GP Summer Education Day

Workshop D

Making the implicit, explicit. Learning **from** work activity

Metaphors for learning (after Sfard 1998)

Learning as acquisition

- Focus on individual learner
- Emphasis acquisition of knowledge and skills
- Transfer of learning from one context to another is assumed

Learning as participation

- Focus on community of practice
- Learning also includes processes of identify formation and fosters a sense of belonging
- Context and culture are key

Learning working relationships

Learning *for* work

Learning *at* work

Learning *from* work

Ref: after Seagraves and Boyd (1996)

Learning from work

"Learning in work-based contexts involves students having to come to terms with a dual agenda. They not only have to learn how to draw upon their formal learning and use it to interrogate workplace practices; they also have to learn how to participate within workplace activities and cultures"

Griffiths and Guile, 1999 page 170

Learning working relationships

Learning *for* work

Learning *at* work

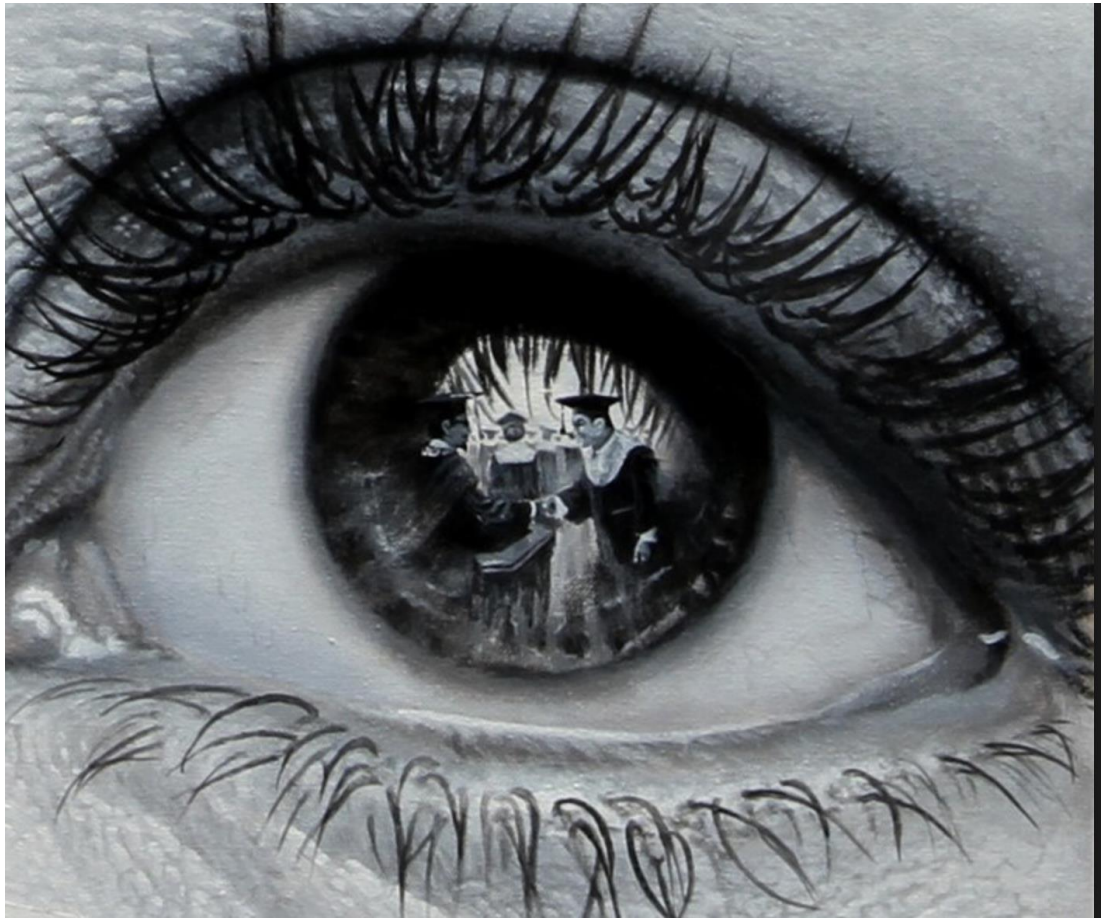
Learning *from* work

Ref: after Seagraves and Boyd (1996)

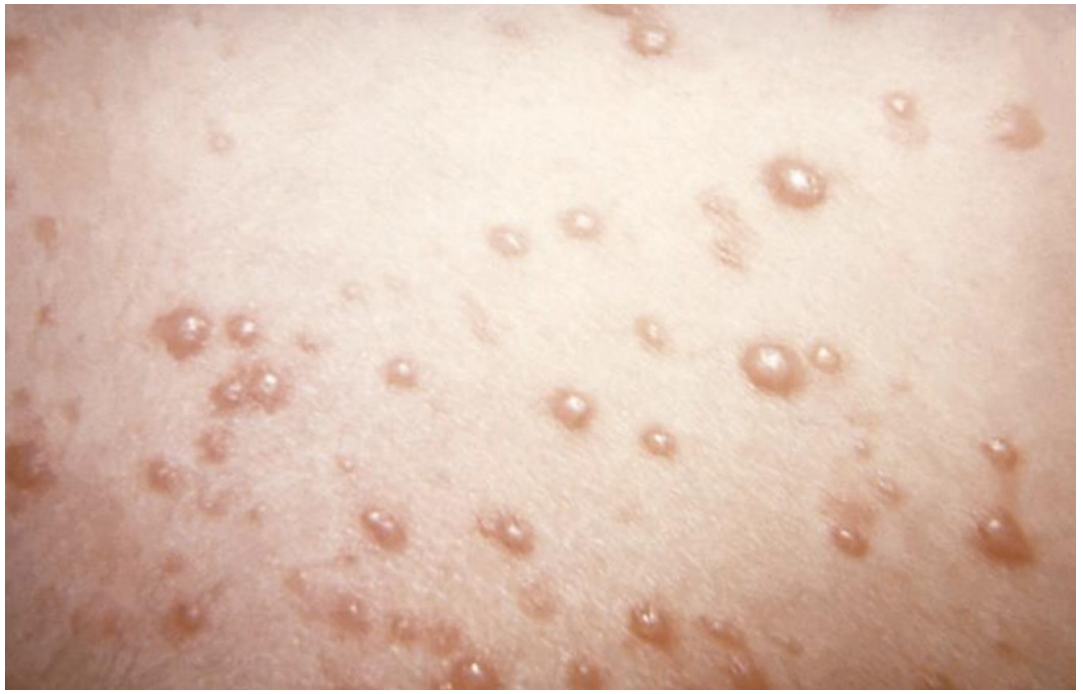
Some specific strategies

1. Active & purposeful observation
2. Developing reasoning skills
3. Teaching through questioning

Active & purposeful observation



What do you see?



Imagine…

We think Mr X might be showing early signs of Parkinson's Disease, he is coming in with his wife today.

Just sit in with this consultation and observe what goes on…we can talk about it afterwards.

What would you observe…

What does that suggest?

- There are different ways of looking at the same situation influenced by the professional background and experience of the observer
- Unless a structure is given there is a risk that students either try to observe everything (at a superficial level) or observe something quite different from intended learning task
- Observation is not an objective or theoretically neutral activity

Purposeful observation

Clearly the instruction ‘observe!’ is absurd. Observation is always selective. It needs a chosen object, a definite task, an interest, a point of view, a problem.

Karl Popper 1972, page 46.

Use advance organisers

We think Mr X might be showing early signs of Parkinson's Disease, he is coming in with his wife today.

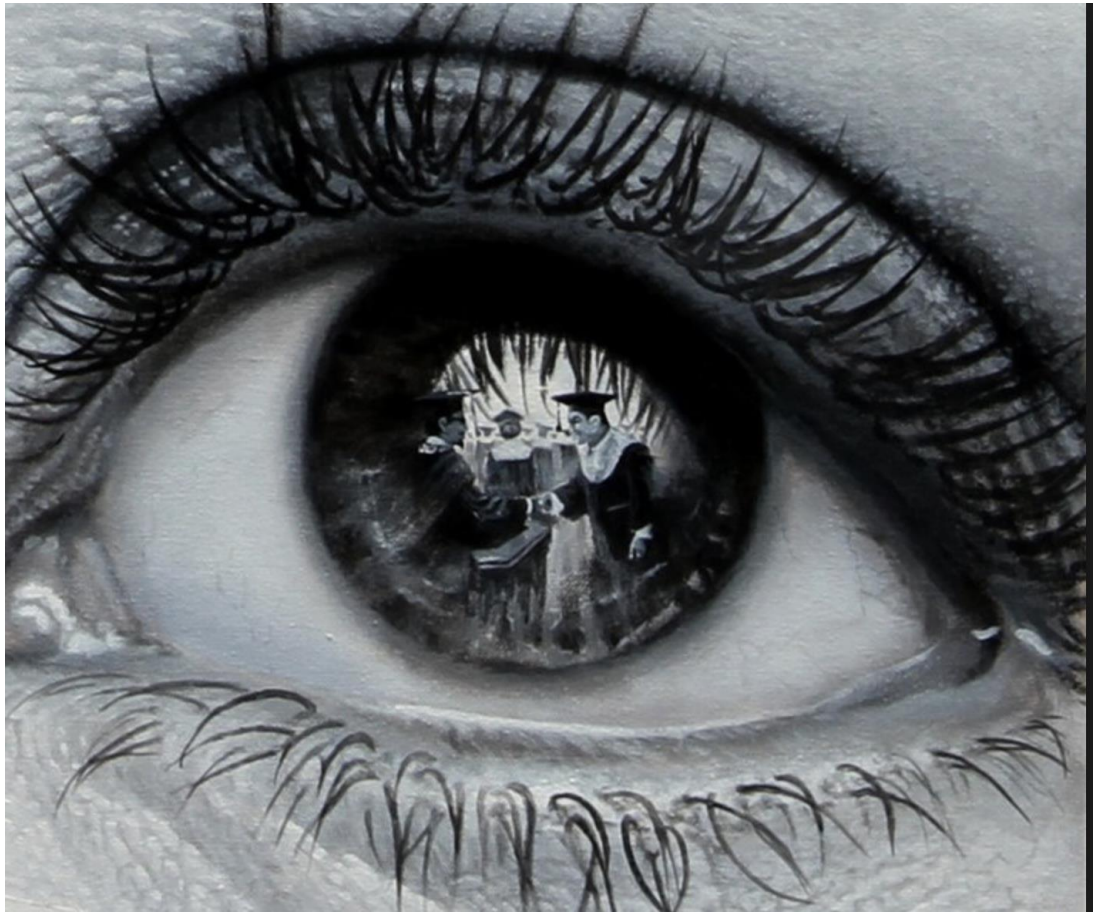
What did you notice about…

Provide a template

- Templates help structure observations, structure thinking and guide practice

- E.g. taking a clinical history

Active & purposeful observation



Useful to

- Structure learning in opportunistic settings
- Draw on formal learning to interrogate workplace practices
- Help students make deliberative connections
- Help develop skills in making routine observations
- Compare practice(s)

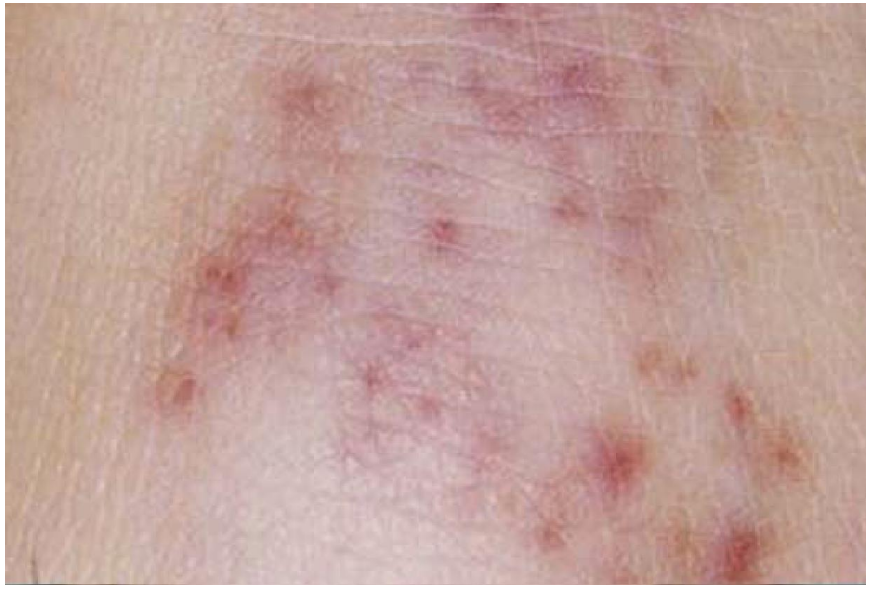
Developing reasoning skills

- What strategies do you currently use to help your learners develop their clinical reasoning skills?

Foster pattern recognition

- Foster pattern recognition by repeated exposure to typical presentations
- Utilise compare and contrast methods in teaching
- E.g. to what extent is this similar to what you have seen before, to what extent is it different etc

Foster pattern recognition



Think aloud techniques

Use ‘think aloud’ techniques to make your thinking visible!

- ‘I am wondering if’
- ‘I am puzzled by’
- ‘I am weighing up x over y’
- ‘My instinct tells me x’
- ‘This is fairly typical’

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Example-based Learning

Self-explanation in learning clinical reasoning: the added value of examples and prompts

Martine Chamberland, Sílvia Mamede, Christina St-Onge, Jean Setrakian, Linda Bergeron, Henk Schmidt

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View issue TOC
Volume 49, Issue 2
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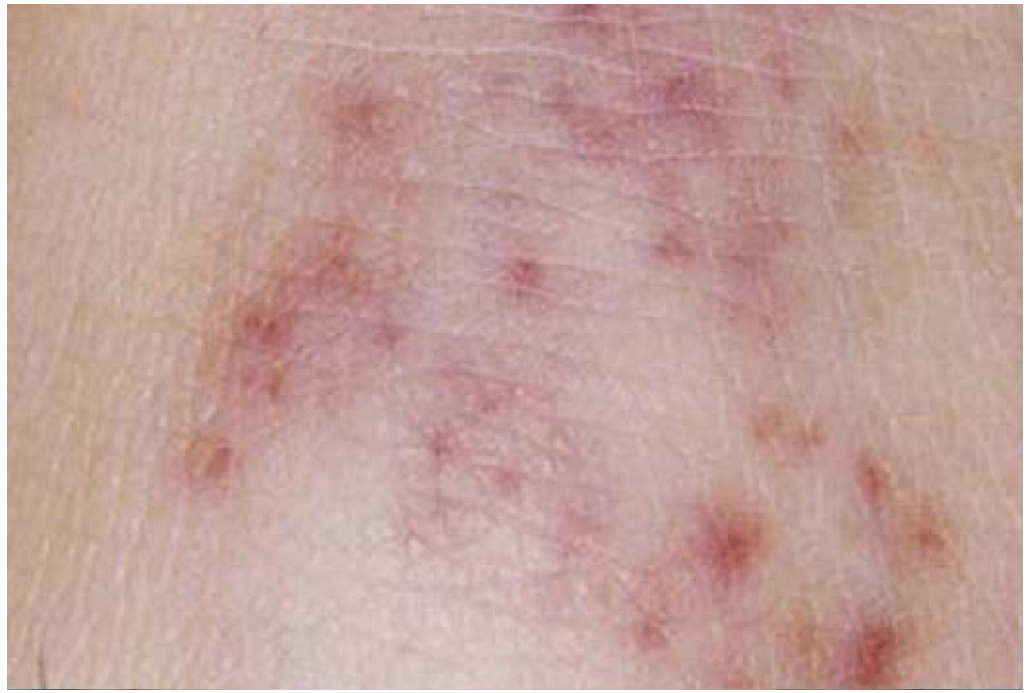
Pages 193–202

Abstract

Context

Recent studies suggest that self-explanation (SE) while diagnosing cases fosters the development of clinical reasoning in medical students; however, the conditions that optimise the impact of SE remain unknown. The example-based learning framework justifies an exploration of students’ use of their own SEs combined with the study of examples. This study aimed to assess the impact on medical students’ diagnostic performance of: (i) combining students’ SEs with their listening to examples of residents’ SEs, and (ii) the addition of prompts (specific questions) while working with examples.

Make your thinking visible



Encourage use of self-explanation

- Use student self-explanation when diagnosing ‘paper cases’
- Students who have worked through paper cases before meeting real patients have better diagnostic performance

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Use prompts.

- Use prompts when working with examples
  - Justification prompts
    - *What principle is being applied here?*
  - Mental model revision prompts
    - *How does it relate to what you already know?*
    - *Does it help you gain more insight into how to solve the problem?*

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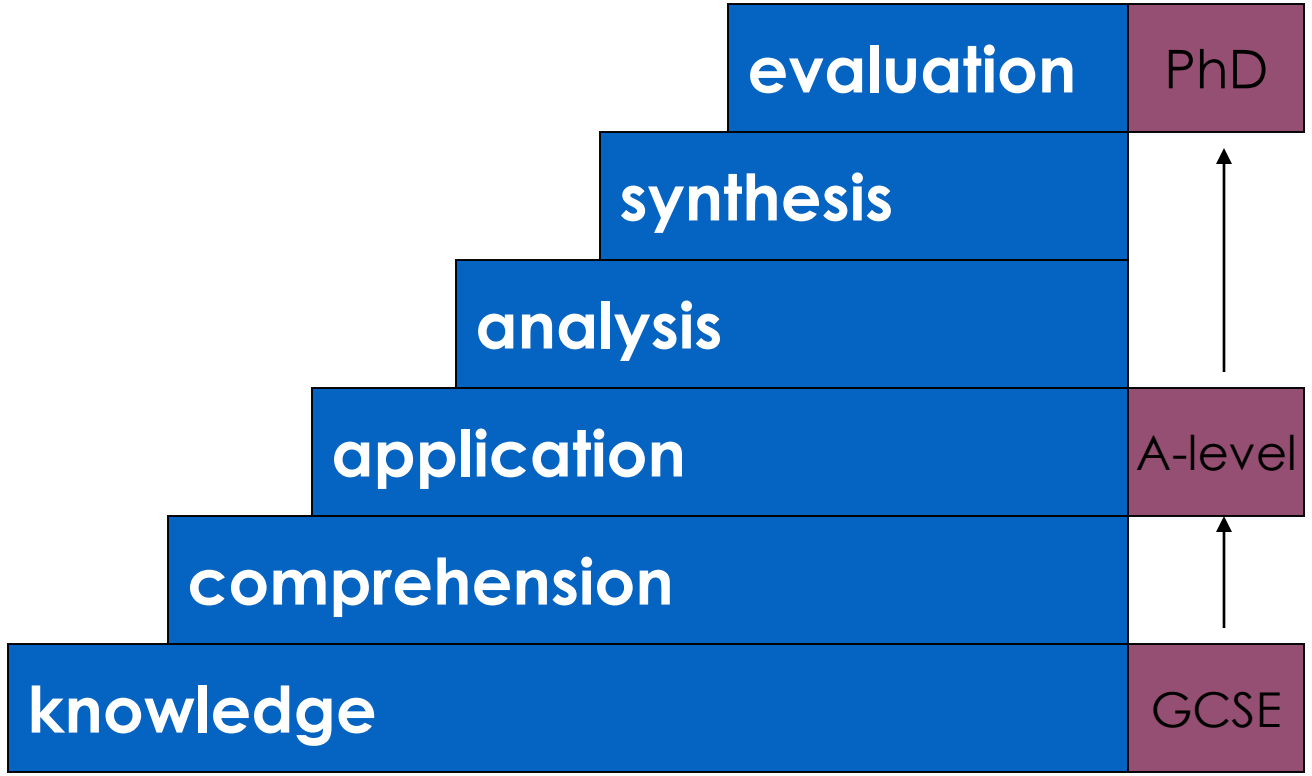
Develop your questioning skills…

- The next patient has diabetes…
- Think of a really good question to get students thinking about diabetes…one for each year of the MBBS

Thinking like a professional?



Adapted from Bloom's Taxonomy

The elephant's child – Rudyard Kipling

I KEEP six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
And How and Where and Who.
I send them over land and sea,
I send them east and west;
But after they have worked for me,
I give them all a rest.

Making the implicit, explicit

Learning *for* work

Learning *at* work

Learning *from* work

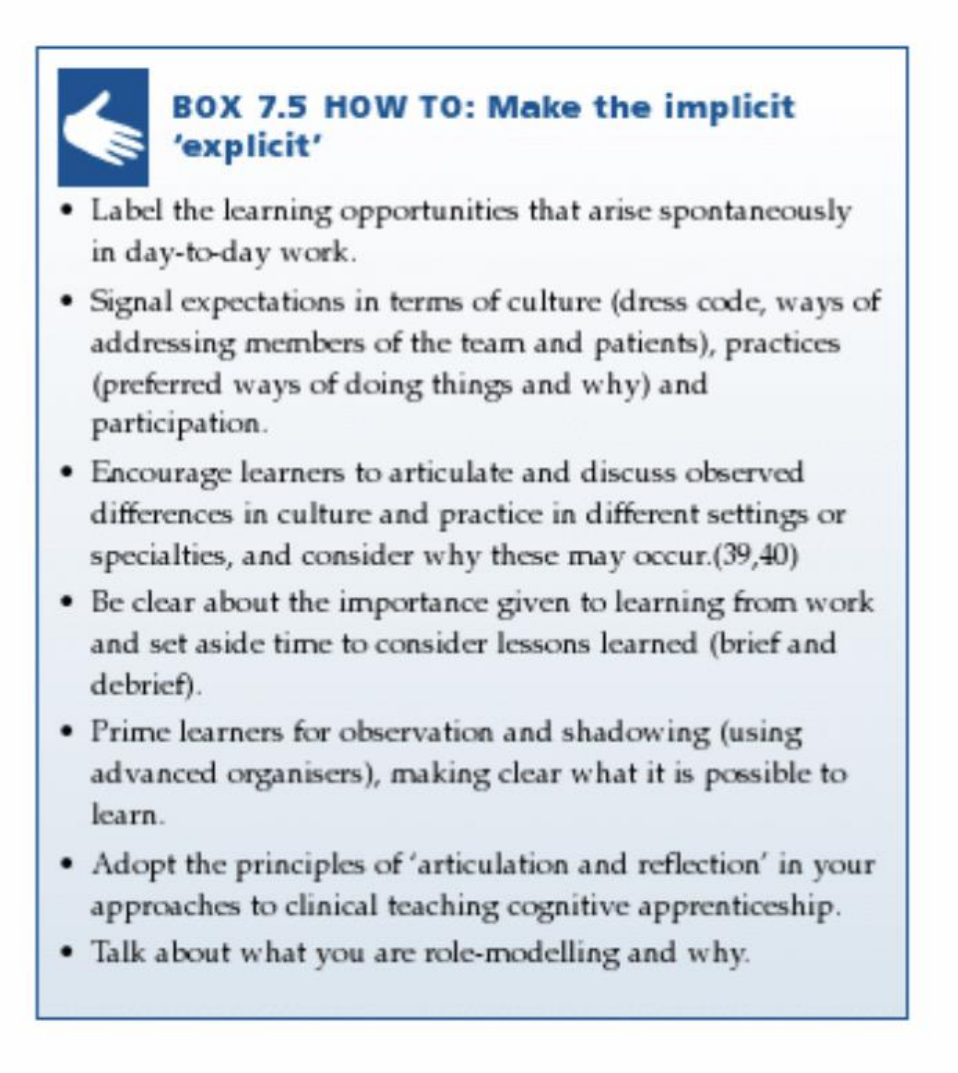
Ref: after Seagraves and Boyd (1996)

A cognitive apprenticeship

- **Modelling**: allow the learner to observe your practice in order to build up a conceptualisation of that practice,
- **Coaching**: watch the learner practise, offering them guidance, critique and feedback.
- **Scaffolding**: offer the learner more opportunities to practise, gradually and purposefully increasing complexity of the work undertaken while slowing fading out your input.
- **Articulation**: use questioning and supervision time to encourage the learner to talk you through what they are doing, why and how, providing a rationale for the approaches taken.
- **Reflection**: encourage the learner to consider their performance analytically and to compare it with that of the expert to identify ways to further enhance their own performance.
- **Exploration**: provide opportunities for the learner to undertake new tasks and activities, prompting the learner to become independent in their activity and their thinking.

Source: After Collins, from Morris and Blaney (2014)

Some general principles…



BOX 7.5 HOW TO: Make the implicit 'explicit'

- Label the learning opportunities that arise spontaneously in day-to-day work.
- Signal expectations in terms of culture (dress code, ways of addressing members of the team and patients), practices (preferred ways of doing things and why) and participation.
- Encourage learners to articulate and discuss observed differences in culture and practice in different settings or specialties, and consider why these may occur.(39,40)
- Be clear about the importance given to learning from work and set aside time to consider lessons learned (brief and debrief).
- Prime learners for observation and shadowing (using advanced organisers), making clear what it is possible to learn.
- Adopt the principles of 'articulation and reflection' in your approaches to clinical teaching cognitive apprenticeship.
- Talk about what you are role-modelling and why.

Morris & Blaney (2014) Work-based Learning in Swanwick, T (Ed) (2014) Understanding Medical Education.