Metacognition and self-regulation approaches have consistently high levels of impact

Cost	Evidence strength	Impact (months)	Effect size
£££££	🔒🔒🔒🔒🔒	**+7**	*0.54*

What is it?

Metacognition and self-regulation approaches aim to help pupils think about their own learning more explicitly, often by teaching them specific strategies for planning, monitoring and evaluating their learning. Interventions are usually designed to give pupils a repertoire of strategies to choose from and the skills to select the most suitable strategy for a given learning task.

Self-regulated learning can be broken into three essential components:

- cognition - the mental process involved in knowing, understanding, and learning;
- metacognition - often defined as 'learning to learn'; and
- motivation - willingness to engage our metacognitive and cognitive skills.

How effective is it?

Metacognition and self-regulation approaches have consistently high levels of impact, with pupils making an average of seven months' additional progress.

These strategies are usually more effective when taught in collaborative groups so that learners can support each other and make their thinking explicit through discussion.

The potential impact of these approaches is high, but can be difficult to achieve in practice as they require pupils to take greater responsibility for their learning and develop their understanding of what is required to succeed.

The evidence indicates that teaching these strategies can be particularly effective for low achieving and older pupils.

A number of studies in the Arab world have noted the significance of meta-cognitive skills on students' academic outcomes. In 2017, a study of students in Saudi Arabia found that pupils in the

experimental group performed better on the posttest when taught using the metacognitive strategies comparing with the control group.

Arab world-based research on the topic suggests that students can benefit from exercising self-regulated learning skills. In order for students to learn how to effectively and autonomously apply these skills, studies in the Arab world suggest that teachers use more open-ended questions and implement activities that encourage students collaborative learning.

Further research is recommended to investigate other meta-cognitive and self-regulation strategies impact on students' achievement particularly among primary grades. Researchers are invited to look at teachers' understanding about these strategies and how and in what ways they can best integrate them in the curriculum. Having this evidence-based data would be helpful for the design of professional development programs for teachers.

How secure is the evidence?

A number of systematic reviews and meta-analyses have consistently found strategies related to metacognition and self-regulation to have large positive impacts. Most studies have looked at the impact on English or mathematics, though there is some evidence from other subject areas like science, suggesting that the approach is likely to be widely applicable.

The approaches that have been tested tend to involve applying self-regulation strategies to specific tasks involving subject knowledge, rather than learning generic 'thinking skills'.

What are the costs?

Overall, costs are estimated as very low. Many studies report the benefits of professional development for teachers and of using an inquiry approach where teachers actively evaluate strategies and approaches as they learn to use them in their teaching. Most projects are estimated as costing under 80.0 GBP (102.9 USD, 73.0 JOD) per pupil, including the necessary professional development for teachers.

Costs originally calculated in GBP; USD and JOD calculated via oanda.com on 22/09/20.

As yet there is no information about local costs.

What should I consider?

Which explicit strategies can you teach your pupils to help them plan, monitor, and evaluate

specific aspects of their learning?

How can you give them opportunities to use these strategies with support, and then independently?

How can you ensure you set an appropriate level of challenge to develop pupils' self-regulation and metacognition in relation to specific learning tasks?

In the classroom, how can you promote and develop metacognitive talk related to your lesson objectives?

What professional development is needed to develop your knowledge and understanding of these approaches? Have you considered professional development interventions which have been shown to have an impact in other schools?