



**Ambition
Institute**

Early Career Teachers Programme: Mentor Clinic 3 Workbook

**KEEP
GETTING
BETTER**

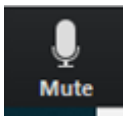
Welcome to the call. While we are waiting for other to join, please test the functions of zoom below.

Zoom functions



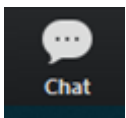
Switching on your video

Look in the bottom left hand corner of the screen.
Click on the camera icon that says 'Start Video'.
The icon will change and you will see your video.



Muting your volume

Look in the bottom left-hand corner.
Click on the microphone icon to mute.
The icon will change (with a red line through it) and your volume will be muted.



Using the chat function

Click on the quote icon, which says 'Chat'.
The chat box will display – type your name.
Press 'Return/Enter' on the keyboard – your comment will be sent for everybody to view. You can change who receives the message by changing the 'To' from 'everyone' to 'host'

Learning outcomes

By the end of the session you will have:

- > Identified the key features of an effective step
- > Practised improving and writing steps
- > Reflected on changes in your own practice as a result of the session

Quiz

1. **Cognitive overload is when:**
 - a. Someone is presented with too much information to process
 - b. Someone needs to think harder than usual about a challenging topic
 - c. Someone tries to remember something they have previously learnt

2. **Teachers experience high cognitive load because:**
 - a. They have lots of knowledge to draw upon in their long-term memory
 - b. The information they are processing often requires an immediate response
 - c. Their working memory is increased due to the requirements of teaching

3. **More novice teachers experience higher cognitive load because:**
 - a. They need to make more decisions than an experienced practitioner
 - b. They have less prior knowledge to draw upon when processing data
 - c. They will be less familiar with the subject and the key content to be taught

4. **Which of the following are features of effective steps?**
 - a. Specific
 - b. Broad
 - c. Concrete
 - d. Relevant
 - e. Bold
 - f. Urgent

5. **Teachers that are likely to benefit from high-quality steps are:**
 - a. More experienced teachers
 - b. More novice teachers
 - c. More expert teachers
 - d. All teachers

Example

Context

The year team/department have identified the likely unfamiliar words used in a topic for the pupils as part of the scheme of work. However, when you observe your teacher, while they are introducing the new vocabulary, they are not spending enough time exploring the language with pupils. This means that not all of the pupils are using the vocabulary orally or in their written work.

Step

Once you have defined an unfamiliar high-frequency word, provide the class with concrete examples of its usage and ask pupils to practise using the word themselves in a sentence. Check pupils are using the word correctly and provide feedback to support them to do so.

Success Criteria

- > **Manageable:** teaching of new vocabulary is introduced in an accessible way for pupils to digest, e.g. focusing on one or two key words per lesson.
- > **Accurate:** teachers use of language is correct.
- > **Explicit:** the teacher explains what the word means and uses concrete examples to further develop pupils' understanding.
- > **Close-the-loop:** teacher asks the pupils to write the word in a sentence or two to ensure that pupils have understood.

Activity

Review the following step and use the space below to explain how it is specific, concrete and relevant.

Context

Your teacher is studying the 'structured support for learning' module within the Behaviour strand, as part of the Ambition programme. As part of your weekly support, when you conduct your observation, you notice that while modelling an important concept, your teacher fails to draw attention to some of the key points. This means that some pupils miss the key points and therefore have a weaker understanding of the concept.

Step

When modelling or explaining, emphasise the important points by drawing pupils' attention to them, e.g. using your words, voice, gestures and/or labels on your model.

Success Criteria

- > **Accurate and important:** the points the teacher has chosen are important points in the model or explanation.

- > **Manageable:** teacher gives pupils only a few key learning points to look out for, so they are not overloaded.
- > **Concise:** the beginning exposition succinctly states the key learning points pupils need to pay attention to.
- > **Emphasised:** teacher stresses the key learning points, e.g. by stating them slightly louder, slower and clearer and pausing afterwards to give pupils a chance to process them.
- > **Clear and confident:** teacher's voice is authoritative, upbeat and can be heard from anywhere in the classroom but does not sound like shouting.
- > **Concrete and visible:** the key points are captured somewhere that is visible to pupils.

Key features

Specific: the step should be small and precise enough to pinpoint the exact change that the teacher needs to make to their practice. This ensures that the step can be practised during the coaching session and begin to be embedded into their teaching practice over the following week.

Concrete: it should be clear how the step translates into teaching practice. To support this, there should be success criteria which break down the step further, helping build the teacher's mental model of the change that needs to be made.

Relevant - The step should be pitched at the right level for the teacher and be in an area that is relevant to their developing practice. For ECTs, this should be tied to the Early Career Framework that they are working on through the programme.

Practice

You are now going to spend time practising improving a step.

- > You have a choice between the two steps below. The first needs less work and the second more substantial thinking
- > You have 5 minutes to improve your chosen step using the key features in the table for support. If you finish before the 5 minutes is up, have a go at improving the other step
- > Afterwards, you will go into breakout rooms with another mentor and spend 3 minutes reviewing your partner's step using the key features.
- > You will each share your feedback (3 minutes each)
- > Finally, you will each spend 2 minutes using the feedback to improve your own step

Key features

- | | |
|-----------------|--|
| Specific | > The step is small and pinpoints the exact change that the teacher needs to make to their practice |
| Concrete | > It is clear how the step relates to teacher practice
> There are success criteria that break down the step further |
| Relevant | > The step is suitable for the level of expertise of the teacher
> The step is linked to the Early Career Teacher Programme |

Model: improving a poor example

Context

When observing your teacher, you notice that a small group of pupils have misunderstood a core concept in the lesson, leading to significant misconceptions and pupils not being able to complete the independent task.

Step:

Ensure that all of your pupils understand the core ideas before moving on.

Improved step

Step:

- > When only a small group of pupils show they need additional support, deliver a re-explanation to support those pupils only. Do this whilst others are working on a task that they can complete without your support at first.

Success Criteria:

- > **The intervention needs to be efficient:** teacher intervenes to support small groups rather than the whole class when it is clear only some pupils need support.
- > **Specific:** instructions state the exact actions pupils that are going to listen to the re-explanation should take, e.g. 'If I have said your name, you will have your eyes on the board and hands empty ready to listen.'
- > **Targeted and concise:** the re-explanation addresses the point of confusion the small group have.
- > **Independent:** pupils who show they are secure on the content move on to a task to apply their knowledge that does not require the teacher's help at first.

Practice

- > You are now going to spend time practising improving a step
- > You have a choice between two steps
- > You are going to have 5 minutes to improve your chosen step using the key features for support.
- > Step 1 requires less changes and has success criteria to improve as well.
- > Step 2 requires more changes and needs success criteria to be created.
- > Afterwards, you will go into breakout rooms with another mentor to share your improved steps and success criteria. Provide each other with feedback

Key features reminder

- | | |
|-----------------|--|
| Specific | > The step is small and pinpoints the exact change that the teacher needs to make to their practice |
| Concrete | > It is clear how the step relates to teacher practice
> There are success criteria that break down the step further |
| Relevant | > The step is suitable for the level of expertise of the teacher
> The step is linked to the Early Career Teacher Programme |

Step 1

Context

Your Early Career Teacher is studying the behaviour strand and is on the module focussing on independent practice. When you observe the teacher, you notice that pupils are going off task during independent practice despite the teacher making their expectations clear at the start and circulating during the activity. You want to set a step around resetting expectations.

Step to improve

When circulating during independent practice, if many pupils are off task, reset your expectations.

Success criteria to improve

- > Have the attention of the class
- > Restate your expectations
- > Start with an anonymous reminder

Step 2

Context

Your ECT is working on the subject strand and on the module looking at 'deep learning'. When observing, you notice that they are not giving pupils adequate time to think about their answer before calling on them to respond. This is limiting the depth of thinking that pupils are doing. You think that pupils would benefit from writing down some of their thoughts before being called upon.

Step to improve

Give your pupils a chance to write down their thinking before you call on them for an answer

Success criteria to improve

None given

Use the box below to improve your selected step, either step one or step two.

Step selected for improvement (circle):	1	2
Improved step:		
Improved success criteria		

Feedback for your partner

Use the table below to provide feedback to your partner. Put a Yes or a No next to the feature and then select one thing that went well and one thing to improve next time to share with them.

Features	Details	Achieved
Specific	The step is small and pinpoints the exact change that the teacher needs to make to their practice	
Concrete	It is clear how the step relates to teacher practice	
	There are success criteria that break down the step further	
Relevant	The step is suitable for the level of expertise of the teacher	
	The step is linked to the Early Career Teacher Programme	Yes. The step is linked to the weekly focus so is linked to the programme and therefore the ECF.
What went well		
Next time try		

Reflection

Think about your learning in today's session.

What are your takeaways from today's session?

What might you do differently in your coaching practice as a result of this session?

Bibliography

Baddeley, A. (2003). Working memory: looking back and looking forward. *Nature reviews neuroscience*, 4(10), 829-839.

Centre for Education Statistics and Evaluation (2018). *Cognitive load theory in practice*. Sydney.

Cohen, J., Krishnamachari, A., & Wong, V. C. (2021). Experimental Evidence on the Robustness of Coaching Supports in Teacher Education.

Deans for Impact (2016). *Practice with Purpose: The Emerging Science of Teacher Expertise*. Austin, TX: Deans for Impact.

Sweller, J., Ayres, P. and Kalyuga, S., (2011). *Cognitive Load Theory*. New York, NY: Springer Science+Business Media, LLC.

Appendix-Clinic Accompanying materials

Decision making when teaching

Mentor clinic 3 will focus on the importance of using effective steps as part of instructional coaching and the features of an effective step. The pre-work can be completed at any time but will be most beneficial if completed before you attend Clinic 3. The pre-work will take around 30 minutes to complete.

First, you will watch a 4-minute clip of a teacher teaching a segment of the lesson. The video has been taken from module I9 of the instruction strand and focuses on scaffolding. As you are watching, consider the number of decisions that the teacher is making. Make a note of each decision the teacher makes.

You are going to see the teacher asking pupils to think about what happens to a red blood cell when it is placed in pure water, scaffolded by key vocabulary on the board. The teacher is then going to choose a number of pupils to read their answers aloud. Here are two examples of decisions the teacher might need to make:

- As the teacher sets the class off on the task, the teacher is likely to be checking that all pupils are on task, if any seem to be struggling and if so, deciding what further support they need.
- Towards the end of the task, the teacher will be deciding on who to question and thinking about what they expect to hear from the answer.

For teachers with more expertise, many of these decisions will be automatic. This may mean it is difficult to recognise them as thoughts and decisions. The purpose of this task is to give you time to think carefully about all the thought processes and decisions that the teacher is making.

Now click [here](#) to play the video.

Decision making when teaching – possible solutions

Some of the decisions we identified during this four-minute clip are listed below. However, you may well have noticed more or different decisions. The purpose of the task is not about finding a 'correct' list of decisions, rather it is to highlight the very large amount of information that teachers need to process. Teachers are required to process this information and make a large number of decisions in a short amount of time. This puts a high cognitive load on the brain. Here are the decisions we identified:

1. How long should I give pupils to complete the task?
2. Are all pupils on task when completing the definition in their workbooks?
3. Does anyone look like they are struggling?
4. Who should I choose to answer the question?
5. Is Molly's answer correct? Are there any misconceptions?
6. Does Molly's answer use the correct terminology?
7. How should I get Molly to provide more detail?
8. Is Molly's definition correct?
9. How should I praise Molly's answer?
10. How can I probe and stretch Molly's thinking further?
11. How can I make sure the whole class extend their thinking and include the key words?
12. How long do they need for this?
13. Is everyone on task?
14. Does anyone look like they need support?
15. Who should I choose to answer the question?
16. Does Mitchell's answer use the key words?
17. What else would make the answer better?
18. At this point, is it better to tell pupils how to improve or to get them to work it out?
19. How long should I give pupils to do the task?
20. Who should I choose to answer the question?
21. Has Hannah used the correct terminology?
22. Do I think everyone is ready to move on?

Now that we've reminded ourselves of the high cognitive load teachers, especially those who are more novice, experience, let's think about what we can do to manage this.

Cognitive Load Theory

Cognitive load theory seeks to explain how people are best able to learn. It is based on the work of John Sweller and colleagues (e.g. Sweller et al, 2012) and is built upon two well-evidenced ideas about how the brain works.

- There is a limit to how much new information the human brain can process (in working memory) at one time (e.g. Baddeley, 2003).
- There are no known limits to how much previously processed and therefore 'stored' information can be accessed (from long-term memory) at one time.

The phrase cognitive overload is used to refer to when someone is presented with too much new information at one time to process in working memory. Any information which is not processed in working memory cannot then be stored in long-term memory.

Novice and experts

In the classroom, all teachers are likely to experience a high cognitive load due to the large number of things they need to pay attention to. However, for more novice teachers, their cognitive load is particularly high. This is because a much greater percentage of the information that they are presented with is new. This means they are not able to draw upon previous knowledge and experience to reduce some of the load on working memory. For example, when explaining a key concept, a more expert teacher is likely to have developed detailed knowledge of how to do this because they have explained the concept many times before. Recalling this information from their long-term memory means they experience lower cognitive load on their working memory. A more expert teacher is, therefore, more likely to be able to pay attention to whether pupils are listening and understanding the explanation and so they can respond accordingly.

Take 5 minutes to read the first two pages of 'Cognitive load theory in practice' (Centre for Education Statistics and Evaluation, 2018). Once you have read it answer the questions below:

Which of the following statements are true for the basic memory model?

Select the answer or answers that you think apply.

- > Long-term memory appears to be essentially infinite
- > Working memory can easily become overloaded
- > When working memory is overloaded, we transfer the information to long-term memory to make space
- > Working memory capacity can be improved

2. How can we reduce the load on working memory?

- > Select the answer or answers that you think apply.
- > Make use of information organised and stored in chunks in long-term memory
- > Reduce the amount of new information we need to think about at once
- > Use written notes or prompts
- > Train ourselves to increase the capacity of our working memory

Implications for steps

Cognitive load theory has implications for supporting teachers to develop their practice. Teachers, especially those who are more novice, have very little capacity to think about and process new information whilst teaching. This means that we should make sure that any changes that we want to make do not cause cognitive overload. This is one reason that Early Career Teachers (ECTs), work on bite-sized steps, not large changes to their practice. We can also reduce cognitive load further by ensuring that steps are specific, concrete and relevant. Let's explore these terms further.

Specific

The step should be small and precise enough to pinpoint the exact change that the teacher needs to make to their practice. This ensures that the step can be practised during the coaching session and begin to be embedded into their teaching practice over the following week.

Concrete

It should be clear how the step translates into teaching practice. To support this, there should be success criteria which break down the step further, helping build the teacher's mental model of the change that needs to be made.

Relevant

The step should be pitched at the right level for the teacher and be in an area that is relevant to their developing practice. For ECTs, this should be tied to the Early Career Framework. Research from Cohen et al (2021) suggests that steps must be tied to a curriculum of content (such as the Early Career Framework) for instructional coaching to be effective.

Take 5 minutes to read page 6 and 7 of Practice with Purpose ([Deans for Impact, 2016](#)).

Reflection

1. To what extent does the practice you run with your ECT include clear and specific goals (steps), agreed on by you and the ECT?
2. Can clear measures (success criteria) be established to track progress against these goals?
3. To what extent do you provide your ECT with specific, actionable feedback on these goals (steps)?