

# MENTOR HANDBOOK

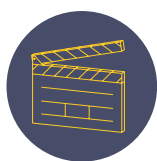
## 11 | INSTRUCTION: STRAND OVERVIEW AND (RE)CONTRACTING

### STUDY

#### KEY TAKEAWAYS FOR THIS MODULE

Your teacher can make better instructional decision by understanding that:

- > Learning is a lasting change in pupil capabilities and understanding - if nothing is remembered, nothing has been learned.
- > Effective instruction takes pupil working and long-term memory into account.
- > Effective instruction involves explicitly teaching the knowledge and skills pupils need in small steps, ensuring a high success rate. Retrieval and practice help them remember what they have learnt.
- > The 'I-We-You' model is a useful rule of thumb for instructional decisions.
- > Pupils learn at different rates and have different levels of prior knowledge, so effective teachers guide practice and adapt instruction and pupil grouping to provide further support for these pupils.
- > Once explicit teaching has been mastered, instruction can be further refined through developing questioning, talk and feedback.



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SUMMARY BELOW:**

#### TEACHING CHALLENGE

Ms Brophy is increasingly confident in her behaviour management. She's supported with pre-prepared schemes of work and lesson plans but sometimes struggles to make them work in her classroom. Pupils can become confused about what she wants them to do or struggle to remember what she has taught them. How can Ms Brophy make instructional decisions that maximise the learning of her class?

#### KEY IDEA

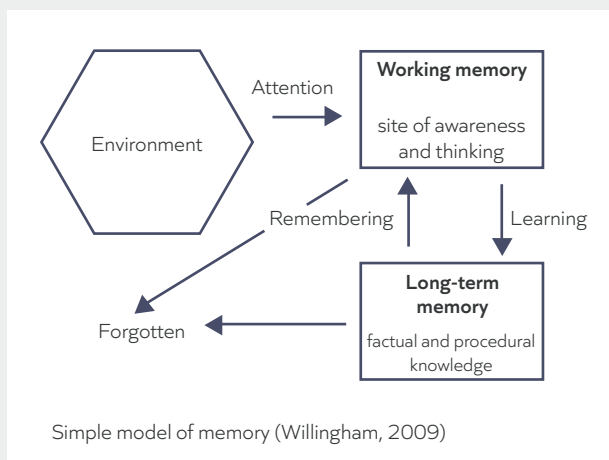
Making effective instructional decisions help lessons to go better and pupils to learn more.

## LEARNING

Learning involves a lasting change in pupils' capabilities or understanding. Ms Brophy wants to ensure that pupils are able to remember what they learn. She also wants her pupils to be able to think creatively and problem solve. To be successful, she needs to understand the foundational role of 'memory' in learning.

### A MODEL OF MEMORY

An important factor in successful learning is memory, which can be thought of as comprising two elements: working memory and long-term memory. Willingham's simple model of memory is one way to represent visually how the components relate to each other:



The main components in this model are:

- > **Working memory** which acts as the conduit between the information we attend to in our environment and our long-term memory (Sweller, 2016). It is also where we hold information we are thinking about in the moment (Willingham, 2009). It has a limited capacity: we can only think about a few things (two or three) at once (Cowan, 2008).
- > **Long-term memory** which can be considered as a store of knowledge that changes as pupils learn. This store of knowledge integrates new ideas with existing knowledge. We can also draw on knowledge from our long-term memory to support the processing of new information in working memory (Willingham, 2009). The capacity of long-term memory is vast (Cowan, 2008).

### MENTAL MODELS

Simply giving pupils knowledge is not enough. Ms Brophy needs to make the knowledge useable, for example by connecting new knowledge to existing pupil knowledge. Mental models -- sometimes referred to as schema -- are how we all organise our knowledge. They are an internal representation of concepts (for example Earth) or a set of interrelated concepts (for example

the circulatory system) (Chi, 2009). Mental models are subject and topic specific, so to be successful Ms Brophy will also need to consider how to develop and convey subject knowledge to her pupils in the Subject strand.

### MANAGING COGNITIVE LOAD

Teachers can change pupils' capabilities and understanding by increasing the knowledge in pupil long-term memory and constructing useful and well organised mental models (Sweller et al., 1998). However, when teaching, Ms Brophy notices that some of her pupils struggle when being introduced to new material. A key reason for this may be that their working memories are being overloaded.

The capacity of our working memory is limited. Complex activities that place a heavy burden on either processing or storage capacity can place excessive demands on working memory and are therefore likely overload the system, resulting in task failure (Gathercole et al., 2006). Cognitive load refers to the amount of effort needed to process information in working memory (Sweller et al., 1998). Teachers like Ms Brophy need to manage the cognitive load pupils experience so that they can learn efficiently. She needs to ensure pupils experience enough new material to learn effectively but not too much, otherwise pupils working memory will become overloaded. She can do this through the instructional decisions she makes.

### DRAWING ON PRIOR KNOWLEDGE

One way which Ms Brophy can manage the cognitive load her pupils experience is by drawing on their prior knowledge. The more prior knowledge pupils hold, the easier it is for them to process new information. Prior knowledge also plays a role in the development of their mental models, as existing pupils' knowledge influences how new knowledge is stored and organised (Deans for Impact, 2015).

Where prior knowledge is weak, pupils are more likely to develop misconceptions (Simonsmeier et al., 2018). This particularly applies if new ideas are not introduced in manageable steps. Ms Brophy knows that pupils will have different levels of prior knowledge and many will also hold misconceptions. On the other hand, as pupil knowledge develops, teachers needs to reduce the support pupils receive, as support can get in the way of pupils using existing knowledge (Sweller et al., 1998). Therefore, Ms Brophy will need to consider how much prior knowledge pupils have when making instructional decisions.

### MITIGATING EXTRANEOUS LOAD

Because working memory has a limited capacity, Ms Brophy needs to be intentional in how she introduces and explains content to her pupils. Extraneous load

refers to ways in which instruction can make processing information unhelpfully challenging for pupils (for example, giving complicated instructions to pupils who have limited prior knowledge, or redundant support to pupils who already have sufficient knowledge; Sweller, 2016). Ms Brophy can reduce extraneous load through the instructional decisions she makes.

## EXPLICIT TEACHING

As we have seen, in order to ensure her pupils learn effectively, when making decisions about her instruction Ms Brophy needs to consider the limits of pupil memory. The knowledge Ms Brophy wants to teach is complex – in Subject she will consider how to develop her subject knowledge and what habits might support her to plan her own lessons. Initially, she should work with her mentor to get shared schemes of work and lesson plans to help her to identify and sequence relevant knowledge. For pupils to successfully learn this material, she needs to explicitly teach her pupils (Sweller, 2016).

Explicit teaching is a heavily ‘guided’ approach to orchestrating learning (EEF, 2017), in contrast to just letting pupils attempt to ‘discover’ new ideas by themselves. In general, less guided approaches to learning, such as discovery learning, have been shown to be ineffective (Coe et al., 2014). This doesn’t mean the teacher simply tells or lectures pupils; it can also include activities and discussion, as long as the relevant information is explicitly provided and practised. Successful explicit teaching breaks down learning, and provides pupils with the support needed to think successfully about content by taking into account:

- > The limits of working memory.
- > The complexity of the material to be taught.
- > The prior knowledge that pupils have.

## I-WE-YOU

One suggested way to implement explicit teaching is to follow an ‘I do’, ‘We do’ then ‘You do’ approach (Lemov, 2015). I-We-You is a rule of thumb Ms Brophy can use to make decisions about her instruction. It involves reducing support over time so that pupils can increasingly accessing content independently. Fundamental to effective instruction is maintaining a high success rate while reducing this support as pupils’ knowledge increases (Rosenshine, 2012).

## ‘I DO’

The ‘I do’ refers to the early stages of learning where the teacher provides new information by modelling and/or explaining the facts and processes which pupils are to learn. Effective teachers ensure that pupils acquire, rehearse and connect knowledge by providing a good deal of instructional support. Pupils can go on to more

independent activities but only after basic material is learned (Rosenshine, 2012).

There are numerous ways Ms Brophy’s ‘I do’ can explicitly convey content, including:

- > Explicitly linking new ideas to what has been previously studied and learned (Deans for Impact, 2015).
- > Explaining new concepts (such explanations are less effective for processes: Wittwer & Renkl, 2010).
- > Introducing materials in steps.
- > Modelling new processes and ideas (Rosenshine, 2012).
- > Providing concrete examples and worked examples of new problems (Pashler et al., 2007).

There are a variety of instructional strategies Ms Brophy can use to support her pupils when introducing new material. These supports are referred to as scaffolds. A scaffold is a temporary aid used to support pupils with their learning (Rosenshine, 2012). Just as with scaffolds around a house, they help us to reach areas which on our own we would struggle to get to. Once they have served their purpose, however, it is important they are removed.

## ‘WE DO’

The ‘We do’ is the ‘guided practice’ part of instruction where pupils gradually complete examples with less and less support on more and more of the task.

Ms Brophy has introduced her new material in small steps and provided scaffolds, such as modelling or worked examples, to support her pupils’ thinking. Because pupils learn at different rates and have different levels of prior knowledge, Ms Brophy knows that they will require different levels and types of targeted support.

She wants her pupils to grasp foundational concepts and knowledge before moving on. Questioning is an important tool for teachers to master which can be used to foster thinking and check pupil understanding (Coe et al., 2014). Furthermore, it can enable teachers to be responsive and better target support to pupils who are struggling (Black & Wiliam, 2009). Once she has used questioning to identify pupils, Ms Brophy could give more targeted input or regroup them so she can better support them.

## ‘YOU DO’

The ‘You do’ is the ‘independent practice’ part of the lesson, where pupils practise tasks of increasing difficulty on their own.

Over time, Ms Brophy wants to ensure that she provides her pupils with regular purposeful practice and the opportunity to retrieve information from memory. Practice is essential, but not all practice is equal (Deans

for Impact, 2015). She needs to ensure her pupils think hard and provide enough scaffolding and feedback to ensure they achieve a high success rate (Rosenshine, 2012). Practice could be even more effective if it includes:

- > Spacing so that pupils revisit ideas after a gap.
- > Low-stakes quizzes to retrieve key content (Pashler et. al, 2007).

Effective practice supports automaticity and overlearning where pupils can complete tasks fluently without drawing on their working memory, freeing them to focus on more complex tasks (Rosenshine, 2012). For example, learning their times tables allows pupils to grapple with more complex long multiplication and division. Therefore, pupils need to practise beyond the point where they get something right to the point when they can no longer get it wrong.

### HOMWORK

Homework can improve pupil outcomes, particularly for older pupils. But to be effective it needs to be of high quality and relevant to what is being taught in class (EEF, 2018). Considering the link to the instructional sequence above could increase the chance of homework being successful. For example, asking pupils to do further practise of something which has been taught in class, or perhaps reading with a parent to introduce a new idea that will be built upon in class. Making the purpose of the homework clear to pupils, ensuring that pupils have the resources to complete homework independently or that parents have the capacity to support homework effectively, are also likely to increase chances of success. It is also important that pupils get feedback on their homework. On the other hand, regular homework unconnected to class learning is less likely to be effective (EEF, 2018).

### REFINING INSTRUCTION

As Ms Brophy improves at explicit teaching and develops her subject knowledge, various strategies can further refine her instructional decision making:

Questioning	Effective instruction checks for understanding and extends pupil thinking (Rosenshine, 2012). Ms Brophy can refine her questioning to ensure she gets quality answers from her pupils, helping her to decide whether to revisit content or go deeper into topics.
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Talk	Pupils can refine their understanding and gain new insights from their knowledge through effective peer talk (Jay et al. 2017; Kirschner et al., 2018). Ms Brophy needs to check whether pupils have enough knowledge to talk effectively and use her instruction to facilitate successful talk.
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Feedback	Good quality feedback is one the best-evidenced and most effective ways to improve pupil progress (EEF, 2018). Ms Brophy needs to practise 'decision-driven data collection': considering what kind of feedback she has the capacity to give and pupils have the capacity to act upon, and how she can do this in a way which supports pupils to manage their own learning.
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Throughout the Instruction strand Ms Brophy needs to keep two questions in mind:

- > How can my instructional decisions best support pupil learning?
- > How can I best support a high pupil success rate?

### NUANCES AND CAVEATS

A common misconception is that I-We-You should only be used in individual lessons. In fact, I-We-You can be used several times within a lesson, or spread over longer instructional sequences.

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# COACHING CONTRACTING

## WHAT IS CONTRACTING?

Contracting is a process that involves teasing out the norms, goals and ways of working that will lead to a productive professional relationship. It is a reciprocal process intended to develop shared expectations, establish mutual respect and pre-empt potential issues. This module serves as a starting point for you as a coach to reflect on the key messages you want to get across in this meeting and support to prepare effectively for it.

## WHY IS IT IMPORTANT?

Contracting serves as an anchor upon which you base the foundations of the coaching relationship. Without these solid foundations, it makes the rest of the working relationship harder to build upon and less resilient when faced with situations or factors that will test this relationship throughout the year.

## WHAT DOES CONTRACTING INVOLVE?

Contracting is used in many different contexts and across all different fields so there is a lot of variety in what contracting looks like and how it is carried out. Despite these superficial differences, contracting can be viewed on three levels:

- > **Professional:** Considers the aim of coaching in relation to the professional development of the ECT.
- > **Procedural:** Considers the practicalities of making effective coaching happen.
- > **Psychological:** Considers the perception and possible misconceptions of coaching, and how you might deal with these.

# CONTRACTING MEETING

Meet with your teacher and use the following prompts as the basis for a coaching contracting discussion. Contracting is most effective when both parties (yourself and the ECT) answer questions for each other.

## 1. Professional prompts

- > What is important to you in your work?
- > What do you want to get out of this process?
- > What do you need from me to make this work well?

## 2. Procedural prompts

- > What is the best way for us to communicate and when?
- > When are the best times to meet for our mentor sessions?
- > What classes/subjects are best to observe?

## 3. Psychological prompts

- > What does an effective professional relationship look like for you? Can you give me an example?
- > What experience have you had of observation? How can we make observation an effective experience?
- > What experiences do you have of coaching? What might we need to do to embrace this coaching approach?

## CONTEXT-SPECIFIC MEETING

In addition to contracting, as required, you may wish to meet with your teacher to work through any context-specific policies, systems and/or procedures that they will need to know about to be effective in their role. It is also important for teachers to be made aware of school-specific policies so you may wish to point your NQT to these and provide some time to discuss them.

Typical school policies include, but are not limited to:

- > Their responsibilities planning.
- > The school's behaviour policy.
- > The safeguarding procedures.
- > How your school assesses pupils.
- > Your marking requirements.