FEEDBACK IN WORKPLACE LEARNING

Prof Dr Sylvia Heeneman

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Maastricht University

W O R K P L A C E L E A R N I N G

Integral part of medical training

Powerful as a learning environment

Authentic tasks / Role models

Also:

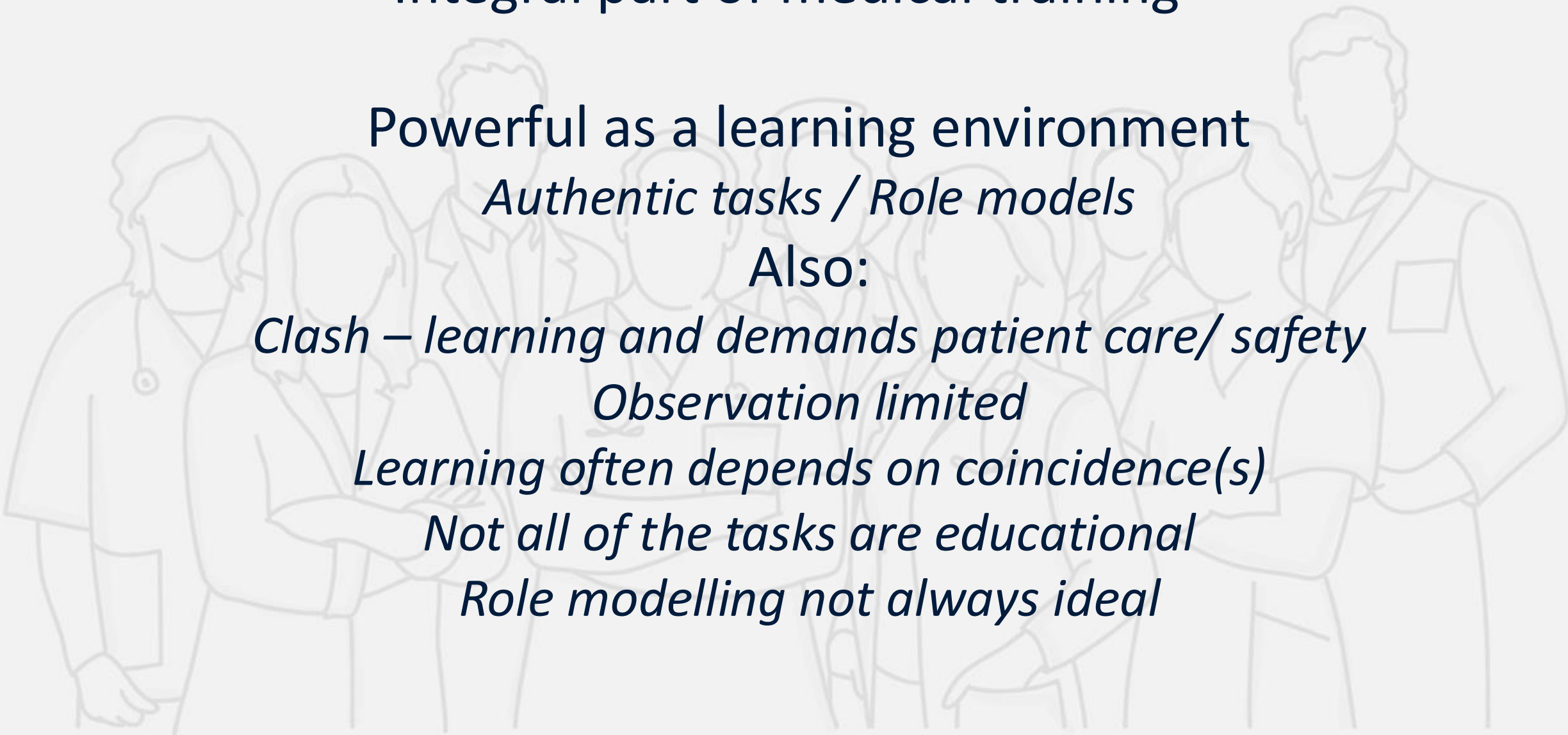
Clash – learning and demands patient care/ safety

Observation limited

Learning often depends on coincidence(s)

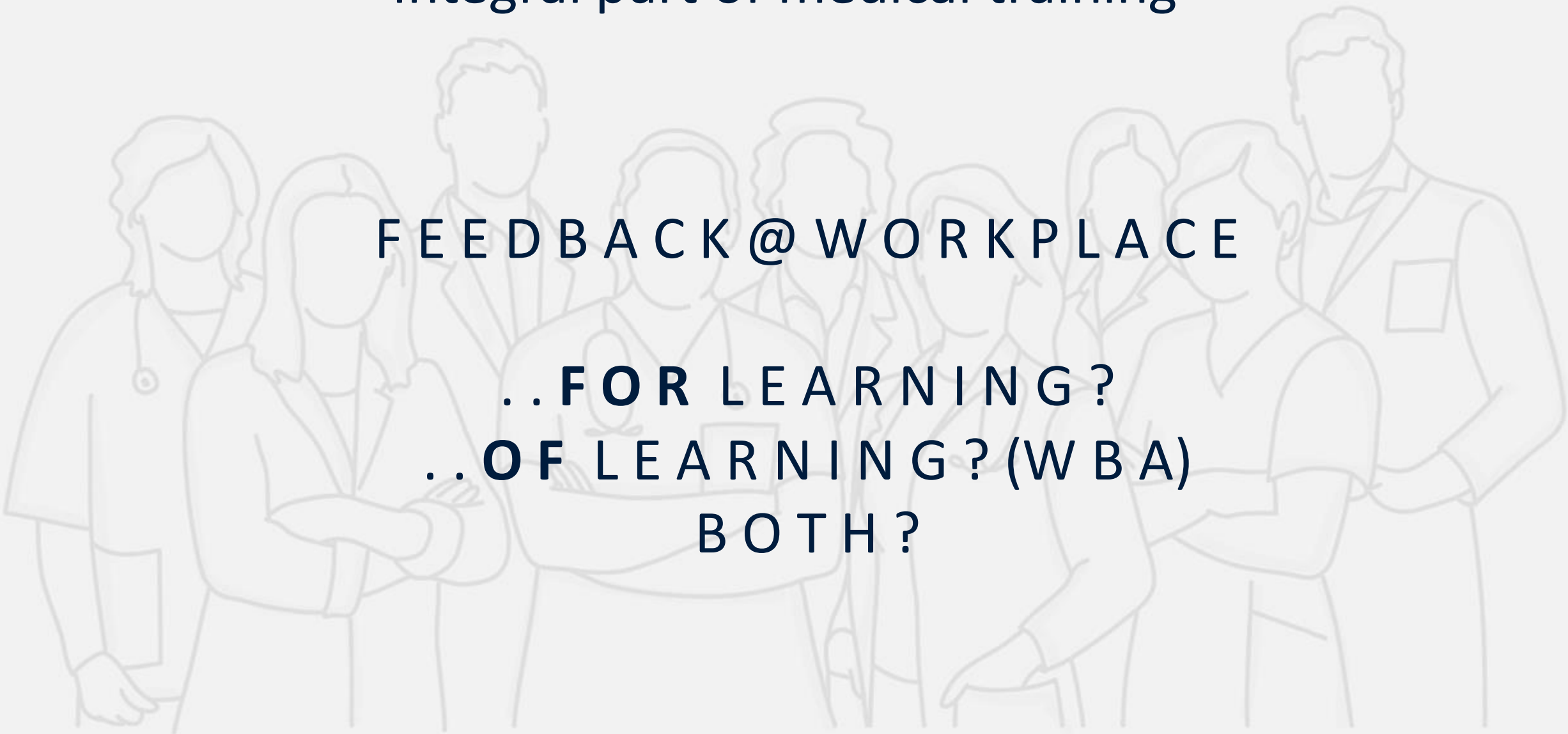
Not all of the tasks are educational

Role modelling not always ideal



W O R K P L A C E L E A R N I N G

Integral part of medical training



F E E D B A C K @ W O R K P L A C E

. . **F O R** L E A R N I N G ?

. . **O F** L E A R N I N G ? (W B A)

B O T H ?

SHIFTS

- Viewing feedback as interactive process, a dialogue
- Shift emphasis toward relationships
- Learner action on feedback
- Harnessing feedback to promote learning
- Constructive alignment
  - link learning culture and learning from feedback (design)
- Narrative feedback needs to be designed into a culture of learning

Boursicot et al, Ottawa consensus Performance assessment, Med Teach 2021

FEEDBACK PROCESS

- Feedback
  - as unilateral and educator driven
  - to student-driven, bilateral, context-based dialogue

Table 4
Categorisation of Student Role in Reviews.

Category	Model	Description
1	No student role Transmission model	• feedback as input-output model • student plays a passive role • focused on correcting errors • assumption that as long as the right feedback conditions are in place, students will learn • students react to feedback without exercising individual control or thought
2	Limited student role Information processing model	
3	Some student role Communication model	
4	Substantial student role Dialogic model	others' learning • active student engagement with feedback seen as a necessary condition for feedback to result in learning • feedback effects highly variable depending on various social, contextual and individual student characteristics • feedback effects cannot be predicted

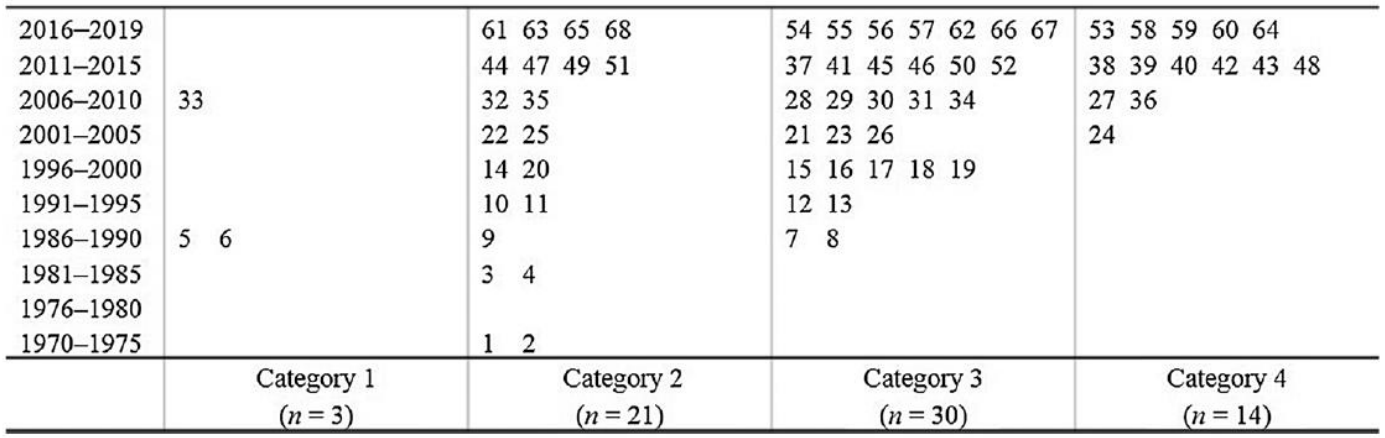


Fig. 4. Overview of reviews assigned to categories of student role.
Note. Category 1: No student role – Transmission model; Category 2: Limited student role – Information processing model; Category 3: Some s role – Communication model; and Category 4: Substantial student role – Dialogic model.
Review identification numbers in this figure correspond with those identifying reviews in Table 3.

Van der Kleij, 2019 Int J Educ Res, A meta-review of the student role in feedback

FEEDBACK PROCESS

- Feedback
  - as unilateral and educator driven
  - to student-driven, bilateral, context-based dialogue
- Use of feedback
  - Feedup - feedback - feedforward
  - Training of student
  - Actionable feedback – training staff
  - Affordances

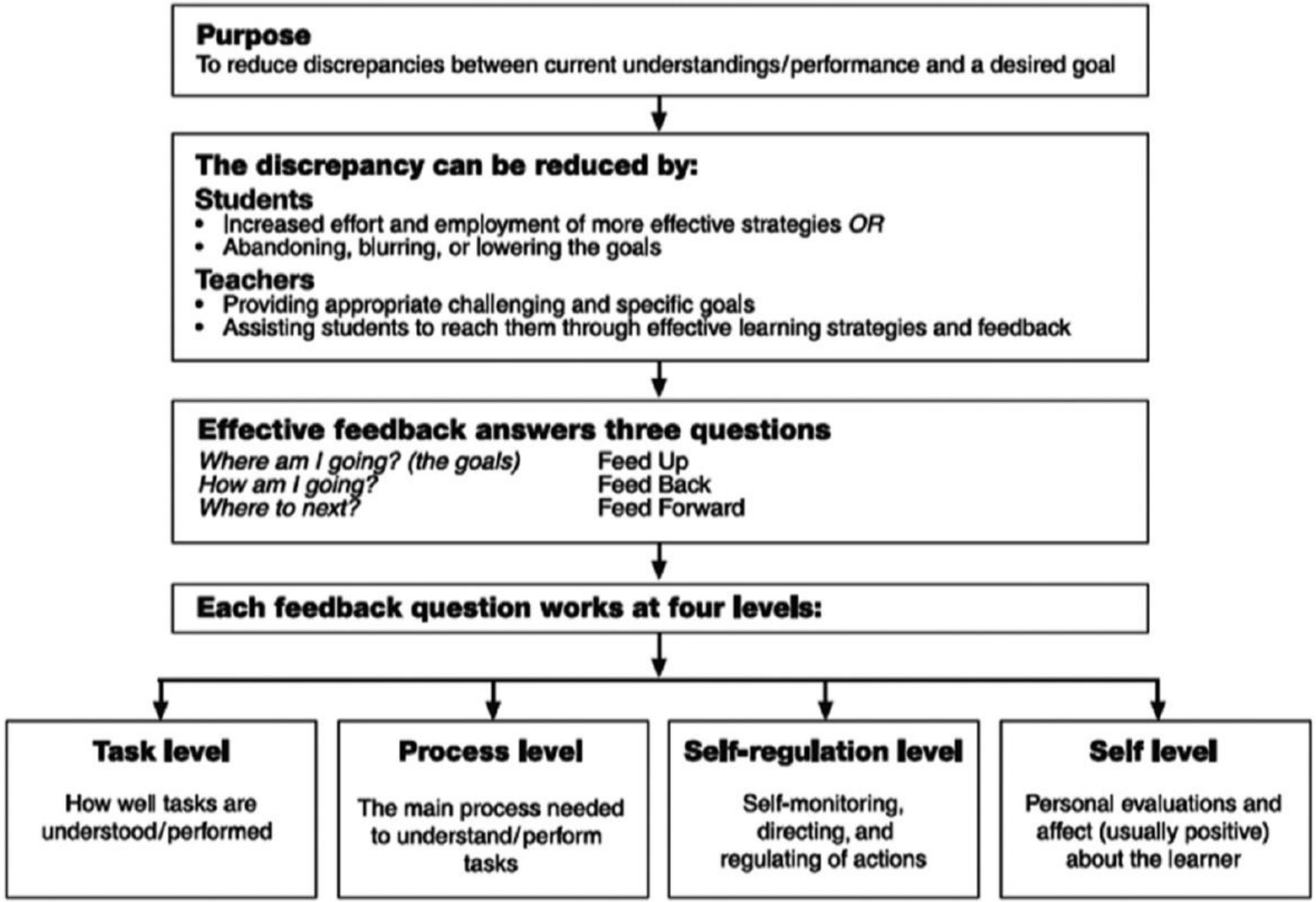


Fig. 1. A model of feedback to enhance learning (Hattie & Timperley, 2007, p. 88, p. 88).

frontiers in Psychology

REVIEW
published: 22 January 2020
doi: 10.3389/fpsyg.2019.03087

The Power of Feedback Revisited: A Meta-Analysis of Educational Feedback Research

Benedikt Wisniewski[1]*, *Klaus Zierer*[1] and *John Hattie*[2]*

[1] Department of School Pedagogy, University of Augsburg, Augsburg, Germany, [2] Melbourne Graduate School of Education, University of Melbourne, Parkville, VIC, Australia

USE WITH CARE

DESIGN (with care)

timely, specific, actionable and task-oriented rather than person-oriented

OPEN ACCESS

Edited by:
Sung-il Kim,
Korea University, South Korea

Reviewed by:
Frans Prins,
Utrecht University, Netherlands
Lu Wang,
Ball State University, United States
Roger C. Ho,
National University of Singapore, Singapore

RELATIONSHIPS

- (more) Effective coaching
- Integral to development of trust
- Need safe learning environments
  - Psychological safety
- Relationship implies continuity of supervision (CoS) - PGME
  - Versus episodic supervision (ES)
  - But definition varies
- UGME – longitudinal clerkships

Telio et al, 2015 - Educational alliance model

TABLE 1 Dimensions of continuity of supervision

Dimension	Requirement for continuity	Possible benefits	Possible risks
For learning	Development of a longitudinal relationship	• Supportive learning environment • Tailoring of teaching to learner needs • Reinforcement of knowledge through frequent feedback • Development of an educational alliance	• Dysfunctional relationship
For assessment	Knowledge of performance over time	• Earlier identification of learner in difficulty • Opportunity for trust • Greater patient care responsibilities	• Bias from past performance or forward feeding • Rater bias (eg halo/horns effect, leniency bias, confirmation bias, etc) having larger effect with too few raters
For patient safety	Extent of physical presence	• Improved patient outcomes	• Interference with independence

Lee & Ross, 2015, Med Educ

RELATIONSHIPS

- Studies on CoS vs ES (Lee, Ross) - PGME
- Impact on assessment
  - Competencies
  - Level chosen

Perceptions - impact

- ES
  - superficiality was accepted for variety and diversity in feedback
- CoS
  - (a) Not developing – tolerate feedback and seek out additional assessors,
  - b) Deteriorating – avoid feedback and seek out alternative assessors,
  - (c) Developing – value and tailor feedback,
  - (d) Becoming a friendship – question bias in feedback and advocate for more assessors.

Lee & Ross, 2015, Med Educ, Lee et al, 2024, submitted

LEARNING CULTURE

- Social-cultural learning theories
- Learning:
  - product of the individual as well the environment
- Learners become part of a professional community
  - gradually adopting practices, beliefs and values of that community

Watling & Ginsburg, 2018, Med Educ

RESEARCH ARTICLE

The social construction of teacher and learner identities in medicine and surgery

Resilience versus self-directedness.	• Being resilient was highly valued in surgical team culture. Surgical resilience meant being capable of normalising postoperative complications, justifying actions and attributing poor outcomes to factors other than self. 'Complications happen; they just happen, and I feel that you cannot get too bothered by it, because if you get too bothered by it, the next patient is affected. You process it, leave it in that room and you move on .... I have had to go away pretend nothing has happened' (H2T2 Resident interview). • Being resilient as a surgical trainee meant deflecting reputational threat by choosing to interpret critical comments from supervisors as coaching interventions rather than attacks on personal capabilities.	• Being self-directed was highly valued in internal medicine team culture. Being a self-directed learner meant observing and absorbing supervisors' practice and being motivated to learn for oneself. • An internal medicine emphasis on self-directedness favoured a modelling approach to clinical education as opposed to the more coaching orientated approach prevalent in surgery. Here an IM consultant figures the modelling teaching approach of IM: 'You lead by example, and you hope that people will watch what you do and if you do it well they will derive a positive experience from it. I do not think doctors need to be spoon fed. You're relying upon self-directed learning' (H2T1 Consultant interview).

Methods: This was a secondary analysis of a large dataset, comprising field notes, participant interviews, images and video-recordings gathered in an ethnographic

Medical Education, 2022

LEARNING CULTURE

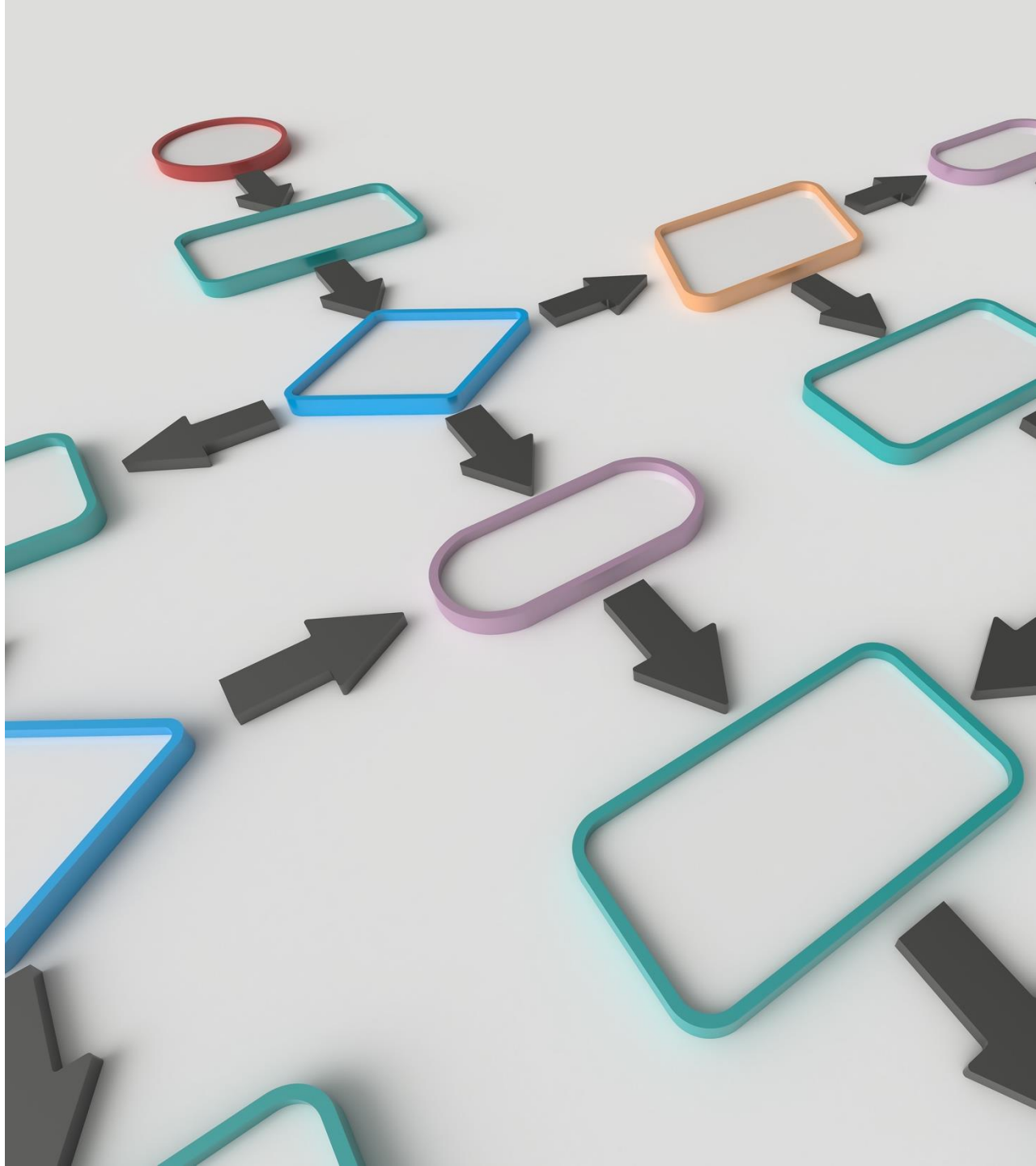
- Social-cultural learning theories
- Learning:
  - product of the individual as well the environment
- Learners become part of a professional community
  - gradually adopting practices, beliefs and values of that community
- In the clinical workplace:
  - performance is public
  - higher stakes of underperformance for identity and professional confidence
  - assessment of learning?
- Change: organizational commitment

Watling & Ginsburg, 2018, Med Educ

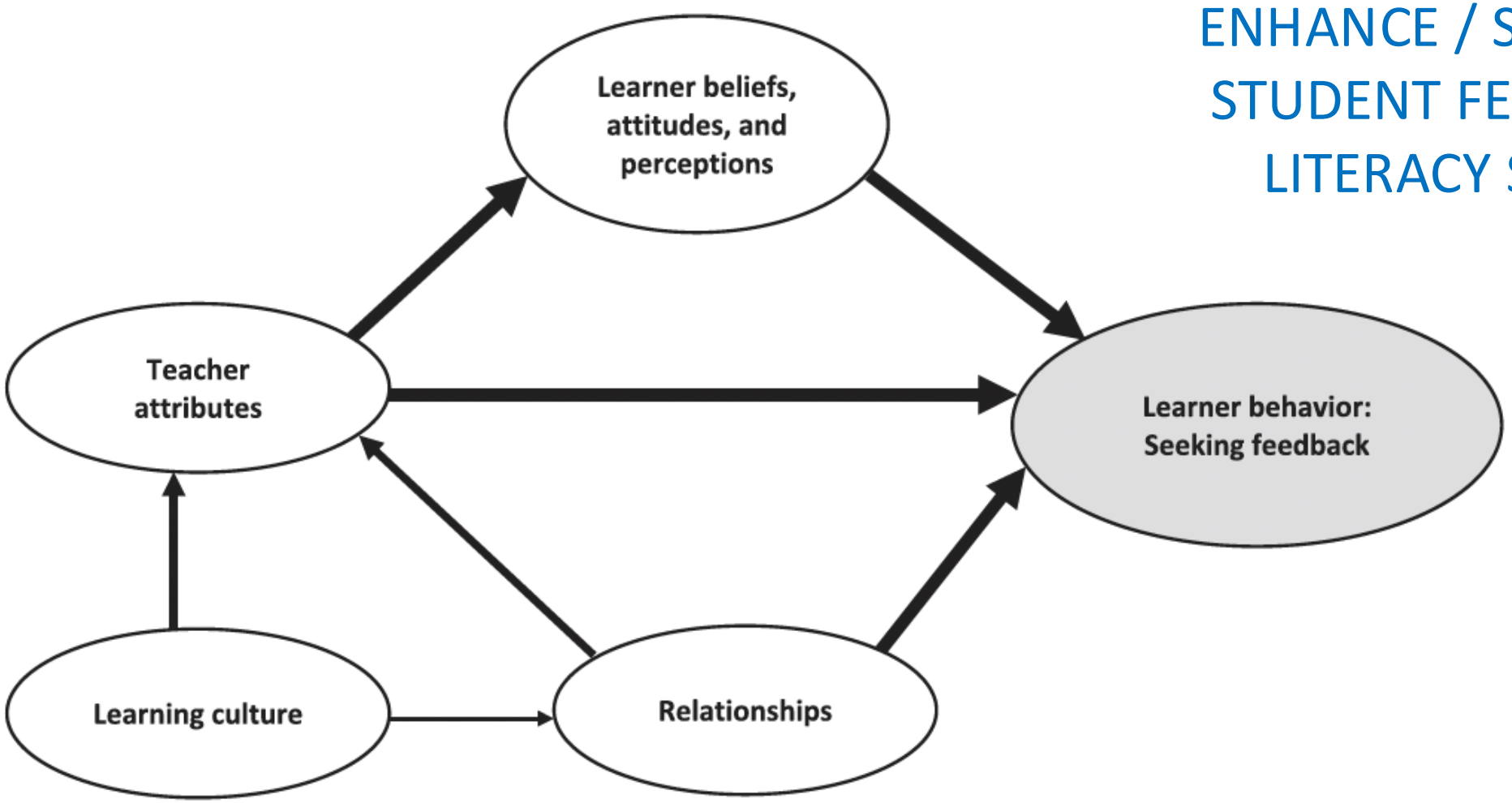
ALIGNMENT

- Feedback processes
- Relationships
- Learning culture

- Constructive alignment
  - link learning culture and learning from feedback (design)
  - feedback literacy
- Narrative feedback needs to designed into a culture of learning



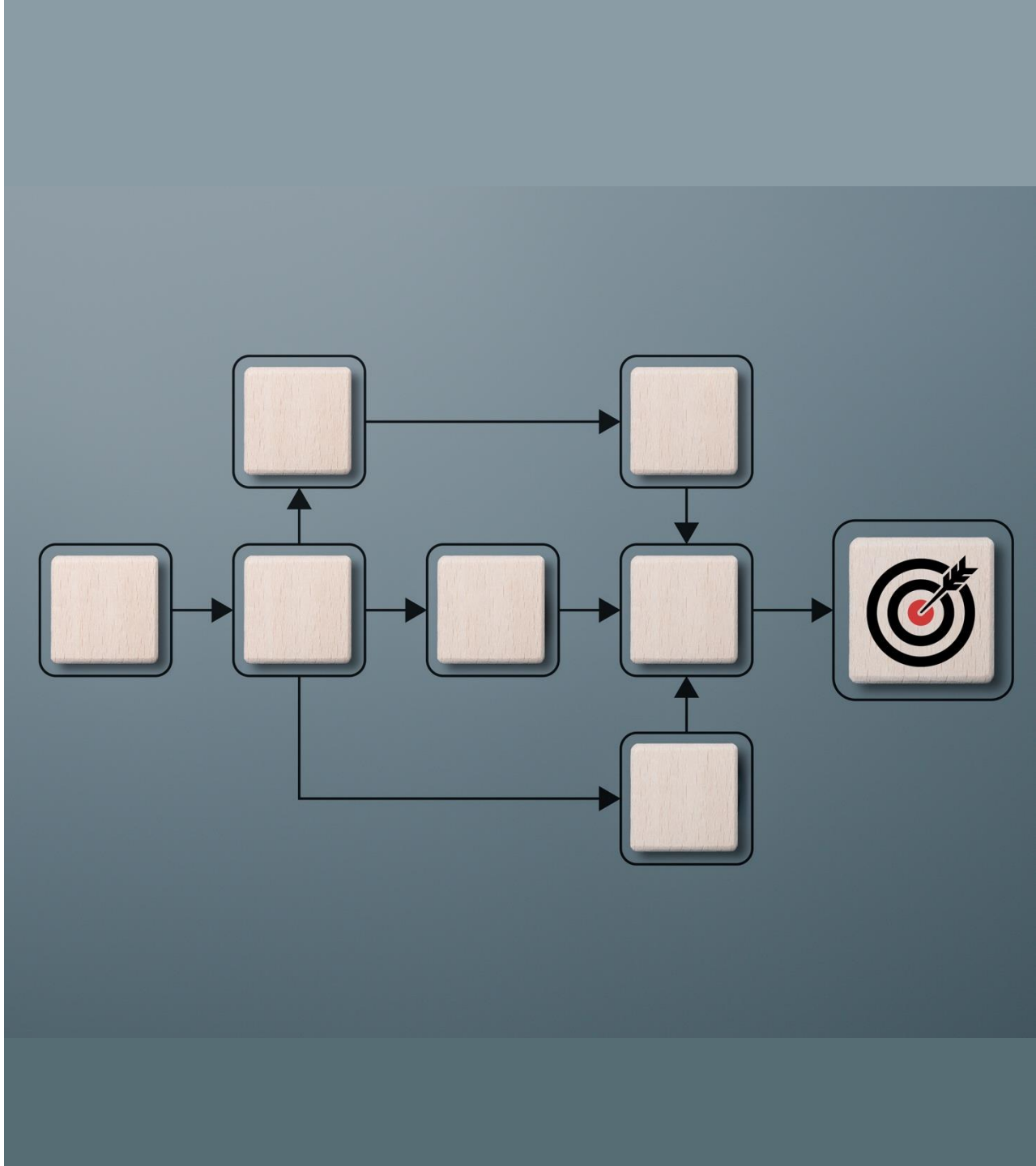
ENHANCE / SUPPORT STUDENT FEEDBACK LITERACY SKILLS



Bowen et al, Ac Med 2017, Medical Student Perceptions of Feedback and Feedback Behaviors Within the Context of the "Educational Alliance"

DESIGN FEEDBACK @WORKPLACE

- When?
- Who?
- How?
- Use for learning



BMC Medical Education

RESEARCH Open Access

Designing feedback processes in the workplace-based learning of undergraduate health professions education: a scoping review

Javiera Fuentes-Cimma[1,2*], Dominique Sluijsmans[3], Arnoldo Riquelme[4], Ignacio Villagran[1], Lorena Isbej[2,5], María Teresa Olivares-Labbe[6] and Sylvia Heeneman[7]

Abstract

Background Feedback processes are crucial for learning, guiding improvement, and enhancing performance. In workplace-based learning settings, diverse teaching and assessment activities are advocated to be designed and implemented, generating feedback that students use, with proper guidance, to close the gap between current and desired performance levels. Since productive feedback processes rely on observed information regarding a student's performance, it is imperative to establish structured feedback activities within undergraduate workplace-based learning settings. However, these settings are characterized by their unpredictable nature, which can either promote learning or present challenges in offering structured learning opportunities for students. This scoping review maps literature on how feedback processes are organised in undergraduate clinical workplace-based learning settings, providing insight into the design and use of feedback.

Methods A scoping review was conducted. Studies were identified from seven databases and ten relevant journals in medical education. The screening process was performed independently in duplicate with the support of the StArt program. Data were organized in a data chart and analyzed using thematic analysis. The feedback loop with a sociocultural perspective was used as a theoretical framework.

Results The search yielded 4,877 papers, and 61 were included in the review. Two themes were identified in the qualitative analysis: (1) The organization of the feedback processes in workplace-based learning settings, and (2) Sociocultural factors influencing the organization of feedback processes. The literature describes multiple teaching and assessment activities that generate feedback information. Most papers described experiences and perceptions of diverse teaching and assessment feedback activities. Few studies described how feedback processes improve performance. Sociocultural factors such as establishing a feedback culture, enabling stable and trustworthy relationships, and enhancing student feedback agency are crucial for productive feedback processes.

Table 5 Summary of design aspects that facilitate the organisation of feedback and enable each feedback loop phase

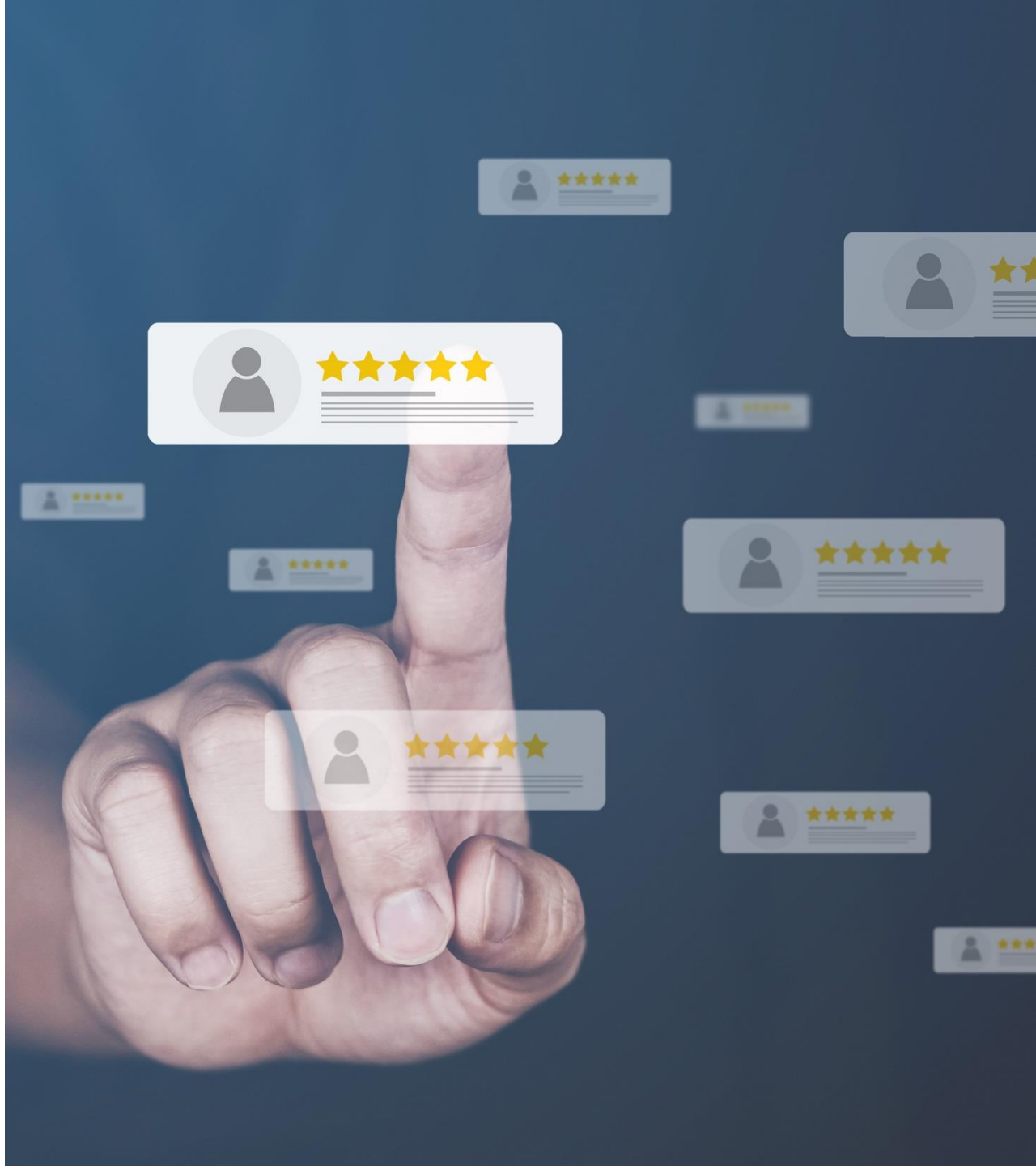
	Designing features of feedback processes to enable each feedback loop phase
Feedup	1. Use **direct observation** for clarification of learning goals [50] 2. Encourage **dialogic feedback** for the co-construction of goals [50] 3. Focus feedback on **students' learning needs and known performance standards** [30]
Feedback	4. Give students opportunities for **clinical practice** [35] 5. Enhance credible feedback through **direct observation** [33, 40, 46, 49, 84, 86] 6. Include **formative assessments** during authentic professional activities [46, 55] 7. Design **WBAs** during authentic tasks [39, 46, 56, 87]. The mini-CEX can provide feedback that improves students' clinical skills [58, 60] 8. Organise **self-assessments** before feedback encounters [46, 52] 9. Enhance **bedside-teaching encounters** to provide in-time feedback [74] 10. Use **questions and interpretation checks** to provide feedback on students´ performance [54], to clarify concepts and facilitate self-assessment [74] 11. Organise **oral case presentations** to improve communication skills [78] 12. Promote **benchmarking** of the same student over time (i.e., internal benchmarking), a peer, or formal guidance (i.e., external benchmarking) (e.g., a text or a guide of recommendations) [52]
Feedforward	13. Embed feedback in a two-way **conversation** [30] 14. Consider a follow-up on **direct observation** [46, 50] 15. Organise long-term use of **WBA** instruments [55] 16. Design low-stake **WBA** [31] 17. Enhance **self-assessments** when organising follow-up [68] 18. Organise formative **mini-CEX** with follow-up [39] 19. Use the **mini-CEX** as the structure for discussing the student's strengths and weaknesses and designing a written action plan [39, 80] 20. Include a **"next step" box** in the WBA instrument [44]

FEEDBACK@WORKFLOOR

- Protected time
- Faculty development
- Continuity of supervision
  - Longitudinal clerkships?
- Collect in portfolio
  - Apps/ forms
  - Format?

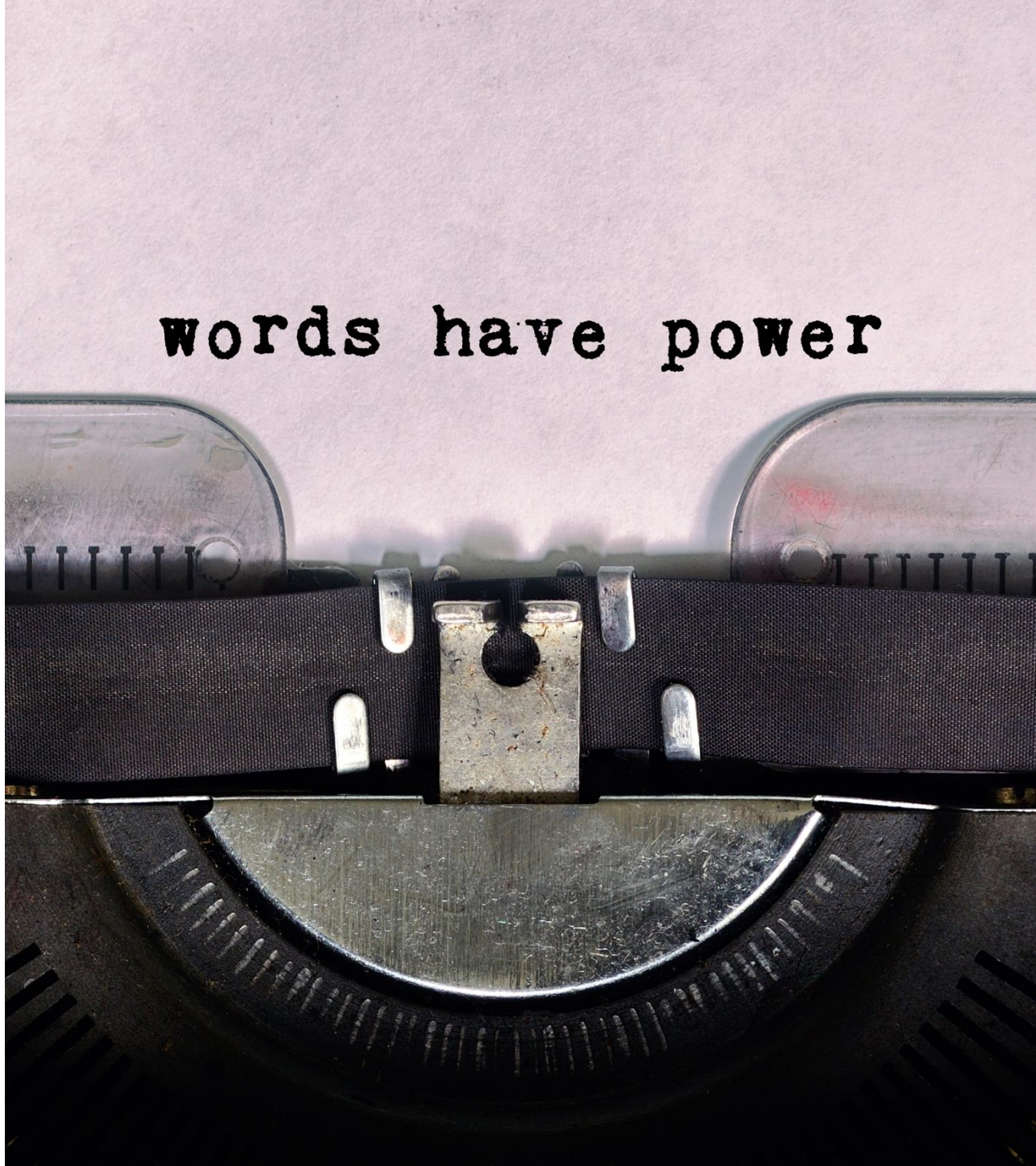
FEEDBACK – IN PORTFOLIOs

- Likert scales
- Rubrics?
- ’Catch’ (verbal) feedback conversations
- Narrative/ written feedback



NARRATIVE FEEDBACK

- Words/ narratives have potential to elaborate, to contextualize and to instruct *(Ginsberg et al Ac Med 2021)*
  - Need to be clear, careful design
- Validity evidence was presented (published research portfolio's) (Cook et al Ac Med 2016)



Medical Expert

MED EXP

1 Format; form - structure

1 2 3 4 5 n/a

2 Content

1 2 3 4 5 n/a

3 Discussion

1 2 3 4 5 n/a

Additional feedback/narrative comments with respect to Medical Expert:

Continue (strengths)

Do more or consider (area for development)

	very slow pace. Regular support form supervisor needed. Does not maintain contact with the health.	with the health.		discomfort / embarrassment in healths, maintains constant contact, instructs and explains well.
3.	**Establishing problem and Differential diagnosis**		**Observed / Not observed (circle)**	
1. Fails to note important findings. Is not able to interpret findings correctly. Problem list and differential diagnosis incoherent, lack good motivation. Too slow; a lot of support from supervisor needed.	2. Limited ability to distinguish relevant and irrelevant findings. Limited coherence in problem list and differential diagnosis incoherent, still insufficient motivation. Regular support	3. Can distinguish relevant findings. Able to interpret findings correctly. Pace not yet fast enough. Problem list and differential diagnosis related to complaint and findings, well-motivated.	4. Correct interpretation of relevant findings. Correct problem list and differential diagnosis without help. DD well-motivated. Support from supervisor only needed in complex problems.	5. Fast and correct interpretation of findings, also in complex problems. Notes what is important very quickly, provides clear arguments. Has good overview, is knowledgeable. Radiates self-confidence.

R E V I S I O N M A S T E R M E D I C I N E (new national medical training framework 2020)

Complexity patient problem
☐ High ☐ Middle ☐ Low
Supervision level
☐ Intensive In almost all areas (essential and non-essential) of the patient contact, adjustment/correction is needed. correction is necessary ☐ Substantial Additional questions/actions are required in essential components ☐ Limited Guidance is needed, but only on non-essential items ☐ None Independently and correctly performed patient contact

COMPETENCY MEDICAL EXPERT
Possible focal points for feedback: - Anamnesis: structure; relevance and patient-centeredness; completeness. - (Physical) diagnostic examination: relevance and problem-orientation; completeness; instructions to patient. - Problem definition and differential diagnosis: interpretation of findings; consistency and substantiation of clinical - reasoning; differential diagnosis. - Policy: relevance; completeness; substantiation; patient-centeredness.
What are the main strengths in this patient contact in terms of Medical Expert:
What could or should be better next time in terms of Medical Expert and how can this be realized:

DESIGN OF TOOLS/FEEDBACK FORMS

- Number of forms with Rubrics limited
  - Experiences: Likert scale 1-5, average of 4-4.5, and '3' becomes almost a signal
  - Revision: MSF and mentor-advice forms, forms for transfer Y1-2-3
  - Rubric (at the competency level) - elaborate and descriptive
- Setting mandatory amount of forms – consider
  - Agency for learners
  - Perception of hig(er) stake
  - Revision: less mandatory forms Observed pt contact ~1 form/ week
  - Also specified for other assignments etc
- Manage expectations staff and students
- Faculty development Staff
- Feedback literacy students

WORKPLACE LEARNING

Integral part of medical training

FEEDBACK @ WORKPLACE
WHEN FOCUS ON
..**FOR** LEARNING

DESIGN
(@program level, people, processes)


THANK YOU
FOR YOUR
ATTENTION
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