Learning from interactive reflection

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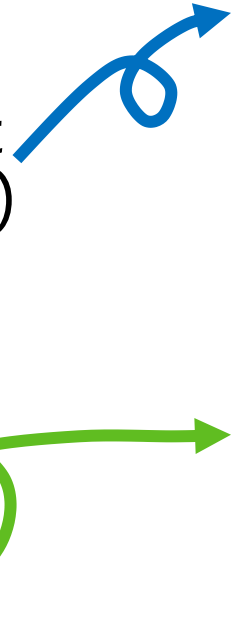
Aims for talk

- Clarification of reflection-in-action (RiA) and interactive reflection (IR)
- Zoom through details of the study (v. quick!) - just read paper[1] if you're interested in these (QR code)
- What did I learn about IR from the study?
- Potential implications?
- Possible tools
- Q&A discussion



1. Anderson, J. (2019). In search of reflection-in-action … *Teaching and Teacher Education, 86*, 1-17. https://doi.org/10.1016/j.tate.2019.102879

Understanding Schön's reflection–in–action (RiA)

- Contrast with reflection on action (RoA) was ***not*** part of Schön's original construct.[1]
- RiA is possible during the "action-present – a stretch of time within which it is still possible to make a difference to the outcomes of action" (Schön 1995, p. 30); this is not necessarily analogous to the lesson event.
- The key importance of RiA is as a vehicle for us to learn from experience – without the need for recourse to external knowledge (incl. "technical rationality") – i.e. RiA is **formative.**

1. RoA is rarely mentioned (1983, 1987) and only vaguely defined by Schön (1987, p. 26). He never hyphenates RoA, unlike RiA.

'surfacing' in reflection–in–action

Reflection-in-action … is central to the art through which practitioners sometimes cope with the troublesome "divergent" situations of practice. When the phenomenon at hand eludes the original categories of knowledge-in-practice, presenting itself as unique or unstable, the practitioner may **surface** and criticize his initial understanding of the phenomenon, **construct a new description of it**, and **test the new description by an on-the-spot experiment**.

Schön, 1983, pp. 62-63

Need to clarify terms for teaching

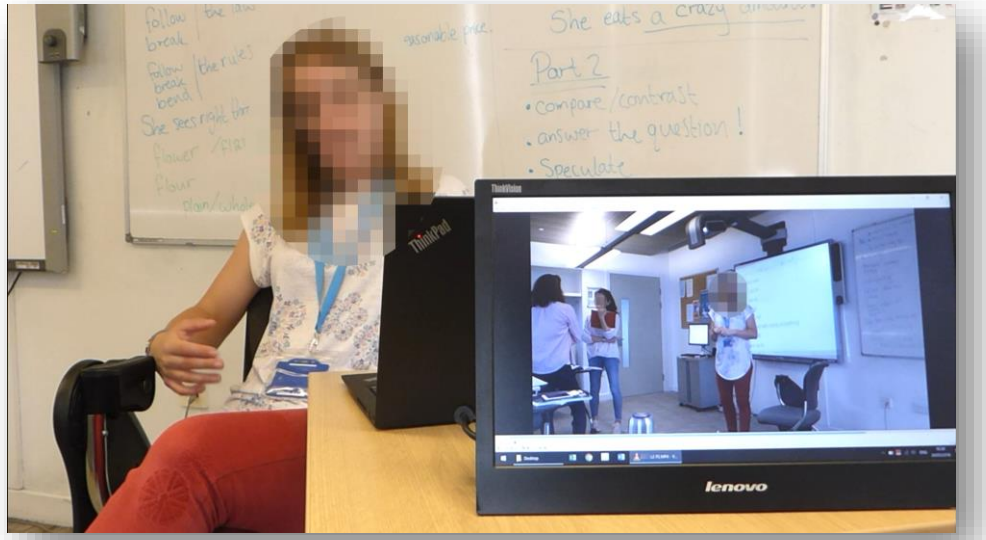
- Schön wasn't writing about teaching – his terminology is ambiguous and unproven in our field (Eraut, 1995 van Manen, 1995).
- RiA/RoA distinction is largely imposed retrospectively.
- A less ambiguous term for *reflection-while-teaching* is required. Jackson's (1968/1990) "interactive/preactive" distinction is useful.
- Thus: "**interactive reflection**" refers specifically to reflection during the lesson.

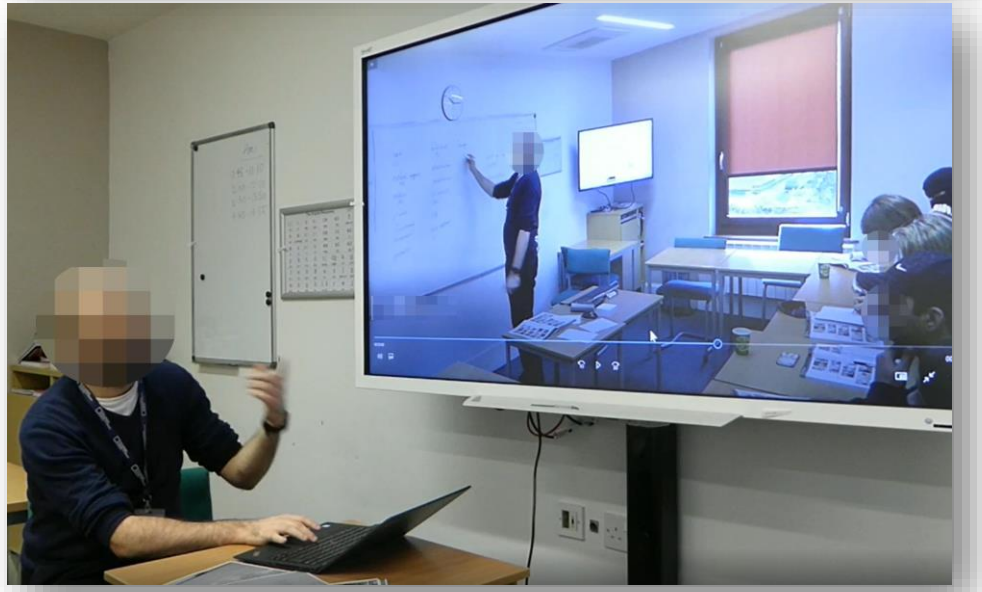
Questions investigated

1. What broad categories of thought process can be identified during the interactive teaching of experienced teachers?
2. To what extent can the thought process categories identified and the individual examples of these be classified as “reflective thought”?
3. What evidence is there that some, or any, of these types of thought constitute what Schön would have called “reflection-in-action”?
4. What else can we learn about teacher interactive reflection from this study?

Aspects of methodology

- 4 participants (adult EFL, small multilingual classes, UK; highly qualified, experienced teachers)
- Key data source: Immediate post lesson video stimulated recall with focus only on recall of interactive thought, not post hoc rationalisation.
- Other data sources: lesson observations, interviews, audio diaries
- Inductive coding; categories validated through inter-rater reliability[1]





1. "substantial agreement" (Cohen's K; K = 0.630 [95% CI, 0.510 to 0.750], p = <.0001) as per Landis & Koch, 1977.

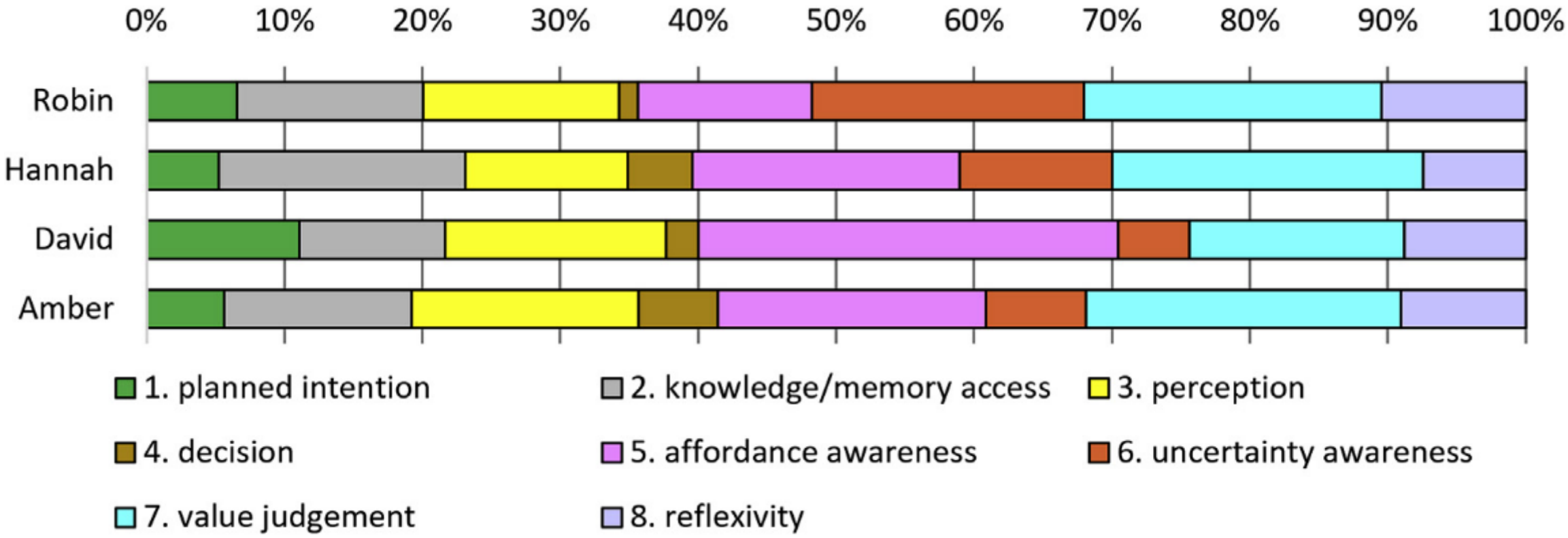
Typology of teacher interactive thought (1/2)

Category	Subcategories	Description
1 Planned intention	a) immediate (right now) b) future (later in the lesson or course of study) c) getting back on course after affordance	When teacher recalls being aware of an intention linked to her/his plan for the lesson.
2 Knowledge /memory access	a) of learners (e.g. personalities, likes, challenges, etc.) b) of prior study/learning c) of subject (i.e. the English, grammar, skills) d) of pedagogy (incl. personal beliefs) e) of other (e.g. materials, own life experience)	When teacher recalls either searching own knowledge/memory, or drawing upon it.
3 Perception	a) of learners' actions, contributions, moods b) of other factors (e.g. materials, time, boardwork, disturbance, own actions etc.)	When teacher recalls seeing, hearing, noticing or perceiving something.
4 Decision	[none]	When teacher recalls conscious awareness of making a decision.

Typology of teacher interactive thought (2/2)

Category	Subcategories	Description
5 Affordance awareness	a) intention in response to learner action or contribution b) awareness of emerging opportunity or problem c) adjustment to prior/planned intention d) anticipation (including expectations and predictions)	When teacher recalls either responding to, or anticipating something unplanned that came up in the lesson.
6 Uncertainty awareness	a) deliberation / questioning b) doubt / confusion / difficulty thinking of something c) hypothesising (i.e. speculating about possible options)	When teacher recalls that s/he was uncertain about something, including deliberations, doubts, etc.
7 Value judgement	a) evaluation of learner action, contribution or learner-generated affordance b) evaluation of own action, choice, contribution or response to learner c) evaluation of general progress of lesson d) evaluation of something else	When the teacher recalls awareness of an evaluative judgment or feeling, including assessment of how an action, activity or lesson stage is going/has gone, but not yet reflexivity.
8 Reflexivity	a) regret of, or annoyance at own practice b) self-confirmation (recognition of the positive impact of a decision or action taken during the lesson) c) self-criticism (incl. indication of alternative action) d) awareness of gap in knowledge or own error e) awareness of unresolved puzzle f) questioning/reflecting on prior or general practice	When the comment indicates that teacher examined own practices critically and/or restructured own beliefs.

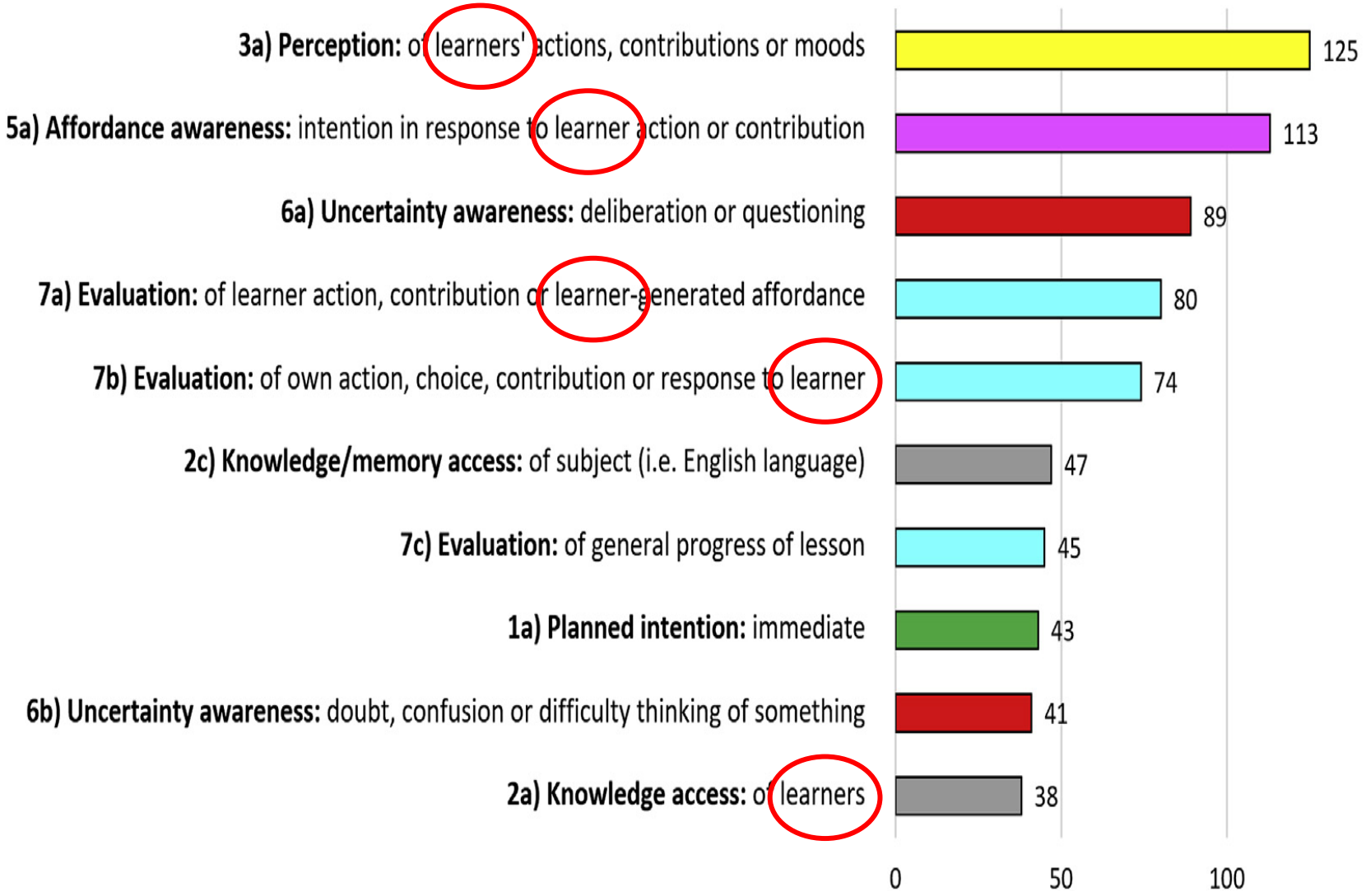
Category distribution within IR of the four teachers



What types of interactive thought were most common?

Category	Count	%
7. Value judgement*	223	21%
5. Affordance awareness	207	19%
3. Perception	149	14%
2. Knowledge/mem. access	145	14%
6. Uncertainty awareness	136	13%
8. Reflexivity	97	9%
1. Planned intention	80	7%
4. Decision	30	3%
Total recalls (4 Ts, 8 lessons):	1067	100%

*synonymous with 'evaluation'



3 broad types of interactive reflection

- **Practical reflection:** faster, automated, yet accessible to recall (mainly involving perceptions, knowledge access, planned intentions and brief value judgements). Indicative of smooth progress.
- **Adaptive reflection:** responsive, complex, sometimes requiring complex judgements (mainly involving affordance and uncertainty awareness). Indicative of 'shit happening'.
- **Reflexivity:** less common, but frequently critical. Including, but more than, Schön's critical RiA.

Adaptive reflection: examples

uncertainty awareness

Robin L2/R11: Well I'm thinking how should I help, should I help?(6a) Um I'm also, I'm also thinking why, why after so much practice is it taking her so long to, to recall the phrasal verb(6a) which is a slightly unfair thought(7b) but (.) [rubs ear] yeah if I'm, if that's the first question and she can't remember it(3a) I'm worried a little bit(7c).

perception

value judgement

David L1/R24: Yeah I'm not [rubbing forehead] completely sure (.) why it's double consonant here(6b). I, I know the rule(2c) he's talking about(3a) and I want to make, I want to show that I know the rule he's talking about(5a): CVC(2c) so I said "consonant vowel consonant" [points finger] to show that I know what he's talking about(5a) um but I think that actually might be more complicated in two syllable words(6a). I, I can't [points at screen and continues playback].

affordance awareness

Reflexivity: examples

reflexivity

Hannah L2/R14: And here I'm thinking that's too open a question. I should've prepared some(8c).

perception

Robin L2/R47: When I think it was Didem or maybe Caroline said 'That's a very good idea'(3a) and there I, I remember feeling a bit bolstered by it all. It's a positive response so I'm like yeah this is a good idea(8b).

David L1/R50: I'm suddenly self-conscious about the fact that I've looked up 'writ' and I don't want anyone to know that I'm in any doubt as to what 'writ' means, for credibility reasons, not for sort of egotistical reasons(8d) [laughs].

6 'discursive' patterns of interactive reflection identified

I. Automated response: Involving mainly practical reflection

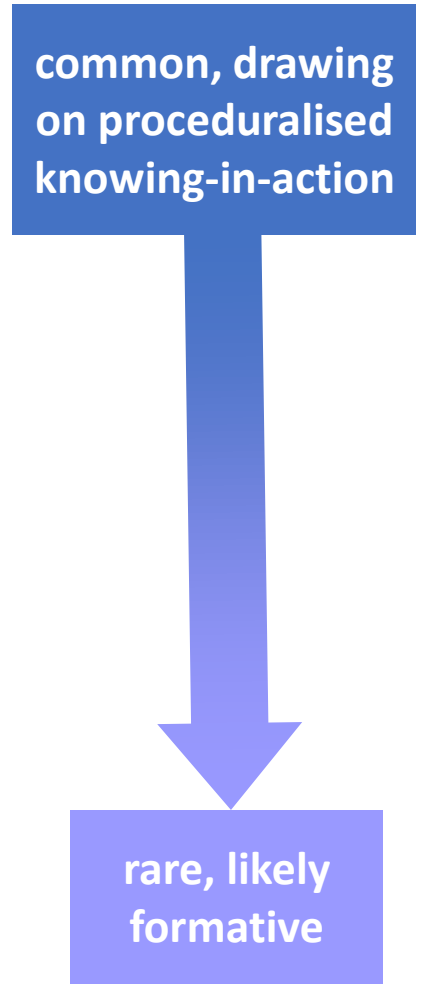
II. Response strategy: Involving mainly adaptive reflection

III. Internal reflexivity: No 'trigger'. More contemplative, often at quieter moments in the lesson

IV. Recovery strategy: Required deliberate action to avert a potentially problematic situation

V. Acknowledgement: 'Owning up' / reflecting aloud to the learners

VI. Face loss incident: Significant teacher error/challenge becomes apparent to learners



A taxonomy of interactive reflection

	Practical reflection		Critical reflection
	Spontaneous, rapid thinking about one's practice, often under time-pressure.		Careful deliberation on one's practice and/or beliefs.
	◄——— Variables may include: duration, complexity, criticality ———►		
Interactive			
Types	Practical - - - > ? < - - - Adaptive - - - > ? < - - - Reflexivity		
Patterns	Automated responses	Response strategies	Recovery strategies Internal reflexivity Acknowledgement Face loss

Patterns of interactive reflection not covered today – please see the paper.

Developing teachers' reflection literacy

- Reflection literacy: "the ability to identify, describe and discuss reflective practices coherently" (Anderson, 2019, p. 15)
- A teacher's ability to accurately recall interactive thought is likely to correlate with their ability to learn from practice (i.e., an indicator of how developed their reflection-in-action is).
- Is this the difference between teachers with "twenty years' experience and those with one year's experience repeated twenty times"? (Ur, 1996, p. 317)

Promoting reflection literacy: Stimulating recall of interactive thought

Possibly useful for supporting teacher reflection during post-lesson discussion/conference/'feedback' after lesson observation. The mediator/mentor/trainer may find the possible questions useful. The teacher may find the sentence stems useful.

Type	Category	Possible questions	Sentence stems*
Practical reflection <----------> tive reflection	**Awareness of planned intentions**	Can you recall being aware of your planned intentions while you were teaching? When?	At that point, I had wanted to… I planned to…
	Knowledge/ memory access	What areas of knowledge do you remember drawing upon today? (e.g. of learners, past lessons, of the subject, teaching skills, etc.)	I remember that I had to think about… I remember trying to recall… My knowledge of … was useful when…
	Perception	What things do you recall noticing (seen or heard) that became important?	On one occasion I noticed that… X looked / seemed to be… I heard X say…
	Affordance awareness	How did unplanned events, opportunities or challenges in the lesson influence your thinking?	When… I realised that… I could / might need to / should(n't)…
	Uncertainty awareness	Were there any occasions where you were unsure or puzzled about something?	When… I wasn't sure if… why… I thought it was strange that

Why no category for "Decisions"? Focusing on decisions tends to prompt *post hoc* rationalisation and 'defence' of the lesson.

*Many thanks to Briony Beaven for suggesting the use of sentence stems.

Reflexivity <----------> Adaptive reflection

Affordance awareness	How did unplanned events, opportunities or challenges in the lesson influence your thinking?	When… I realised that… I could / might need to / should(n't)…
Uncertainty awareness	Were there any occasions where you were unsure or puzzled about something?	When… I wasn't sure if… why… I thought it was strange that…
Value judgement *[continuum to reflexivity]* ↓	Can you recall specific moments when you were pleased or not with something that happened?	When… I felt that… …it was going… well / badly It was good that… I was starting to worry about…
Reflexivity	Can you recall any occasions that caused you to think more critically about what you were doing (positive or negative)? What do you recall learning?	When… I realised that I had… / hadn't… I knew that this was because… It made me think / reflect that… I think I learnt that…

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Comments, questions, critique, links?

Downloads: For slides, go to the 'Talks' page at: www.jasonanderson.org.uk

Many thanks to the four participant teachers for sharing their classrooms and thoughts.

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Promoting reflection literacy: Lesson observation proforma for focusing on adaptive reflection and reflexivity

This proforma may be useful, either for the observer (to complete while observing lesson) or teacher self-observation (e.g. while watching video). The 'Transcript / recall stimulus' column can be used to make notes of dialogue and actions at moments when adaptive reflection or reflexivity may be occurring (see Anderson, 2019). This can then prompt discussion or personal reflection/introspection afterwards.

Adaptive reflection incidents / response strategies

Occasions when teacher managed a specific event, affordance or potential challenge without the need for deeper reflection (reflexivity):

Time	Transcript / recall stimulus	Comments / thoughts / questions

Reflexivity incidents (incl. recovery strategies, acknowledgement, face loss)

Occasions when an affordance, potential challenge or critical incident necessitated a specific intervention, potentially leading to formative reflection:

Time	Transcript / recall stimulus	Comments / thoughts / questions

Example of 'Acknowledgement'

Recall #	Lesson transcript	VSR transcript
78	[teacher is summarising the challenge of the activity] T: In general I think I think this was quite difficult to…	As I say that I'm thinking, ah *that should have been a question. I should've, I shouldn't tell the student or students that was difficult, I should ask them and then [restarts playback]*$_{(8c)}$.
79	T: …what do you think? Didem: No it's good.	*When Didem says "no"*$_{(3a)}$ I'm thinking yeah *that should've been a question*$_{(8c)}$ [laughs].
80	T: I mean I think you communicated very well and you asked lots of good…	And now I'm thinking, *OK I sort of messed up with that I should probably give them some positives*$_{(8c)}$.