

WHAT ARE METACOGNITION AND SELF-REGULATED LEARNING?

Freya fiddled with her pencil case. Every Friday, she would experience a quiet dread when facing the weekly spelling test. This week, though, she felt more confident than before. After a couple of weeks characterised by annoying mistakes, she had worked hard in readiness for this week's test. She had devised two of her own mnemonics and she had practised her 'le' ending words, as well as 'surprise' with an 'r', repeatedly.

As Mr Thomas began the spelling test, Freya listened hard. She knew that sometimes she would feel a little pressure when her teacher moved quickly onto the next spelling, but that this week she would listen carefully and remember what she had practised.

One or two words were no doubt tricky, but Freya had weighed up her options each time and she was utterly confident of her success. Before Mr Thomas had a chance to cycle through the correct spellings, Freya sat up straight, with a smile lighting up her face, fuelled by quiet satisfaction. She had already thought about her new spelling routine and how she would stick to it next week too.

METACOGNITION: A BRIEF EXPLAINER

Follow-up activities



A BUILDING KNOWLEDGE



This worksheet relates to the 'Building Knowledge' group of mechanisms, as featured in the EEF guidance report 'Effective Professional Development'.



eef.li/EPD



The EEF's animation 'Metacognition: a brief explainer' can be found here:



youtu.be/sAike_RQY_Dg

Questions for discussion

Leaders using the EEF's animation '[Metacognition: a brief explainer](#)' when delivering professional development training on Metacognition might find these key questions a good starting point for discussions:

1. **What is Metacognitive knowledge?**
 - a. Knowing how to approach a learning task
 - b. Planning an approach to learning
 - c. Knowledge of the task, strategy and self
2. **What is Metacognitive regulation?**
 - a. Applying your prior knowledge and making a plan
 - b. Thinking deeply about the learning
 - c. Pupils' ability to plan, monitor and evaluate their learning based on their existing knowledge
3. **Can you describe an example of when you have supported pupils to plan, monitor and evaluate their learning—what was the impact?**
4. **Moving forward, what adaptations could you make to your deliberate teacher habits to support pupils to be more confident when faced with an independent learning task?**

Worked examples

These examples and non-examples of independent learning behaviours could form the basis of a range of activities aimed at deepening staff understanding for example:

1. **Ask staff to sort into examples and non-examples to consolidate understanding.**
2. **Ask staff to create examples and non-examples to explore what independent learning behaviours look like across different subjects and phase.**

Example	Non-Example
Adam's teacher has asked him to solve a maths problem. He recognises the type of problem and remembers that he has used visual representations successfully in the past to help him. Then he flicks through his Maths book to find a completed example to help jog his memory, before beginning the task.	Adam's teacher has asked him to solve a maths problem, but he is unsure of what to do. He grabs some manipulatives and begins to move them around, to appear busy. When this doesn't help, he asks for a pass to use the toilet.
Natasha is revising for her A-levels. She found revising for her GCSE's overwhelming and stressful. In response she decides to speak with a trusted adult and together they come up with a manageable revision timetable for the coming term.	Natasha is revising for her A-Levels. She feels overwhelmed with the amount of content she needs to revise. She puts it off until a week before her first exam, cramming her work. As a result, she enters her first exam feeling exhausted and under-prepared.



What is metacognition?

Metacognition and self-regulation approaches support pupils to think about their learning more explicitly, often by teaching them specific strategies for planning, monitoring, and evaluating their learning.

What is this starter kit?

Building independent learning habits into teaching can be challenging. Evidence tells us that explicitly teaching metacognition can support pupils to think about their own learning more purposefully, leading to more independent learning behaviours.

This resource could be used as a starting point for schools who want to support pupils to build more independent learning behaviours.

It offers advice and recommends specific tools to help build staff knowledge around metacognition, and also provides suggested activities for initial professional development.

While some of the metacognitive strategies can be described generically, they can only be improved through practice—this means applying them to specific tasks. Other EEF guidance reports, such as those on literacy and mathematics, provide more detailed subject-specific guidance for teachers.



Purpose of activity

Building a shared professional understanding

Consolidating understanding

Exemplification

Supporting metacognitive strategies

Rec. 1 of our metacognition guidance report says:

“Teachers should support pupil’s to plan, monitor and evaluate their learning.”

Rec. 2 of our metacognition guidance report says:

“A series of steps—beginning with activating prior knowledge and leading to independent practice, before ending with structured reflection—can be applied to different subjects, ages and contents.”

Rec. 3 of our metacognition guidance report says:

“Teachers should verbalise their metacognitive thinking.”

Resource

Metacognition: A Brief Explainer

This short animation aims to cut through the complexity by providing a clear example of metacognition in practice. It could be shared with staff during training to build knowledge.

Watch the animation here: youtu.be/sAik_RQY_Dg



Metacognition: A Brief Explainer—Follow-up activities

Leaders using the EEF’s animation when delivering professional development training on Metacognition might find these key questions and worked examples a good starting point for discussions.

Planning Professional Development—Considering a balanced design

This worked example provides a model of how schools can draw upon the best available evidence around professional development to ensure a balanced approach to PD design, making it more likely that this will lead to a sustained change to practice.



Supporting Independence through Questioning



Supporting Independence through Questioning

Planning questions that encourage learners to **plan**, **monitor** and **evaluate** can be a good starting point when thinking about developing metacognition within the classroom. This tool suggests questions that could be used across subjects and school phases. Blank/editable versions are included for training purposes.

Metacognition—The seven-step model

In this ‘Voices from the Classroom’ video, Lucy Broomfield—Primary Teacher and KS1 phase leader at Chorlton Park Primary School—explains how she uses the ‘seven-step model’ to support pupils’ independent learning.

Watch here: youtu.be/PS9s-ML6aMU



Supporting Self-Knowledge through Modelling

This tool provides a range of prompts that could be used by teachers using a ‘think aloud’ to model knowledge of self at each stage of the metacognitive process. Blank/editable versions are included for training purposes.

Why metacognition?

The EEF’s **Teaching and Learning Toolkit** suggests the potential impact of metacognition and self-regulation approaches is high (+7 months additional progress).

Pupils who are metacognitive demonstrate more independence and resilience throughout the learning process. The explicit teaching of metacognition can be particularly helpful for learners that come from socio-disadvantaged backgrounds.

To find out more...

The EEF’s guidance report **Metacognition and Self-regulated Learning**, offers practical advice on how to develop pupils’ metacognitive skills, whilst our **Effective Professional Development** guidance report offers further evidence-informed approaches to support schools in developing professional development that improves teacher practice.



Access metacognition explainer animation



Use your smartphone’s camera or QR app to access the explainer video.

youtu.be/sAik_RQY_Dg

Access EEF metacognition resources



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