

15th Annual  
Hawker Brownlow  
**Thinking &  
Learning**  
Conference

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**ROBIN FOGARTY**

**FRIDAY 18 MAY**

**Session 2**

**Metacognitive:**

**Discover The Power of Reflective Thinking**

**MELBOURNE**

# DR ROBIN FOGARTY

Widely known as “the teacher’s teacher”, Robin Fogarty has taught at all levels from pre-school to university, and has trained educators throughout the world in curriculum, instruction and assessment strategies. She has also served as an administrator, and educational consultant in Europe, America, Asia and Australasia. With a doctorate in curriculum and human resource development, Robin is a widely recognised educational expert who has written and had published a proliferation of educational literature. Furthermore, some of her articles have appeared in Educational Leadership, Phi Delta Kappan, and the Journal of Staff Development.



Robin is known as the teachers' teacher. She brings a wealth of knowledge and passion to all endeavours, and is often complimented on her lively sense of humour and personable ways.

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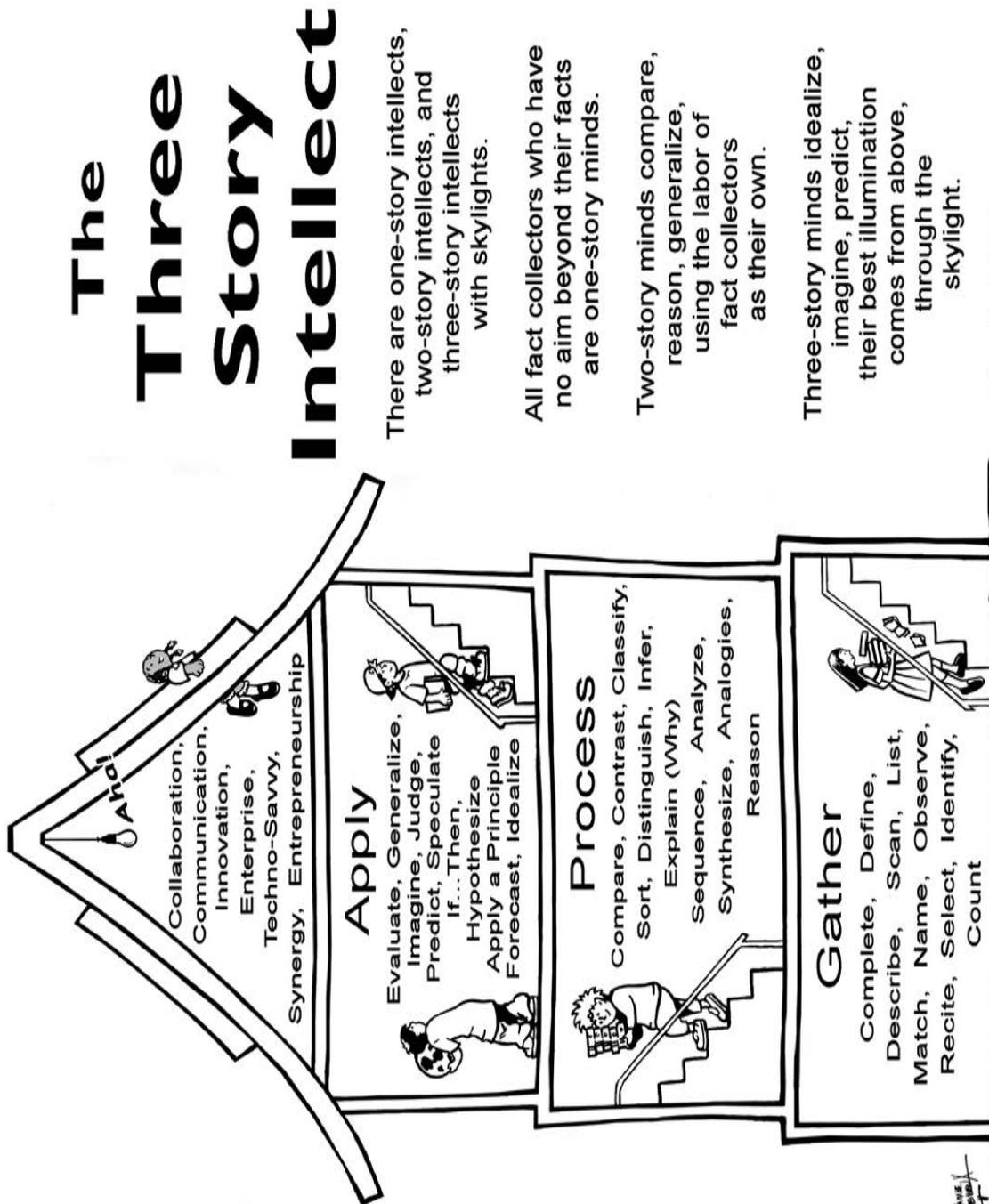
Robin Fogarty

# Metacognition:

Discover The Power of Reflective Thinking



**Teachers should  
never work  
harder than  
their students.**



# The Three Story Intellect

There are one-story intellects, two-story intellects, and three-story intellects with skylights.

All fact collectors who have no aim beyond their facts are one-story minds.

Two-story minds compare, reason, generalize, using the labor of fact collectors as their own.

Three-story minds idealize, imagine, predict, their best illumination comes from above, through the skylight.

Oliver Wendall Holmes  
Adapted from the poem, At the Breakfast Table

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## Thinking About Your Thinking Stem Sentences

Learning to become metacognitively aware of one's actions, thoughts, words, and deeds, as well as one's behaviors, habits, attitudes, and aptitudes, depends on the effectiveness of an individual's power of insight into himself or herself. It also depends on one's integrity to be entirely candid about what is obvious, and the ability to find the inspiration to proceed. This takes a healthy, mentally aware, and highly motivated person. It takes effort and effectiveness to hone this set of skills. It is about becoming a self-realized learner. It is a process that teachers can help students develop with reflective strategies and grow an awareness of self and the control measures to take when change is indicated.

The set of stem statements or reflective questions prompt students and students working in small groups to think about their learning: what went well and what might need a change, and so on. These metacognitive skills are embedded in the strategies that students learn to use. This listing is partial, but these are appropriate for K-12 and adults to get them in the reflective mind set for self-awareness, self-improvement, and self-appraisal.

Of course all skillfulness in knowing ones self leads to more powerful learning and a true sense of student agency.

### **Mr. Parnes's Questions:**

How does this connect? How will you use it?

### **Mrs. Potter's Questions:**

What was the goal? What went well? What will you change next time?

### **Ms. Poindexter's Questions:**

When did you get stuck? How did you get unstuck?

### **What? So What? Now What?**

What Data? So What? Infer: Now What? Act.

### **Aha! Oh, No!**

Aha! What was striking? Oh no! What are the implications?

### **PMI:**

Plus? Minus? Interesting?

### **3-2-1:**

3 Recalls, 2 Questions, 1 Take Away

### **Dial 4-1-1 Information:**

4 Agreements, 1 Disagreement, 1 Application

### **Yellow Brick Road:**

Under Construction, Rocky Road, Yellow Brick Road, Highway to Heaven

### **Tiny Transfer Book:**

Take Away 1, 2, 3, 4, 5, 6

### **Give One, Take One:**

Partners Give 1 Idea, Take 1 Idea

### **That's a Good Idea:**

"That's a good idea because . . ."

### **One-Minute Write:**

Write for one minute, count words, repeat and compare data

Source: J. Bellanca, R. Fogarty, & B. Pete (2012). How to Teach Thinking Skills: 7 Student Proficiencies of the New National Standards. Bloomington IN: Solution Tree Press

## Metacognition: Mirror, Mirror on the Wall Four Levels of Metacognitive Behaviours

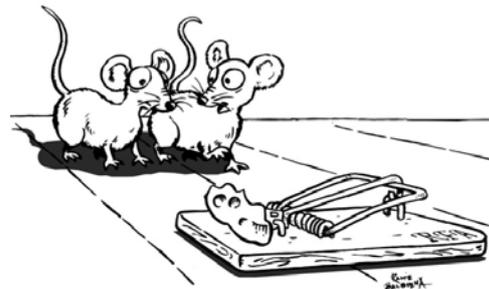
Tacit Use, or subconscious use of strategies without really thinking about them, just using them as reflexive behavior.



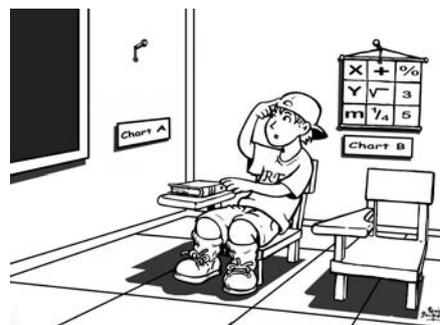
Aware Use, or knowing that one is using a strategy and recognizing that use, through metacognition and self-reflection.



Reflective Use, that involves thinking back, think about what one used before and if the strategy worked or not, and trying to determine if this is the right time to try it again.



Strategic Use, involves consciously and purposely using the strategy to get a desired result.



### Knowing What You Don't Know

While this is a simple hypothesized example, it offers much to ponder about the effectiveness of some performers, students or learners with their skillful use of metacognition. At the same time, it is just as revealing to observe the absence with others, of any real evidence of using metacognitive behaviour. The instance offered to illustrate this involves reading by two students, each managing comprehension in their own way, (Fogarty, 1994).

#### Student A

One student reads and reads and reads, and when he gets to the end of the page, he has an awareness, some metacognitive alert system, that signals him that he has lost contact with the text, and he has no idea what he has just read. With that signal, he employs a recovery strategy, looking for a key word, rereading the first and last sentence or tediously reading the entire page over again, until he is satisfied that he has some sense of the content in the text.

#### Student B

The second student reads, and reads, and reads and turns the page and keeps reading, reading, reading. When he is done, he has no idea that he does not really know what he read. He, literally, has little idea that, he is supposed to get meaning from the text, let alone, knowing that he is supposed to read in order to get meaning. He doesn't really know that he supposed to read to understand. He only goes through the motions, but relies on various other ways to learn, including teacher talk, asking a friend, or looking at the pictures and charts to try to discern meaning.

It's important to focus on metacognition and thinking about your own thinking, because the reflective learning that comes with metacognitive behaviours has a very high impact on learning.

Only Ask BIG Questions!

Show Robin Williams in a clip from *Dead Poet's Society* (Touchstone Pictures, 1989). Begin with the part where he is introducing the poetry text and is drawing a graph on the board. Then, go to the scene where they are huddled together and he recites Whitman's, "O Me, Oh Life" from *Leaves of Grass*, (Whitman, 1889) and then addresses the boys: "O Me! O Life! ... life exists, and identity; That the powerful play goes on, and you will contribute a verse. What will your verse be?"

Only Ask BIG Questions! (Clare Luce Booth in *Pink*, 2009, p.154)

Tell them, the story of the advice to John F Kennedy, that Clare Luce Booth, gave the young President. "A great man is a sentence, "Lincoln freed the slaves. "FDR lifted us from the Great Depression." What will your sentence be?"

Select one of the following to respond to:

- What will my sentence be?
- What will my verse be?
- What will be my legacy"?

Then Keep Asking Small Question! (*Pink*, 2009, p.155)

To realize your dream and aspiration, takes much more than discovering your sentence. It takes lots of small steps and that means asking a lot of small questions along the way.

Am I on the right track?

Is there a right way?

An easier way?

Does this makes sense?

How long is it gonna take?

Are there shortcuts?

How will I know it's right for me?

Was I a little better today than yesterday.

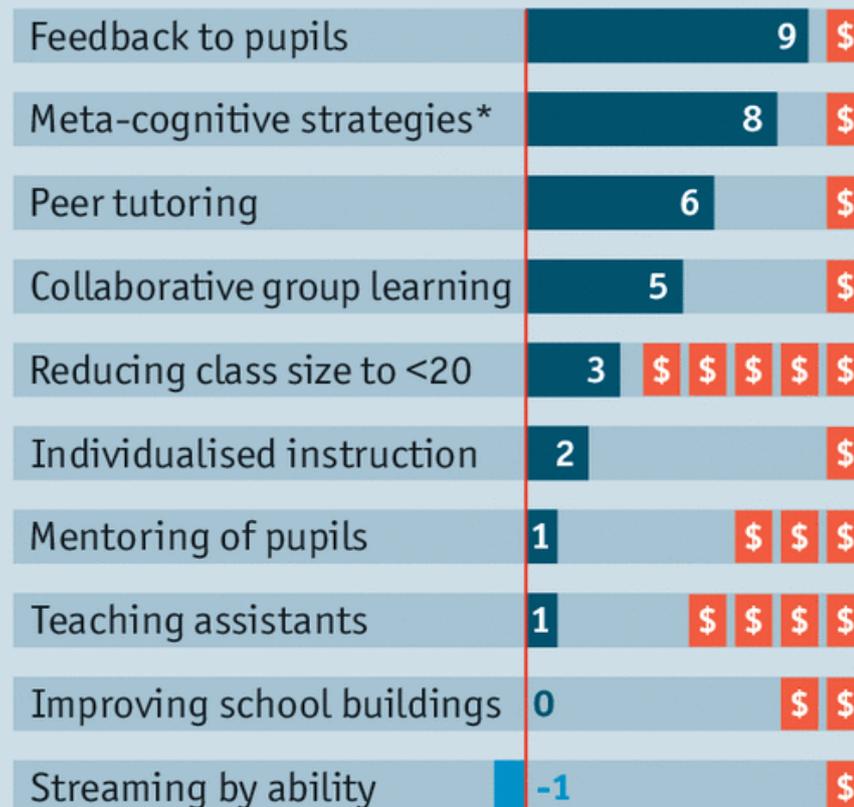
Give them this list of questions and invite them to add others.

## What works, at what cost

Effectiveness and cost of education strategies

*Effect in additional months' progress*

*Relative costliness*  
5x \$ = most expensive



Source: Education Endowment Foundation

\* Helping pupils think about their own learning more explicitly

Economist.com

## What works at what cost

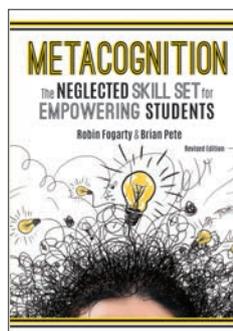
John Hattie crunched the results on the effects of instruction on the learning. What matters is “teacher expertise”. All of the 20 most powerful ways to improve school-time learning identified by the study depended on what a teacher did in the classroom. ***In a Nutshell, it is Feedback, Metacognition and Collaborative Group Learning***



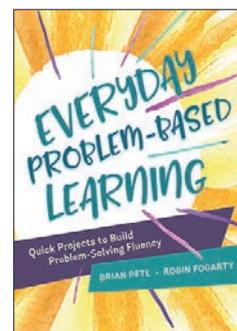


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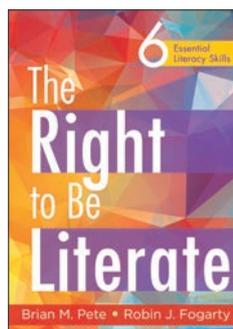
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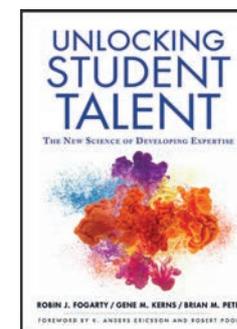
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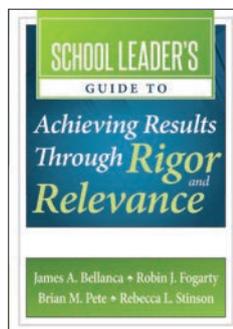
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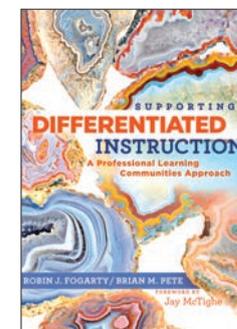
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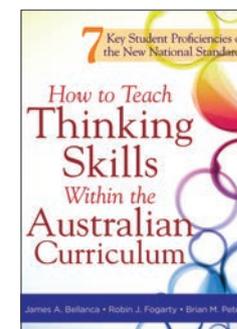
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