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Metacognition :

The power of metacognition to raise academic achievement for post 16 students

Leaders of their own learning

Vicky Crane

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What is this?




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The Juicy Salif by Philippe Starck – a lemon squeezer that doesn't work



Starck even said his squeezer was, "not meant to squeeze lemons" but "to start conversations"

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Which one represents academic school improvement in your sixth form and why?




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It is only right to squeeze as much out of it as possible out of the education system.

But, let's start a conversation, not just about using a more effective lemon squeezer...

is there an additional avenue?

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### Successful *learners* are highly metacognitive

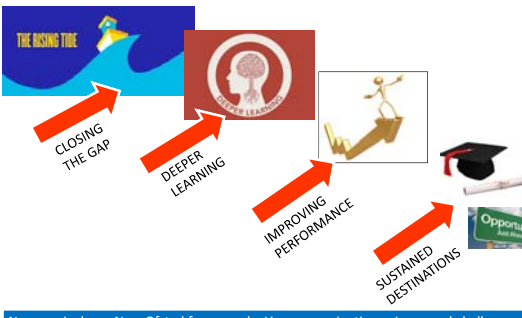


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### Why metacognition?



THE RISING TIDE

CLOSING THE GAP


DEEPER LEARNING

IMPROVING PERFORMANCE

SUSTAINED DESTINATIONS

New curriculum. New Ofsted framework. Linear examinations. Increased challenge.

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### Metacognition


- This will give departments the edge.
- This will deliver better results.
- This will improve pupil independence.
- This will create better learners.
- This will build student confidence.
- This will lead to more successful citizens in later life.

Show me a school leader who doesn't want these things.

**We need: Strategic, self-improving learners with strong beliefs in their ability to grow, improve and achieve.**

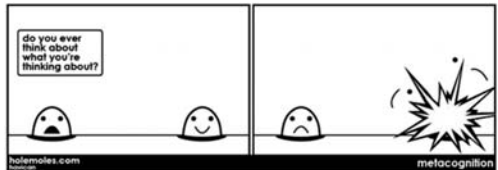
Metacognition is the route to a self-improving learner.

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### Metacognition : warning, is likely to make your brain explode




do you ever think about what you're thinking about?

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Thinking about your thinking

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### Introspection : What shapes your metacognitive skills?



Developing a metacognitive dialogue and an analytical approach

The belief

Strategies: not a bolt on but applied in subject lessons. Not just generic but also subject specific.

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How does mindset influence our development as a learner? Am I born smart? Am I in control of my own development? If I am, what does it mean and how do I do it?

Am I smart?

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### Mindsets on a sliding scale

Most of us will have experienced a growth mindset at some point.

*"Of course I can do that!"*  
*"I could never do that!"*

The question is which is our most common position and do we need to change it? Do we need to adopt a more growth mindset approach in particular situations?

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As a senior leader, how do you support post 16 students to have a growth mindset?

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Is it just 10,000 hours? Is it just effort?

2 hours BEGINNER    20 hours NOVICE    200 hours INTERMEDIATE    1,000 hours ADVANCED    10,000 hours MASTER

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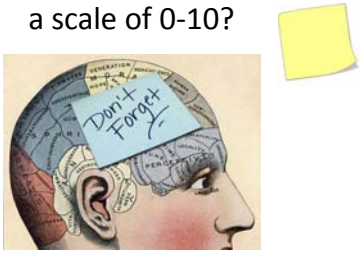
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How would you rate your memory on a scale of 0-10?

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### How would you rate your memory on a scale of 0-10?




Can you improve your memory?  
By how much do you think you can improve your memory?  
What is your argument for your viewpoint?

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### You have 8 playing cards




For the nervous : just the values  
For the brave: the values and the suits

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### What **strategy** did you use?



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### How would your strategy stack up?

- **21.19 seconds** – the current record for speed in memorising a deck of cards
- **Hour cards** - Ben Pridmore from Nottinghamshire in the UK holds the title for remembering **28 decks of 1,456 cards** in an hour




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### How far will your strategy get you?




The High Jump - Scissor technique



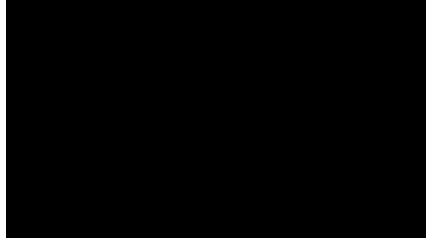
The High Jump – Fosbury Flop

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If your pupils repeated get low test scores, do they say "Maybe I need a new strategy" or do they say "I'm not very good at..."



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**Metacognition : the internal learning dialogue**

What strategies could I use to solve the problem?

Is my strategy working? Do I need to change strategy?

Did my strategy lead to the results I wanted?

What kind of task / problem is this? What do I already know about this?

Would I use that strategy again? How could I improve next time?

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**What are the success variables? What factors go into choosing the right strategy?**

Mindmap

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**What approach will you take?**

How do you assess what you know?  
 How accurate is your assessment?  
 How do you know where to start?  
 How do you know what to focus on?  
 How do you know what approach to take?  
 How do you know if it is the right strategy?  
 How do you check if your strategy is working?  
 Who teaches us the strategies?  
 Who helps us to evaluate them?

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**As a post 16 senior leader, what strategies would you like your students to be developing, fine tuning, trying alternatives of, evaluating?**

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**Metacognition Wrappers : How can metacognition be practically applied to support linearity?**

Before pupils start the task, they are given support in how to use a specific learning strategy. E.g. note taking.  
 After the task, pupils are given the opportunity to reflect on the strategy.

EXPLICIT TEACHING OF THE STRATEGY → EXAM or ASSESSMENT → EVALUATE SUCCESS OF STRATEGY

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**EXAM WRAPPERS : VARIABLES**

1	What do you know about the exam	→	Reviewing, judging success, planning next steps
2	Building a bank of revision strategies (to be applied to a question or assessment)	→	Reviewing, judging success, planning next steps
3	Preparing for the exam	→	Reviewing, judging success, planning next steps
4	Formulate strategies to apply during the exam	→	Reviewing, judging success, planning next steps
5	Strategies for dealing with difficulties that arise during the exam	→	Reviewing, judging success, planning next steps

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## Exam wrappers

Assessment 1      Assessment 2      Assessment 3

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As well as strategies, you also need...

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### Constant internal monitoring : Successful learners are also metacognitive *during* the process

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### Metacognition monitoring : the internal learning dialogue during learning

Do I need to re-read that last paragraph?

Does it look like I think the solution should look like?

Am I on track to meet the success criteria?

Do I understand this? Would I be better working alone?

Time! Do I need to speed up? Do I need to slow down?

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## Reflection

Reflection with a capital 'R'

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### What does an Olympic competition look like?

Do pupils take the same approach to examinations as they would to preparing for the Olympics? Do we?

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## What can post 16 senior leaders do to harness the power of metacognition?

Students	Teachers
Middle leaders	Parents, career guidance, form tutors, pastoral teams

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## Can't we just do this on enrichment days or in form time? We have a handbook for students.



Where are the gaps in your pupils metacognitive skills?

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## Metacognition

- Classroom ethos, environment, philosophies that seep into all practices
- Practical actions to aid development of metacognition e.g. exam wrappers, think alouds, reflection techniques, explicit teaching of learning strategies
- Pupils becoming more aware of how metacognition, mindsets and aspirations all play a part in successful learning and getting them to see that they can hone their skills and develop their ability to be a learner

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## Developing metacognitive skills

- Are you showing them what to aim for, or inviting them to deduce what to aim for?
- Are you telling them what they need to know, or supporting them to develop the metacognitive skills necessary to plan?
- Are you telling them the strategy, or equipping them with the ability to evaluate strategies and make choices as to when to apply?
- Are you showing them what to improve, or encouraging analysis against criteria?

What does a metacognitive post 16 classroom look like?

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## Harnessing the power of metacognition : It's not a walk in the park



It's not a fad diet it's a lifestyle change and needs a strategic approach to achieve it, as well as belief, grit and determination.

A lifestyle change begins with a vision and a single step.  
-Jeff Calloway  
healththoughts.in

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