

COGNITION, CULTURE, AND CREDIBILITY

Deconstructing Feedback in Medical Education

Chris Watling MD PhD

Learners Need Feedback

Feedback is...



"the cornerstone of clinical teaching" (Cantillon, Sargeant)

But Why?

What do we expect feedback to accomplish?

How does feedback become meaningful?

Feedback Defined

Information provided to a learner regarding aspects of their performance or understanding

(Hattie & Timperley 2007)

Information that allows a learner to compare their performance with that of a standard to which they are aiming, and that enables them to take action to remedy the gap between the two

(Sadler 1989)

The Promise of Feedback

Feedback should provide **direction** and **motivation** for learning



Without Feedback...

"...mistakes go uncorrected, good performance is not reinforced, and clinical competence is achieved empirically, or not at all."

(Ende 1983)

Does Feedback Work?

Kluger and DeNisi (1996)

Feedback improved performance (modestly) on average, BUT...

Feedback reduced performance *in over 1/3 of experiments*

Does Feedback Work?

Bangert-Drowns (1991)

Meta-analysis of impact of feedback in setting of test-like events

Modestly beneficial overall effect

Feedback detrimental in 18/51 studies

Does Feedback Work?

Feedback one of the strongest influences on student learning in Hattie's synthesis of multiple studies

Effect size *highly variable*

Learner Perceptions

"I can't even think of any time I got feedback that was useful."

Research Questions

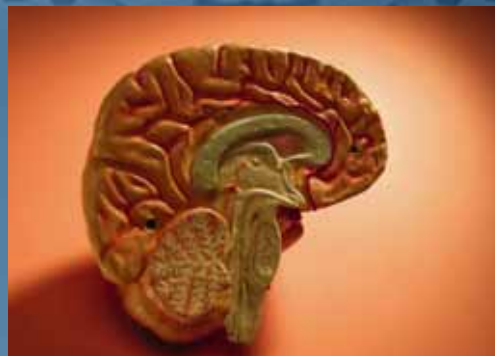
1. What are the characteristics of feedback that becomes influential?
2. How do learners decide to accept or discard feedback?
3. How does medicine's learning culture influence the role of feedback in learning?
4. How can feedback's potential be more effectively harnessed in medical education?

A Broad Definition

Feedback = information about performance

Allow participants to define feedback based on their own histories and experiences

A Cognitivist View...



Cognitivist perspective illuminating, but limiting



The Sociocultural Perspective

Learning as a social and cultural process

Learning inseparable from context

To understand learning, attention to culture is required

Lave and Wenger, Sford

The Method

Constructivist grounded theory

Interviews, focus groups

99 participants across 5 studies

Methodologic Fundamentals

Purposive sampling

Constant comparative analysis

Goal: Theoretical, conceptual understanding

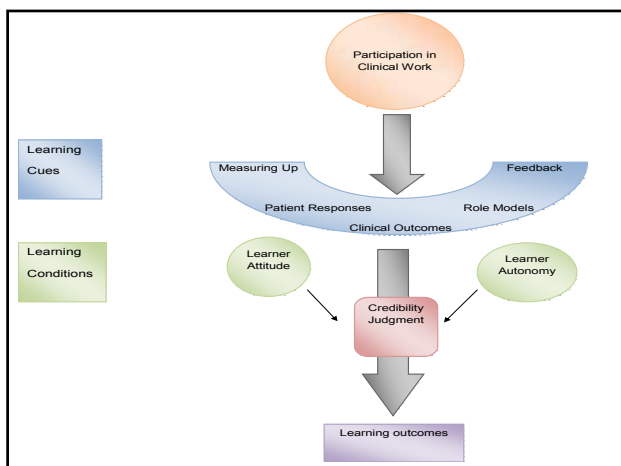
Reflexivity



STUDY 1

What experiences do physicians consider to have been influential in their learning?

Why do these experiences resonate with them?



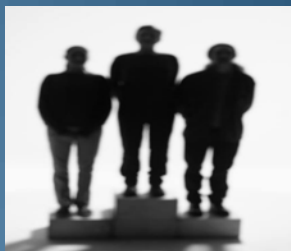
Feedback in Clinical Learning

Feedback has to *compete* for learner attention



Feedback in Competition

Credibility determines how successfully feedback competes for learners' attention



STUDY 2

Focus on feedback

How useful is **regulatory focus theory** in explaining or predicting feedback responses?



Regulatory Focus and Feedback Response (Kluger and van Dijk 2010)

Regulatory Focus	Sign of Feedback	Effect on Motivation and Performance
Promotion	Positive	↑
Promotion	Negative	↓
Prevention	Negative	↑
Prevention	Positive	↓

Findings

Regulatory focus theory provides some insight into feedback responses
BUT...
Applying regulatory focus theory to real feedback scenarios is challenging:

- Mixed regulatory focus often present
- Regulatory focus can change over time
- Credibility may trump regulatory focus

Conclusions

The Potential...

- Regulatory focus theory can enhance understanding of learners' responses to FB

The Limitations...

- Complexity of clinical learning situations resists a simple rubric



Research Question

What are the taken-for-granted assumptions about learning that exist within the medical culture?

What influence do these assumptions have on learning?

What are the implications for improving learning in medicine?

Medicine

Learning by doing

Competence

Teachers valued for clinical skills

Self-assessment as a skill to develop

Music

Learning by lesson

Excellence

Teachers valued for instructional skills

Self-assessment as an impossibility

Signature Pedagogies (Shulman)

Characteristic forms of teaching and learning within professions

Windows into cultures of their fields

Revealing of values



Feedback and Culture



How do the characteristics and values of a profession shape its learners' responses to feedback?

Findings

Credibility and *constructiveness* are essential for feedback to be perceived as meaningful

Cultures define credibility and constructiveness in distinct ways

Learning cultures provide variable support for credible and constructive feedback

Tying it Together

How do individual and sociocultural influences on feedback interact?





THE APPROACH

Exploit the research potential of individuals who have moved across learning cultures

Physicians with high-level training in music or sport

Findings

Feedback's meaning is influenced by:

- The individual learner
- The feedback characteristics
- The learning culture

THE IMPACT OF CULTURE

Determines norms and expectations for:

- Teachers
- Teacher-learner relationships
- Feedback

Defines performance goals

LEARNING CULTURE

Neither creates motivated learners nor defines "good feedback"

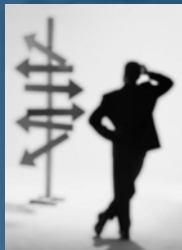
Rather...

Creates conditions and opportunities for good feedback to occur and for learners to respond

RECONSTRUCTING FEEDBACK

SITUATING FEEDBACK

Feedback sits at the intersection of the individual and the sociocultural



Workplace Learning

Leading theories integrate individual and social
Eraut

Individual and sociocultural theories as complementary

Billett

Affordances

Agency

Learners are not "hapless hostages to the social."

Or Are They?

Culture

Creates opportunities for meaningful feedback to occur

AND

Shape learners' judgements about its credibility through its values and ideology

