Module 7, week 4

ECT Mentor session

Module 7: Engaging pupils in learning

Week 4: What might be a useful alteration to the ECT's teaching?

Session Elements

analyse artefacts

collaborative learning

discussion with mentor

Learning Intentions for this session

In addition to their own focus, the case studies are a reminder how to:

Increase likelihood of material being retained, by:

2h Balancing exposition, repetition, practice and retrieval of critical knowledge and skills

2i planning regular review and practice of key ideas and concepts over time

2j Designing practice, generation and retrieval tasks that provide just enough support so that pupils experience a high success rate when attempting challenging work

2k Increasing challenge with practice and retrieval as knowledge becomes more secure (e.g., by removing scaffolding, lengthening spacing or introducing interacting elements)

Support pupils to build increasingly complex mental models, by:

3g Revisiting the big ideas of the subject over time and teaching key concepts through a range of examples

Help pupils apply knowledge and skills to other contexts, by:

3k Ensuring pupils have relevant domain-specific knowledge, especially when

being asked to think critically within a subject

And develop pupils' literacy, by:

3n Supporting younger pupils to become fluent readers

3p Modelling reading comprehension by asking questions, making predictions and summarising when reading

Introduction

In your first mentor meeting of the year, you carried out a Module 7 audit with your mentee (based upon the same audit they completed in Module 2), you identified development priorities in relation to Standards 2 and/or 3, and you refined one of these priorities into an exploratory inquiry question. Since last week, within their self-directed study time, your mentee has been collecting some evidence about their exploratory question. They should have summarised this within a simple evidence statement about the impact upon their pupils of their normal practice.

In this session, you will consider whether the evidence suggests that your mentee's normal practice is helping their pupils to make progress or there should be an alteration. Together, you will use the evidence base of the ECF to speculate about what that change could be. Finally, you will decide what evidence your mentee would need to collect to tell them that the alteration had led to improvement.

A note on evidence and workload:

Schools are already data-rich environments. Practitioner inquiries first of all make use of what we call here 'naturally occurring' evidence. They are in the pupils' work—and the ECT's assessment of it. They are in the words and reactions of the pupils—and what the ECT has heard or seen of this. When we refer to evidence-collection, in the main we mean: look at what the pupils have done, and listen to what they are saying. A practitioner inquiry invites you to be more systematic about how you do this looking and listening so you might deliberately ask a few questions of a few pupils for five minutes at the start of breaktime, or you might share lunch with a colleague and quiz them about how they approach a problem in their own class.

Case Studies

These case studies explore how 2 teachers—improving their practice and without adding to their workload—conducted their own practitioner inquiries into promoting good progress and demonstrating good subject and curriculum knowledge. Both are interesting, but you should focus on the one most closely related to the exploratory question your mentee is working on. The case studies set out the issue the teacher was interested in, how they gathered evidence about the impact upon pupils of their own normal practice and how they decided to introduce an alteration to the way they taught.

When reading these cases, your mentee will need to take account of their own pupils' characteristics, the context of their classroom and the nature of the material that they are teaching.

Embedding retrieval, practice and challenge

Yemi is a chemistry specialist teaching a Year 10 class, who are motivated and able to work independently. She notices that some students are able to finish sets of problems involving drawing the atomic structure of an element quickly and accurately, whilst others need support and are often left behind. She also feels that they are not able to then apply this knowledge in thinking about which elements are more reactive. She talks to a colleague who she shares this class with, and they suspect that recall of key points about atomic structure and the periodic table might be at play here.

They decide they need to develop their practice in this area, so come up with an exploratory inquiry question together:

> To what extent do we give pupils opportunities to recall key knowledge about atomic structure and the periodic table?

The 2 teachers decide to work together to investigate this. In one lesson, they ask pupils to try to answer a set of problems which ask them to draw the atomic structure of a few elements and to then explain how reactive they are. They do not provide

any resources for this and explain to the pupils that they are setting a very challenging task and that pupils should try and identify where they struggle if they can. In the next lesson, the other teacher gives them a similar set of problems but makes this 'open book', allowing them to draw on a textbook to help but asking them to note down what they have to look up. From considering their exercise books and talking to the pupils afterwards, they find that:

- pupils need to recall the basic facts of the structure of atomic shells
- pupils who answer questions quickly, already know 'rules' about which groups in the periodic table are more reactive
- pupils who complete questions are able to relate their knowledge of atomic structure to their knowledge about reactivity
- Conclusion: all pupils need to know the 'rules' about which groups in the periodic table are more reactive before they can answer questions with a high degree of success or apply this knowledge to other problems; they realise that this is probably always true about the importance of core knowledge (3.5)

What alteration to her teaching might Yemi make to improve her pupils' recall of key concepts so they can apply their knowledge quickly and reliably to other situations?

Yemi's approach to embedding retrieval, practice and challenge

Yemi and her colleague look at the Research and Practice Summaries from Module 2, in particular those covering ECF 2h, 2i, 2j and 2k. They realise that they need to build in retrieval practice as well as increasing the challenge of the exercises over time. They decide to plan 3 revision activities, which they will spread over the next 3 lessons (whilst still teaching other content). In them, they will:

- repeat questions which ask pupils to recall the structure of atomic shells, and practise drawing structures (2i)

- as their recall becomes more secure, ask pupils to make predictions about reactivity based on which group and element is in the periodic table, and based on the atomic structure (2j)
- increase the complexity of the task by challenging the pupils to consider reactions that occur between different (ionic) elements (2k)

Supporting a class with reading comprehension

Kishan is a Year 3 teacher in an inner-city school and is pleased with how his class are developing fluency with reading. Having learned about this during his ITT year, and in Module 2 of his ECF year 1, Kishan has promoted reading for pleasure by reading aloud with his class and using a range of different texts and genres, including fairy tales, poetry, fiction and some non-fiction. However, he notices that they sometimes struggle to discuss the feelings and thoughts that characters might have and to draw on the texts to understand the motives involved. This becomes clear in his whole-class questioning and pupil written work around comprehension. Following a discussion with another Year 3 teacher, Kishan decides to consider the details of which texts they struggle with and which they find easy to comprehend or think critically about.

He drafts an exploratory inquiry question:

> Under what conditions are pupils more likely to be able to comprehend the motivations of characters in a range of texts?

To answer this question, Kishan and his colleague decide to review a sample of pupil work on reading comprehension and see if there was any relation to the types of texts being read. What they find suggests that:

- when the pupils know the context well, they comprehend motivation more easily, and they can make critical connections (3.6); the pupils are able to explain the actions of characters more readily when they know the story and context well, e.g., when it is about a child rather than a magical creature in a fairy tale—they also found a text more difficult when it was set around a farm

- skills that pupils demonstrate in one area do not necessarily transfer to another (3.8); pupils are sometimes able to make claims about the intentions and feelings of characters in fiction, including in fairy tales but seem to really struggle in poetry
- pupils can connect details more readily and understand the relationships between them when they appear more closely together; in non-fiction, pupils are able to infer motivations if they are described in the same paragraph as a description of the character but struggle when reference to the character is a long way from the context which leads to the action—for example, a newspaper-style account of why an elderly lady is waiting by the letterbox is a long way from text saying that people receive a card from the queen when they are 100 years old

What alteration to his normal practice might Kishan make to support his class in reading comprehension?

Building critical thinking and transfer skills

Reflecting on the evidence he had gathered so far, Kishan went back to the Research and Practice Summaries from Module 2, in particular relating to 3g, 3k, 3n and 3p. He found the useful reminder around how pupils need to be secure in their understanding before they can think critically or transfer their knowledge or skills from one domain to another. He thought it would be helpful if his pupils could experience models of how to question and make predictions or summarise to improve reading comprehension. He therefore decided to reorganise the next sequence of learning with the following principles in mind:

- using himself as a model first, thinking out loud as he was reading: asking questions—'Why do I think Biff did that?'; making predictions—'I think Biff is going to find the key'; and summarising—'So I think that children all got home safely because they helped each other when they needed it' (3p)
- ensuring that pupils have a clear understanding of the context presented within the text and supporting them in asking questions to do this (3k)

- presenting the same type of narrative first (e.g., fiction) until they are confident in considering motivations of characters before introducing other forms (e.g., poetry)
- as those new forms are introduced, being explicit about how the same comprehension skills might still apply, despite the different form (3g)
- using succinct texts to start with and considering using more involved or lengthy texts for those pupils who seem to have a good grasp early on (3n)

Mentor Meeting Activities

Throughout the session, try to refer explicitly to the Learning Intentions and encourage your mentee to record key points in their Learning Log. Tailor your use of the Theory to Practice activities below in response to the Review and Plan sections of this session.

Review 5 mins

1) Start this session by briefly following up the actions that the mentee set at the end of last week's mentor meeting. Ask your mentee to summarise
   a. what they did
   b. the impact of this on pupil learning (including how they are evaluating this)
   c. what they will do going forward to build on these actions

(2) Clarify the Learning Intentions for this session with your mentee

Plan and Theory to Practice 40 mins

1. Analysing artefacts and data

Ask your mentee to share with you the simple evidence statement they wrote following their rapid collection of data on their exploratory inquiry question. They may also share with you the evidence itself (e.g., comments from pupils or analysis using the school's data management system.)

To guide them, they had 2 model statements arising from the case studies.

Yemi, in Case Study A, said:

'My Year 10 pupils are really motivated, and they like working independently. Many of them can quickly and accurately solve problems, but others are left behind—which seems to get worse when I make the task more complex. When my colleague and I examined their books and spoke to a few pupils, we found that some lacked knowledge of basic science facts and rules and so could not move on to more complex tasks. I realise now that I need to give them lots of opportunities to recall and practise the fundamentals. I need to think about when I give extra scaffolded support and when I can withdraw it.'

Kishan, in Case Study B, said:

'My pupils seem to be fluent readers, but I noticed that they have problems with reading comprehension. When with a colleague I analysed samples of their work, I found that they appeared to struggle to comprehend motivations when they were unfamiliar with the contexts; that when connected details appeared closer together in a text, they seemed to comprehend more readily; and they didn't easily transfer their comprehension skills in one genre to another. I have decided I need to help build my pupils' skills with critical thinking and transfer. I suspect the best way of doing this will be to help them become really good at comprehending motivation in short fiction first before moving to other genres. I also suppose that I could model good questioning, predicting and summarising to help with their comprehension.'

Your mentee's statement will not be definitive; it is likely that they have used tentative language, such as 'seems to indicate' and 'may suggest'. This is appropriate, but you should now gently probe them to support their statement with evidence. Remember, they were exploring the impact upon pupils of their normal practice. E.g.,

About their normal practice	*Standard 2* *Give me an example of how you normally try*

(This might also prompt your mentee to think about how they could introduce an alteration to their practice.)	*to increase the likelihood that pupils retain material you have taught them. How much time do you typically allow for teacher exposition of critical knowledge and skills, and how much for them to practise independently? In your medium-term planning, do you build in opportunities to return to key ideas? Do you have frequent retrieval tasks in your lessons that help support your pupils' memory? And how do you increase challenge for all your pupils?*
	Standard 3 *In your medium-term planning, how often do you revisit the big ideas from your curriculum? What ways have you found of teaching the key concepts? What typical ways do you have of connecting the key concepts of a subject to the new content you are trying to teach? If you are trying to encourage your pupils to think critically, do you normally ensure they have secure core knowledge of the topic first?*
About the evidence they collected	*How did you ensure it was reliable? Do the data reflect a true picture for the pupils you were interested in?* *Did you collect enough, but not too much?*
About their (tentative) conclusions	*Were you surprised?* *Did you find out something you did not already know?*
About their next steps	*Does your evidence suggest to you what your next steps might be?*

2. Discussion with mentor

It is likely that you will agree with your mentee that there is some useful alteration to their normal practice that they can now make. This should be drawn from the ECF evidence base for Standards 2 and 3. Inspect these carefully and agree one change to their practice. You may need to spend a little time showing them how they could implement this alteration.

For example, returning to our 2 case studies.

To increase the likelihood that her pupils would retain material 2i, 2j, 2k	**Embedding retrieval, practice and challenge** Look back at what Yemi did
To help his pupils build complex mental models and apply knowledge and skills to other contexts 3p, 3k, 3g, 3n	**Building critical thinking and transfer skills** Look back at what Kishan did

3. Collaborative planning

Finally, you will decide what evidence your mentee would need to collect to tell them that the alteration they had agreed to make to their normal practice had led to improvement. They can collect evidence in a similar way to before.

Here is a useful way to visualise this:

What I hope to see (e.g.)	How I would know it (e.g.)
Because I have embedded retrieval, practice and challenge	Improved progress data (you might see this over time) Pupil work—stronger recall, fewer misconceptions appearing in their work, higher success rate in retrieval quizzes Pupil response—able to take on greater challenge, the pupils are

What I hope to see (e.g.)	How I would know it (e.g.)
	more willing to take risks Pupil voice—'I remember you taught us that last term!' 'I used to find this much harder. Now I get it more easily.'
Because I have built critical thinking and transfer skills	Improved progress data (you might see this over time) Pupil work—more secure in foundational knowledge, greater success when different contexts require similar skills Pupil response—they are able to articulate when *this* is similar to *that.* They enjoy making connections between different subjects or topics Pupil voice—'This is just like when…' 'I agree/ disagree with that because…' 'I believe this because of A, B and C'

Your mentee will try to implement this change over the next 2 weeks, collect the evidence and report back to you in your final mentor meeting of this module in week 6. You should remind your mentee that there are efficient ways of collecting naturally occurring evidence which do not involve an additional burden to their workload.

Next Steps 10 mins

Agree with your mentee how they will now put their learning from this week's session into practice in their teaching. Help your mentee to clarify:

1. the action(s) they will take and how these action(s) are expected to contribute to improving pupil learning
2. what success will 'look like' in relation to these action(s)
3. how they will evaluate their success in taking these action(s)

Note the date of your next mentor meeting, which is next week