Thinking about thinking

What is metacognition and how can it help students learn?

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Metacognition is the ability to think about and regulate one’s own thoughts. Teaching metacognitive strategies can improve learners’ performance at school. This makes it a good, evidence-based target for intervention.

A simplified definition of metacognition is “thinking about thinking”, but metacognition also encompasses the regulation of these thoughts – the ability to change them. It is a step further than simple awareness of thought processes, incorporating the ability to alter thoughts and behaviours. Explicitly teaching learners strategies for metacognition has been shown to lead to improvements in attainment.

Encouraging metacognition is therefore a relatively straightforward and cheap way to improve learning. The Education Endowment Foundation (EEF) describes metacognition approaches as having “consistently high levels of impact”, while acknowledging that they can also be a challenge to implement.

However, we must be cautious not to overstate the impact metacognition can have on learning. Like mindsets, metacognition is sometimes revered as an easy fix, when in fact there are of course many factors affecting learning. Teaching metacognitive strategies can also be challenging for the educator. On the other hand, metacognition is disregarded by some who fear it is simply the latest buzzword in the teaching profession.

Modelling metacognitive strategies through thinking aloud helps students learn techniques

Showing learners examples of metacognitive thinking, through thinking aloud, is one of the key recommendations for enhancing metacognition. There are three key phases in metacognition: planning, monitoring, and evaluation. Each of these phases can be modelled by the teacher or parent who is helping the learner, demonstrating how to approach a problem verbally. This can be done through asking a series of questions.

During the planning phase, before starting on the task, questions address how previous work relates to the current work, how best to start the task at hand, and how the goal can be achieved. The aim here is to increase awareness of different strategies, and to help students choose a strategy and draw on prior work.
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In the monitoring stage, while the task is underway, a teacher might ask whether the current approach is working, and what can be improved, in order to encourage students to change their strategy if necessary. After the task has finished, during the evaluation stage, questions relate to whether or not the goal was reached and what would be better next time.

These are just examples of the kinds of questions that can guide and encourage metacognitive thinking. The EEF website contains many more examples and a detailed description of how they can be used in the classroom. What seems to be important is that metacognitive strategies are taught explicitly and in relation to specific tasks, as opposed to in an abstract manner where learning skills are taught without being applied to real tasks.

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Metacognition is a particularly appealing target for improving learning because it doesn't require expensive specialist equipment, and is thought to have its biggest impact on disadvantaged students. There is a good evidence base, and there are great resources freely available online to support teachers and parents. If metacognition is the latest buzzword in teaching, then it’s for good reason.

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