

Where's the Evidence? A look into effective verbal feedback in medical education

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TRADITIONAL TERRITORIES ACKNOWLEDGEMENT



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We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.

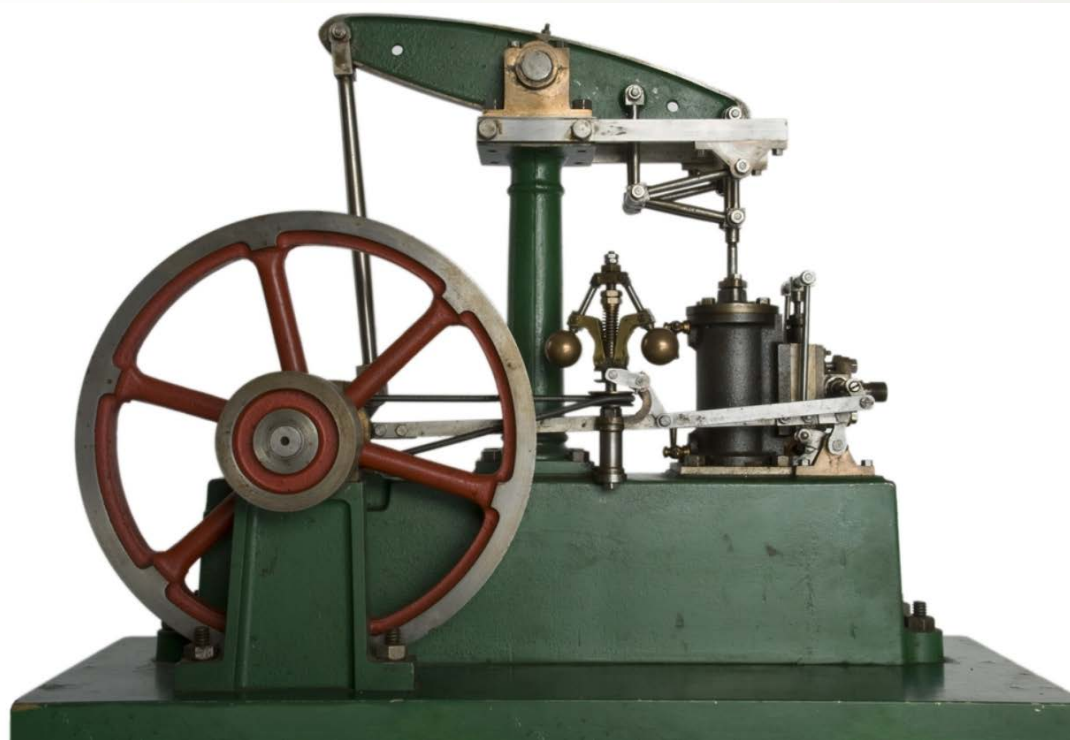
No Conflict of Interests to Declare

Learning Objectives

After this session, participants will be able to

1. Describe the evidence and theory for feedback in medical education
2. Understand what theory has been validated through the lens of feedback utilization
3. Appreciate the growing understanding of the role of cognition and emotion in feedback utilization
4. Apply theory and evidence to the feedback they provide in their teaching practices

The Origins of Feedback¹⁻²



The Origins of Feedback

Learners \neq Steam Engines

Teachers \neq Machine Operators

Feedback in Medical Education

- Feedback as a tool to improve individual performance was first seen in business management and education.
- Best practices were borrowed and translated into medical education literature in 1983.³

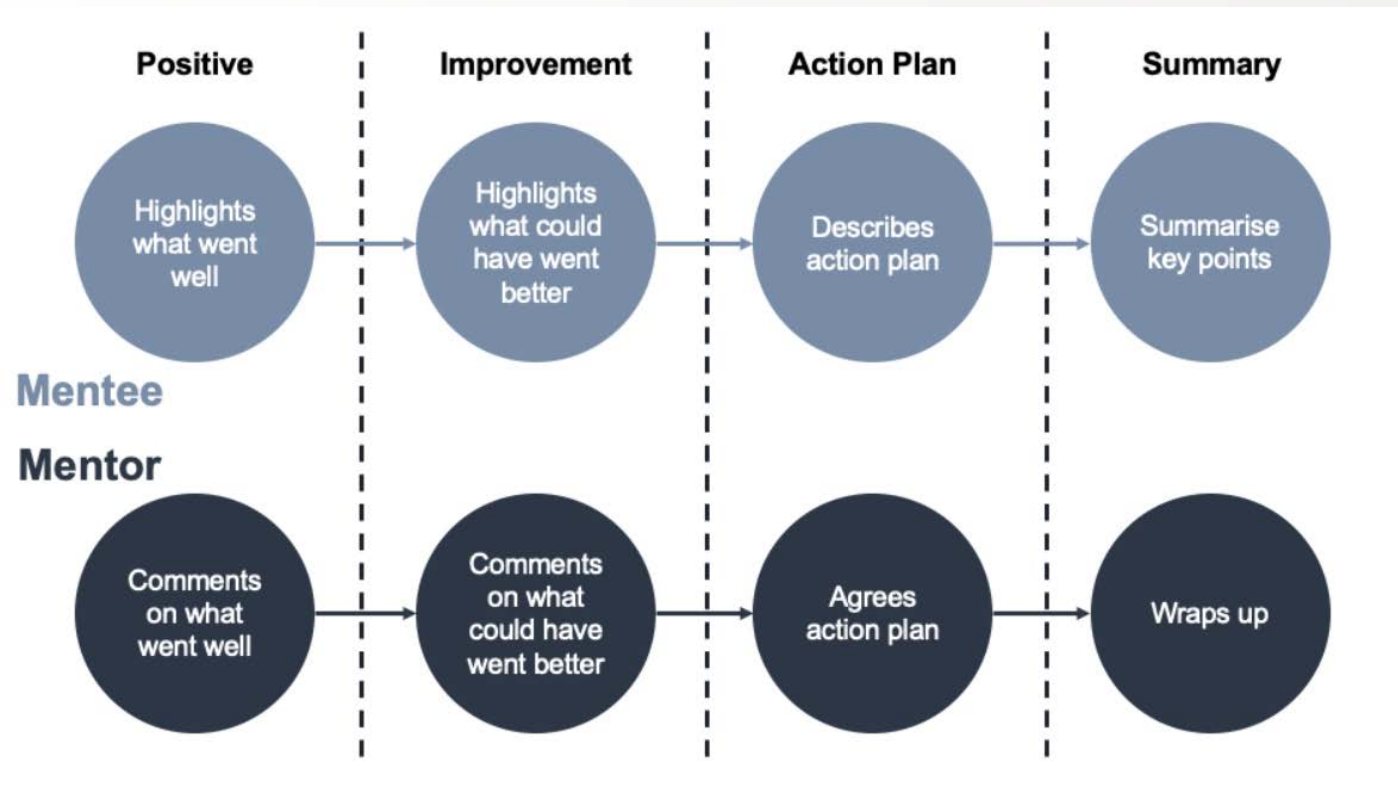
Feedback in Medical Education



Teacher-Focused Literature

- Initial principles felt to be integral to effective feedback were directed towards teachers and included³⁻⁵:
 - Specificity
 - Direct Observation
 - Immediacy
 - First-hand
 - Use of non-evaluative language
 - Follow-Up
- Workshops were published to help guide teachers⁶
- Frameworks were developed to guide teachers (e.g. Pendelton's, SPIKES)⁷.
- No research into whether any of these principles were effective.
 - Validation was based on teacher opinion⁸

Pendelton's Model⁷



Student-Centred Literature

- Maturation differences impacted the type of feedback learners valued.⁹
- Interviews with students revealed they valued feedback from teachers with whom they had longitudinal relationships with.¹⁰
- Some students revealed that defensiveness and emotion prevented them from acting on feedback.¹¹
- Students suggested that the perceived credibility of their supervisors impacted the feedback they were willing to consider.
 - E.g. Psychiatry residents valued feedback from specific preceptors with differing skill-sets.¹²

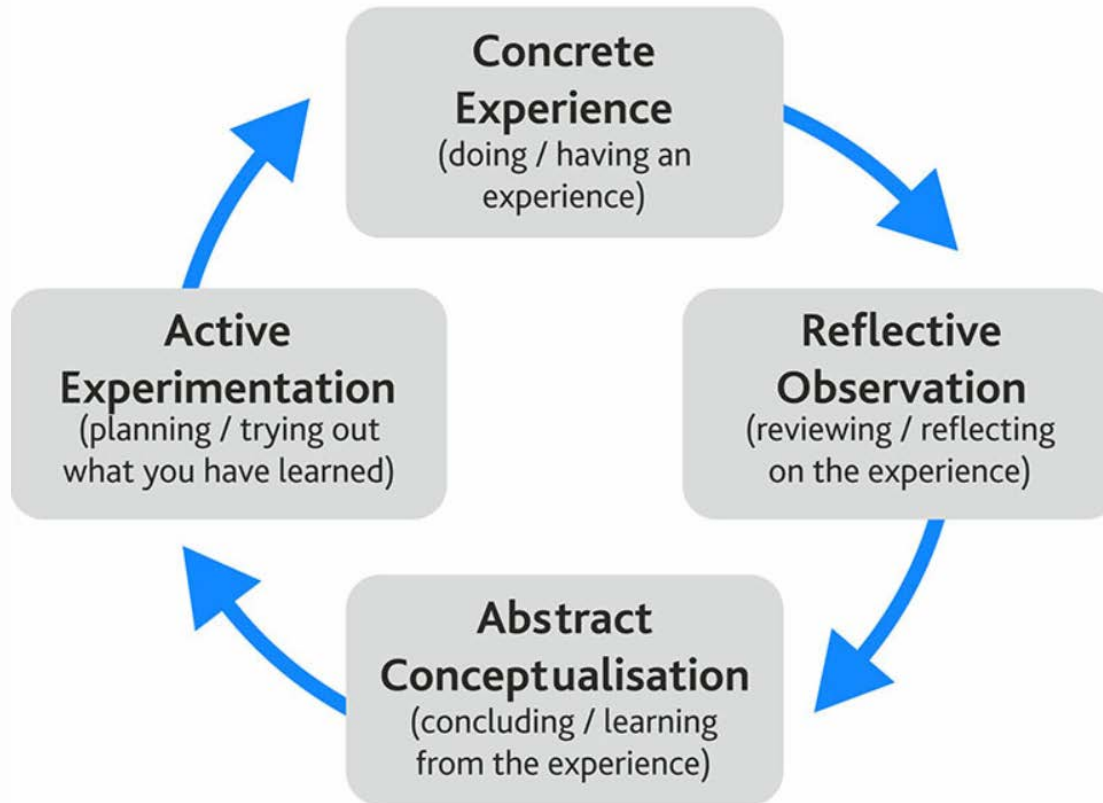
Emotion and Cognition: Self-Concept

- Recognition of the complex role of cognition and emotion in acceptance and utilization of feedback.¹³
- Many self-based theories have been used to illustrate this.
 - Self-Efficacy: Defined as the confidence one has in their own abilities to succeed professionally.¹⁴
- Feedback that does not align with one's self-efficacy or self-concept is more likely to be rejected.¹⁵
- Cognitive biases such as self-serving bias have been observed as ways to preserve self-efficacy during challenging feedback encounters.¹⁴
- Emotional barriers found to impact acceptance of feedback – e.g. attacking provider credibility

Feedback in Medical Education Today

- Predominantly two forms:
 - Verbal and Written
 - More research into video assisted
- A process that has evolved in conceptualization:
 - Linear → cycle
 - Monologic → dialogic
- Significant theoretical research describing best feedback practices
- Meta-analysis has revealed moderate-large improvement in performance of health-care professionals based on verbal feedback.¹⁶
- Consensus that a feedback cycle ends in learner in action.
 - How do we promote action?

The Experiential Learning Cycle



Jattan and Kennedy (2021) – A Call to Action: Why do medical residents act on verbal feedback

Purpose

- Validate as much of the theoretical basis for feedback in medical education through the lens of feedback action

Method

- Qualitative study with a constructivist epistemology
- Narrative Inquiry methodology
- Semi-structured interviews allowing for narration of experiences with verbal feedback utilization or conscious lack of utilization
- Learners: UofM Senior residents (PGY2+) in FM, EM, IM, OB/GYN
- Dual-Analysis:
 - Thematic Analysis – validate common principles believed to be critical to feedback delivery
 - Structural Analysis – explore the emotional and cognitive elements

Thematic Analysis

- Based on the principles of Braun and Clarke
- Combination deductive and inductive analysis utilized
- Codes are generated which are then housed into themes

Structural Analysis

- Based on the Labov's Narrative Analysis
- Temporal narratives are separated into clauses and each clause is matched to one of the basic functions
- Based on patterns in the telling of narratives, various typologies can be generated.

Table 1. Components of Labovian Analysis

Abstract	<i>An initial summary of the story or what is to be told in the narrative</i>
Orientation	<i>Statements which orient the listener to the characters, setting and time</i>
Complicating Action	<i>Clauses which summarize the events of the narrative</i>
Evaluation	<i>Statements which provide the point of view of the narrator. It may involve internal or external evaluations</i>
Resolution	<i>Clause(s) which describe how the complicating actions were resolved</i>
Coda	<i>The bridge from the story to the present, often offering a conclusion or summary of the narrative</i>

Results

- 9 participants were interviewed for an average of 50 minutes

Table 2. Participant Demographics	
Age Range	
25-30	7
31-35	2
Gender	
M	2
F	7
Year of Training	
2	5
3	2
4	1
5	1
Specialty	
Family Medicine	5
Internal Medicine	1
Emergency Medicine	2
Obs/Gyne	1

Results

- 76 narratives generated in total from interviews
 - 55 – action narratives
 - 23 – conscious inaction narratives
- 31 Labovian Narratives (maintain temporal order)

Thematic Analysis

- Conducted on all narratives
- 4 themes uncovered including both factors not yet theorized to be involved in feedback utilization and previously theorized factors

Theme 1: Clinical Context

- Feedback was acted on if it were related to:
 - Clinical Case
 - Learner Context/Future Career
 - Optimizing patient safety
 - Fear of repercussions within the clinical setting – e.g. team rounds, CaRMS

Theme 1: Clinical Context

- *“[Feedback] that stands out in my memory have been things that have helped me re-evaluate how I perform within the emergency department.”*
[EM4]
- *I was trying to get a letter. It was high stakes. And so it was a lot more likely and it was more of a consequence if I didn't and I wanted him to write me a good letter. [FM2C]*

Theme 2: Delivery

- Validation of many of the previously theorized feedback principles:
 - Specificity
 - Direct Observation
 - Immediacy
 - Non-Evaluative Language
 - Limited in Scope
 - Predominantly Positive
 - First-Hand

Theme 2: Delivery

- *“right after we saw the patient, Dr. [X] was like, ‘You should review the lipid guidelines and which situations you should be ordering them in and how often you repeat it.’ [FM2D]*
- *“...you ask a lot of questions and it seems like you are defensive about your plans and it comes off as stubborn.” [FM2C]*

Theme 3: Feedback Content

- Feedback was acted on if:
 - Learner agreed with the content of feedback
 - Content was medically sound
 - Feedback scope was limited
 - Minimal financial barriers
 - Feedback was consistent with other sources

Theme 3: Feedback Content

- *“There was a staff who kept talking about these treatments that are no longer really done.” [EM3]*
- *“read an entire textbook...an entire, super dense 500-page textbook.” [OBGYN5]*

Theme 4: Relationships

- Mutual Respect
- Longitudinal Relationship

Theme 4: Relationships

- *“It was coming from [someone] who I work with a lot and who knew me very well and we have a pretty good relationship. So, I’m inclined to take that feedback and take it to heart.” [FM2a]*
- *“It was coming from someone who I never really worked with and it was given like [generic] feedback that was probably given to a lot of people.” [FM2a]*

Structural Labovian Analysis

- 3 Typologies Generated and named based on the way feedback impacts our sense of “self”.
 - Matched to three types of feedback: Task-specific, positive-reinforcement and behavioural.
- They illustrate the cognitive and emotional elements in play

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Typology 1: Self-Preserving

- Feedback is readily accepted or dismissed by the learner
- Task-Specific Feedback >>> Behavioural Feedback
- Narrative focus is on the feedback and less on performance

Typology 1: Self-Preserving

1. I worked at the [Addiction Centre].	OR
2. And what I really loved,	E
3. is when you're taught	OR
4. about taking a medical history,	
5. and specifically, about social history,	
6. where [they] put alcohol and substance use.	
7. And I remember them specifically,	CA
8. putting those sorts of things under medications.	
9. They would put them either under medications,	
10. or under past medical history.	
11. and would separate it from social history.	
12. They'd say, "these are chronic disease,	CA
13. that we treat.	
14. Like we don't put marital status	CA
15. under past medical history."	
16. That is very intentional for me now.	RE/CO
17. I try to keep substances out of social history.	

Typology 1: Self-Preserving

1. I remember one preceptor	OR
2. while I was on my emergency psychiatry rotation	
3. had been encouraging us	AB
4. to go back to a formal, structured psychiatric assessment.	
5. He said we needed to get more details.	CA
6. And that we needed to talk with collateral.	CA
7. And I didn't say anything to the preceptor.	CA
8. But I just remember in my head,	E
9. I was like, "from an emerg physician standpoint	
10. I don't have an hour and a half	
11. to do a full psych assessment, right?"	
12. <u>So</u> although I noted it	CA/E
13. I thought that isn't what we're looking for,	E/RE
14. given that we screen for safety	
15. or whether they need expert consultation.	

Typology 2: Self-Enhancing

- “Positive Reinforcement”
- Narrative shifts from feedback content to narration of their actions

Typology 2: Self- Enhancing

1. There was one of [my preceptor's] patients	OR
2. who I got to see for a start of Suboxone treatment.	OR
3. And this is an area of medicine that really interests me.	E
4. And I know [Dr. X] spends so much time	E
5. building a positive relationship	E
6. with her patients.	E
7. So it felt like a privilege,	E
8. that I got to be the one starting off this talk.	E
9. And so, I talked with him.	CA
10. And I ended up meeting with this patient again	CA
11. because it was a longer block.	
12. And I actually got to do the initiation of Suboxone.	CA
13. And I don't remember when it was during this	OR
14. But we were kind of debriefing	CA
15. And she complimented me	CA
16. on the care and follow-up I had provided.	CA
17. And how I had made it so comfortable	CA
18. for him to feel comfortable	
19. coming back for treatment.	
20. And how him and I	CA
21. were able to build a relationship	
22. and that he felt it was a safe place for him.	
23. So that felt like such a huge boost.	RE

Typology 3: Self-Threatening

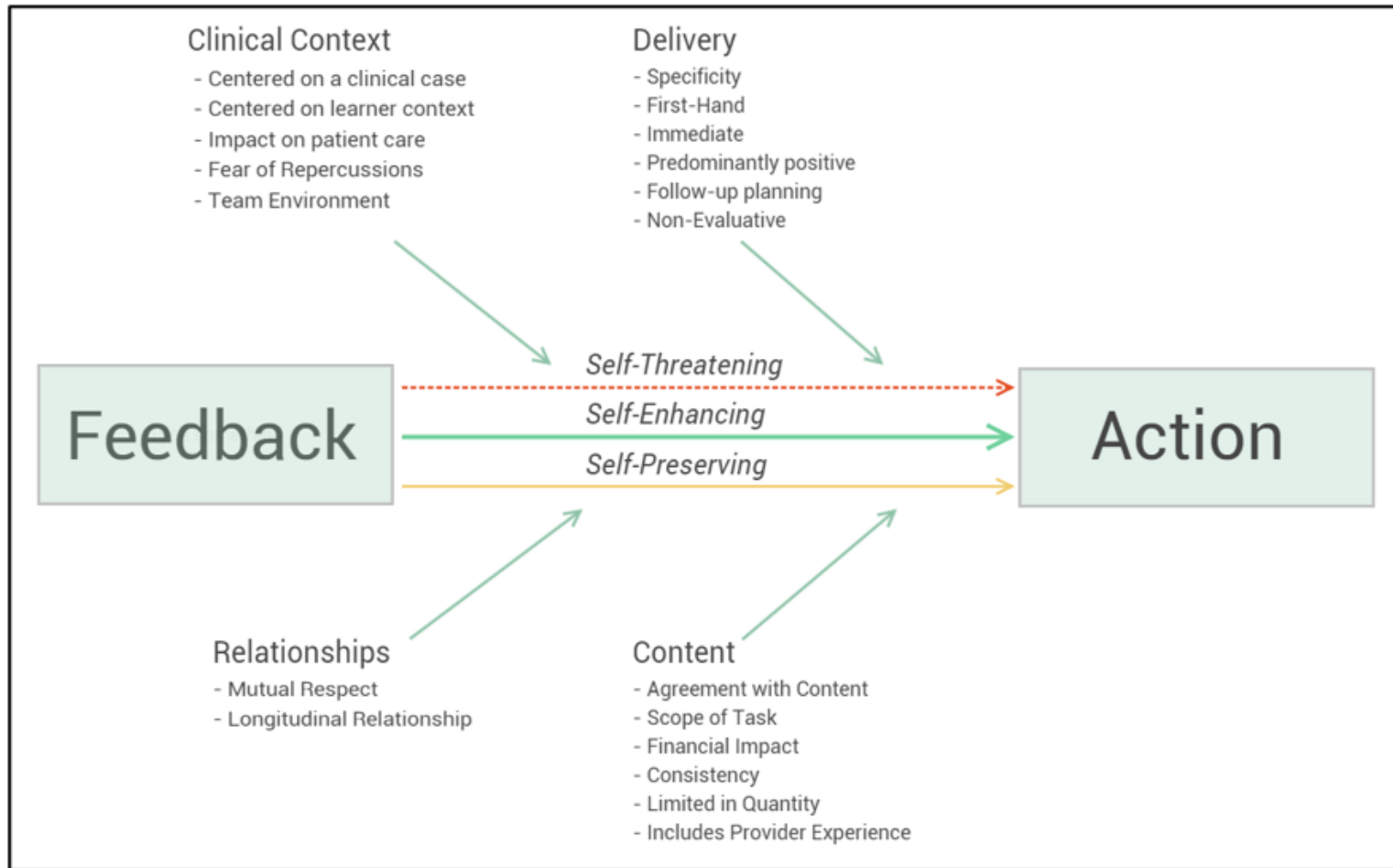
- Learners struggle to process the feedback
- Evidenced by chaotic narratives oscillating between evaluative and complicating clauses
- Action often required a balance of factors seen in thematic analysis (e.g. longitudinal relationship, mutual respect, direct observation)

Typology 3: Self- Threatening

1. [Time management] is something	AB
2. that Dr. X	OR
3. <u>actually</u> told me to work on	CA
4. on my first block in R1.	OR
5. And again, it was very fair feedback for me.	E
6. I'm someone who likes to write long notes.	E
7. Like, I have detailed notes	E
8. and I like to talk to people.	E
9. <u>So</u> knowing both my visits with [patients]	E
10. and my charting at the end of the day,	
11. I knew it was long	E
12. and I was very aware of that.	E
13. <u>So</u> to have Dr. X....	
14. I'm trying to remember what else she said	
15. because she didn't even just say work on efficiency and time management,	E
16. even though she could have	
17. and I would have known.	
18. But I think it was it was part of like,	CA
19. respect other patients time.	
20. Like, [she said], "you can't take 15 minutes longer with each patient,	CA
21. [because] the patient at the end of the day	
22. Is waiting three hours.	
23. And that's not respectful to them or to you."	
24. And then also again,	E
25. I want to do this for the rest of my life. right?	

Validated Principles for Feedback Utilization

Table 5. Principles Validated for Effective, Actionable Feedback	
Theoretical Principles	Emerging Principles
Specificity	Centred on a Clinical Case
Direct Observation	Centred on Learner Context
Immediacy	Impact on Patient Care
Mutual Respect	Team Environment
Predominantly Positive	Agreement with Content
Follow-Up Planning	Scope of Feedback
Non-Judgmental	
Longitudinal Relationship	
Limited in Quantity	



Conclusions

- First study to specifically show the effectiveness of feedback tailored to the learner context and to the clinical environment.
- Trust and provider credibility appear to be powerful factors.
 - Longitudinal relationships appear to lessen the risk of “vanishing feedback.”
- Task-specific feedback is less likely to impact a learner’s sense of “self” and will either be accepted or dismissed based on contextual factors.
- Positively framed feedback enhances self-efficacy.
- Self-threatening narratives are laced with emotion and action requires a delicate balance of factors seen in the thematic analysis.

How did this influence my practice?

- No more formal feedback sessions
- I ask, “am I the right person to deliver this feedback?”
- I always try and establish what my learner’s future career looks like and try to tailor feedback to that.
- Consider tying feedback to specific clinical cases which the learner is involved in.
- Elicit self-assessment

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