The use of any teaching thinking approach aims to develop thinking for all of the students concerned.**

It is the principle, that the use of any teaching of thinking approach aims for improved thinking for all of the students concerned, not simply a particular few. There also are whole-school problems regarding this principle.

- **Teachers need to believe the positive prospects for, and contributions from, all the students.**

All educators concerned within the teaching of thinking got to have a belief system that affirms the positive prospects for, and contributions from, all the students, together with those from a large vary of cultural and socio-economic backgrounds.

- **The training setting has to offer adequate learning challenges for all the students.**

Within the wider learning environmental setting, that to give birth to psychological feature modifiability the varsity should be modified so the processes in it square measure dynamic and dynamical under the requirements of those that attend it.

- **The learning environment needs to be open to change.**

The training setting has to be open to change, new ideas and directions, and to affirm the partnership of all key players. The key characteristic of a modifying environment is that it's a high degree of openness (Feuerstein, Rand and Feuerstein 2006).

The learning environmental setting includes the broader community. The learning environmental setting includes the whole community which the school is placed. Not only should we see the school as whole 'community of thinking and learning' (Brown 1997), we must always involve the broader school community.

- **The mediation of thinking involves the mediator in a very shared, reciprocal learning relationship with the learner.**

That we share the intention of the learning focus in a very reciprocal means may be a central criterion of mediation in Feuerstein's theory of mediate learning expertise (Feuerstein and Feuerstein 1991), which is important in Feuerstein's approach to the teaching of thinking. In reviewing the Instrumental Enrichment programme for the teaching of thinking, that arises from this theory of mediation, Sternberg and Ben-Zeev note that the main goal is for students to develop a way that they're active and to blame for their own learning experiences, not passive recipients of knowledge (Sternberg and Ben-Zeev 2001, p.336).

- **Thinking involves the mediator in creating the learning to the learner.**
In mediating a program for the teaching of thinking, we'd like to create clear to the learners the significance of the program as a full, and its value to the learners' real lives.

Why Teach Meta Cognitively

Teachers must self-regulate their instruction before, during and after conducting lessons so as to expand their effectiveness with students. Many teachers conduct lessons without adequate advance planning and without enough checking to work out how a lesson goes while it's underway. Teachers often teach the way they were taught instead of consider the benefits and downsides of other approaches and the way to use them most effectively. When observing classroom teachers, Brophy (1986) found that several were so needing to begin a lesson that they passed over communicating the lesson's objectives. While research shows that low-achieving students need explicit information on the way to perform academic tasks (Doyle, 1983), research by Winne and Marx (1982) suggests most teachers are least successful in providing that direction and structure for college students. They interviewed teachers and students to check their views of thinking processes for classroom learning and to look at the degree of coherence between teachers' goals for students' thinking processes and therefore the extent to which they're obtain successfully. The results indicated that there have been serious

problems in classroom communication. Teachers were relatively unsuccessful in setting objectives, defining tasks, and fascinating students. Consequently, many teachers must think more carefully about what they present during a lesson and the way they supply students with important information. Teaching meta cognitively can improve classroom communication and facilitate effective academic performance. Research on expert versus novice teachers shows that experts, or older teachers, are better able to monitor, interpret and evaluate what occurs in an exceedingly classroom during instruction than novices, or inexperienced teachers. Whereas novices were only ready to describe classroom behaviour, experts were ready to explain it (Sabers, et.al., 1991). Teachers also need a "bag of tricks" or collection of teaching strategies at their disposal so as to full fill the wants of various students, still on meet the requirements of the identical student at different times and/or situations. Even the "best" teaching technique isn't effective all the time and is probably going to become boring if overused. Teachers need information on alternative, acceptable approaches so should experiment with the varied techniques to judge their effectiveness. Because they're coping with real people, their students, teachers have an obligation to supply assistance that's in keeping with modern research, theory, and practice. Choice of an instructional technique will vary to some extent on the background of the scholar, the actual material, and therefore the goals of the lesson.

Metacognitive Teaching Strategies

1. Awareness of strength and weaknesses:

Central to metacognition is a person's capacity to see their own strength and weaknesses. Only through looking at oneself and making a genuine assessment of one's weaknesses can achieve self-improvement. One way to start looking at your strength and weaknesses is to use a SWOT chart. A SWOT chart with four sections:

- Strength: write down what one perceive to be one's strength as a learner.
- Weaknesses: write down what one perceive to be one's weaknesses as a learner.
- Opportunities: identify opportunities threats that may prevent from improving one's cognitive skills in the coming weeks and months.
- Threats: identify potential threats that may prevent from improving one's cognitive skills in the coming weeks and months.

POSITIVE AND INTERNAL	
Strengths	Weakness
What are you really good at?	What skill do you lack that may hinder you from being successful in this course?
What skills do you have that will assist you in being successful in this course ?	
What do you do better than anyone else?	What personal traits do you have that may hinder your success?
What do others see as your strength?	What do others see as your weakness?
NEGATIVE AND EXTERNAL	
Opportunities	Threads
What university resources are available to facilitate your success in this course?	What do you see as threads to completing this course?
What other resources are available to you to facilitate your success in this course?	What is your greatest challenge from external factors in completing this course?

2. Reflection

Reflection involves pausing to think about a task. It is usually a cyclical process where we reflect, think of ways to improve, try again then go back to reflection. Reflection is metacognitive only if consciously reflect on what your thought processes were and how to improve upon next time. Reflection needs following phases:

- A task is planned
- Attempt the task
- Look at how did the task
- Come up with things, did well and areas for improvement
- Plan the next task, with a focus on improving on your weaknesses.
- Try again
- Reflect

3. Self-Questioning

Self-Questioning involves pausing throughout a task to consciously check one's own actions. Without self – questioning may lack humility and awareness of our own faults. We would be able to ask some questions to check ourselves as follows:

- Is the way used to carry out this task is appropriate?
- Did I miss something? May be I should check again.
- Did I follow the right procedure there?

- How could I do better next time?
- How can I do a better job at thinking about what I'm doing?

4. Meditation

Meditation involves clearing mind. We could consider it to be a meta cognitive strategies because meditators aim to:

- Clear out the chatter that goes on in our heads.
- Reach a calm and focused state that can prime us for learning.
- Be aware of our insight.

5. Thinking Aloud

Lev Vygotsky argues that “beginner learners tend to think aloud before learning to think inside their head”. The benefit of socio cultural theory’s strategy of thinking aloud is that it makes really think. To talk through what one’s brain is doing, making those things processes explicit.

Teachers will often ask students to speak out loud about what they’re thinking. It not only help the student be more conscious of their cognitive processes, it also help the teacher identify areas where the student is going astray.

6. Mnemonic aids

Mnemonic aids are strategies that can use to improve students information retention. It involve using patterns and associations to remember. They work by adding context to a fact to help to recall it. The verbal information promotes recall of unfamiliar information and content (Nagel, Schumaker& Deshler, 1986). For example “VIBGYOR” is commonly used to help students remember the order of rainbow colors.

7. Science Facts Triangle (Thier & Daviss, 2002)

This strategy divides information on a subject into three parts. To make a appropriate relationship between the three parts according to the above part. Learners get an idea and improve their knowledge from the concept. This strategy can be used as an advanced tool to organize the study method.

1. Draw a triangle and divide it into three sections.
2. Place the most idea within the top section.
3. Write key facts in the middle section.
4. Place supporting details in the bottom section.

8. Awareness of Learning Styles

Gardener's Multiple Intelligence learning theories and Learning Modality theories explain about that people learn in different styles. common learning styles include:

- Visual: Visual learners learn easily by pictures, visual documentaries, graphics. They are good in patterns and matching complementary colours.
- Auditory: Auditory learners learn through reading and listening stories.
- Logical-Mathematical: People who are strong in logical-mathematical are good at using reasoning skill to get the solutions. They are good with numbers but may struggle with subjective issues within the humanities.
- Interpersonal: An Interpersonal learner loves learning through social interaction, and Group work. They are good in emotional intelligence.
- Kinesthetic: A kinesthetic learner learns best through movement. They wish to learn by doing things instead of reading or listening. They are active rather than passive learners.

9. Split the whole content into its simple points

Split the big content or essay type answers into small and simple points. so the students easily understand the difficult concepts quickly. It is one of the strategy for students to learn easily.

10. Role play

Use role play to act out scenarios to help practice self-control skills not only is this a lot of fun for students, but it makes the experience more memorable too.

Using any of the topics by discuss as scenarios, act the situations out in small groups or partners. Not only is role-play a lot of fun for kids, but it makes it memorable. Note that it's always most helpful to act out the socially appropriate way to handle situations. For this reason, it's extremely helpful to partner students up with peer role models who can help kids brainstorm solutions for handling challenges.

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