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Feedback That Helps Trainees Learn to Practice Without Supervision

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Abstract

Feedback pedagogies and research tend to focus on immediate corrective actions rather than learning for the longer term. This approach means that feedback may not support trainees who are managing complex, competing, and ambiguous practice situations, often with limited supervision. There is an opportunity to consider how feedback can help medical trainees sustain their own development into the future, including when they have completed formal training. This perspective explores how feedback pedagogies can facilitate medical trainees' abilities to develop challenging aspects of practice across multiple clinical environments to eventually practice without supervision. From a sociocultural perspective, clinical training takes place within a practice curriculum; each clinical environment offers varying opportunities, which the trainees may choose to engage with. This paper proposes feedback as an interpersonal process that helps trainees make sense of both formal training requirements and performance relevant information, including workplace cues such as patient outcomes or colleagues' comments, found within any practice curriculum. A significant pedagogic strategy may be to develop trainees' evaluative judgement or their capability to identify and appraise the qualities of good practice both in themselves and others. In this way, feedback processes may help trainees surmount complex situations and progressively gain independence from supervision.

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Complex and ambiguous situations provide significant challenges for medical trainees. Learning to manage these complex situations requires more than understanding a difficult patient problem; it requires sophisticated and dynamic capabilities like managing time or resolving collegial conflict. Trainees must develop these capabilities at the same time they are providing care and negotiating the intricacies of a clinical workplace. The dominant work-based feedback approaches that privilege direct observation and corrective prompts are not sufficient to meet this need. This perspective explores how feedback can be developed to support these challenging aspects of practice as trainees move through multiple clinical environments to eventually work without direct oversight.

Learning to provide safe and appropriate medical care without direct oversight is often called developing progressive independence. This term, however, is contested because much of health care training may be considered interdependent,[1] and health care practice itself is highly collaborative.[2] We therefore refer to this developmental process as learning to practice without supervision. It occurs as trainees chart their individual course through all the complexities of the local way "things are done around here." They learn and work at the same time,[3] enmeshed in the social, cultural, and historical practices of the workplace.[4–7]

Practice without supervision requires the ability to practice in a range of contexts; however, the workplace learning literature focuses on learning embedded within particular practice contexts[4,5] and tends not to consider preparation for future learning beyond the environment at hand. So how do we ensure that practitioners have the lifelong capabilities to assume responsibility for their own professional development once they are working without supervision? Drawing from Boud, we suggest this goal can be met if trainees learn to

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> . . . identify whether they have met whatever standards are appropriate for the task in hand and seek forms of feedback from their environment (from peers, other practitioners, from written and other sources) to enable them to undertake related learning more effectively.[8]

In other words, we all must be able to sustain high quality practice by identifying the information that lets us know how we need to improve.

Lifelong learning is one of the aims of competency-based medical education.[9] Competency-based education, particularly approaches based on entrustable professional activities (EPAs), organizes learning with milestones and/or ability to perform tasks, with the aim of taking students from novice to practice without supervision.[10] However, while these structures help trainees progress toward competency, they are predicated on prearranged rather than work-based curricula. These approaches therefore frequently invoke corrective feedback to guide the trainee in attaining a standard (as described by a competency) or in managing a discrete responsibility (such as an EPA). That is, by themselves, formal curricular structures do not directly address how to learn the sophisticated capabilities necessary to manage the complex and dynamic situations encountered in clinical practice.[10] Our contention is that to develop these lifelong skills, trainees must rely on both the workplace feedback that is naturally integrated into clinical environments as well as that associated with formal work-based assessments and competency milestones.

In this perspective, we frame workplace feedback as the key pedagogy to link learning within the immediate context with learning to manage complex and ambiguous challenges across multiple unsupervised workplaces. We conceptualize feedback as occurring within and beyond formal assessment processes. Moreover, as we outline, trainees themselves can be agentic and take responsibility for their own feedback processes.

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Key Ideas From the Literature

This paper introduces 3 key notions from the literature to explore how feedback within clinical environments can facilitate medical trainees' abilities to work and learn without supervision. First, we explore workplace learning and the intersections between clinical practice and trainee agency. Second, we review notions of feedback from the last decade. Third, we highlight the need for learners to make evaluative judgements about the quality of practice. We bring these 3 ideas together to consider how feedback that builds evaluative judgement might operate within the sociocultural landscape of clinical practice. Our suggestions may assist clinical supervisors in supporting trainees in managing the complex, ambiguous professional challenges that must be surmounted for trainees to work effectively without formal supervision. Finally, we present an agenda for future research.

Workplace learning: Clinical practice and trainee agency

Workplace learning theories emphasize the influence of the working environment upon learner development. From one perspective, novices embark on a trajectory of learning the practices of the particular work context, moving from the periphery to becoming old timers.[4,5] Some authors emphasize the role of learners, both as drivers of their own learning and as agents of change.[3,11,12] Billett's theory of relational interdependence[3,12] centers on this interaction between social practice and individual learning:

> Learning throughout working life . . . can be viewed as a negotiated, but
> transformative journey as individuals selectively negotiate their engagement in
> work. . . . So, individual workers are not mere and hapless hostages to the social
> experience. Rather, they are pressed to actively engage with it, even if only to
> rebuff it. It is these interplays that make up individuals' learning as they construe

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what they experience and construct a response that has legacies for both the

individual (i.e. learning) and the workplace (remaking of practices).[3]

In other words, the workplace affords opportunities for practice, and learners intentionally direct

themselves toward these opportunities. In this way, both the learner and the practice change and

develop.

Workplace practices are remarkably powerful and persistent.[13] Medical trainees, like other health

care workers, are strongly influenced by these practices; they tend to align with the way things

are done within a particular ward or community setting. However, as relational interdependence

suggests, practices can also evolve in response to a learner's "interests, identities and

subjectivities."[14] For example, trainees can eschew "the way things are done around here" by

drawing from new evidence or approaches from another setting that they think are superior.

Others in the workplace may then adapt to newcomers, rather than the other way around. Thus, a

workplace responds to new practices the learner presents, and the learner develops while learning

the workplace practices.

Billett coined the phrase "practice curriculum"[15] to represent the scope of workplace learning

activities. Billett[16] suggests that the workplace facilitator's role primarily concerns sequencing

tasks and providing heuristics or stories. For example, junior doctors are directed to easier tasks,

which then scaffold entry into more complex activities. Senior doctors also provide aphorisms

and stories as is well recorded within sociological studies of medical practice.[17] The practice

curriculum, as theorized by Billett, does not highlight the term "feedback"; however, as we

explore next, feedback and its affordances offer valuable pedagogical tools.

Feedback and performance information

We now outline a range of conversations around feedback and reflect on how they intersect with

the notion of learning as a sociocultural phenomenon. Feedback has become a somewhat

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contested term in the last decade. Feedback has traditionally been seen as the comments a teacher

gives learners about their performance. Van der Ridder et al define feedback as "specific

information about the comparison between a trainee's observed performance and a standard,

given with the intent to improve the trainee's performance."[18] This definition states feedback is

information. However, in response to concerns that such a definition does not take any account

of what the trainee does with this information,[19] many publications now define feedback

differently—as a learner's meaning-making process.[19,20] Ajjawi and Regehr[21] suggest that

effective feedback is a "dynamic and co-constructive interaction in the context of a safe and

mutually respectful relationship for the purpose of challenging a learner's (and educator's) ways

of thinking, acting or being to support growth." Here feedback is reconceptualized from

information that is given by the teacher to interactions that support the learner's sense-making.

This definition suggests the following: shared ways of making meaning (co-construction), shared

interpersonal exchanges (relationships), and the shared purpose of development (growth). This

definition takes feedback beyond "corrections" directed by the teacher to a relationship-based

interaction in which both learner and teacher contribute.

If we define feedback as an interpersonal process, then it is complemented by the notion of

performance relevant information (PRI).[22] PRI is defined as follows:

> . . . all potential sources of information for learning arising from the interpretation
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> of one's performance and interaction in the workplace. Among these are patient
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> outcomes after treatment; the performance of role models; evaluations and
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> assessments; responses of colleagues and peers in communication with you. . . .[22]

Feedback, in the interpersonal sense, is often concerned with helping trainees work with PRI.

Moreover, PRI can sometimes (but not always) include information from an expert about a

learner's performance, what is traditionally called feedback.[23]

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Feedback and PRI do not occur in a vacuum. A trainee's relationship with clinical supervisors takes place within preexisting power structures, particularly with respect to trainees' immediate clinical supervisors who both direct their work and have greater expertise than the trainees. Sometimes, a particular workplace (or supervisor) may provide very limited opportunities for meaningful feedback conversations or may even restrict trainee access to certain types of PRI. Trainees may also find themselves working in an environment that requires practice without supervision even though they are still in training. Trainees have to negotiate these constraints to satisfy their needs to both work and learn. We suggest that by equipping trainees appropriately to manage their own learning, they will be able to negotiate environments where there is limited feedback. This is where the notion of evaluative judgement becomes very useful.

Evaluative judgement: A dynamic understanding of quality in practice

As trainees move through workplace curricula toward practicing without supervision, they are using feedback and PRI to develop their own interpretations of what good practice looks like. A trainee's capacity to identify quality of work is what we, and others, refer to as "evaluative judgement," which is "the capability to make judgements about the quality of work of self and others."[24] Practitioners use evaluative judgement to determine if their practice is at the necessary standard and whether they need to invest in further learning. It is a key part, therefore, of the self-monitoring required for working without supervision.

There are 2 components to evaluative judgement: (1) understanding quality and (2) appraising work.[24] We explore how each is conceptualized within the sociocultural frame of workplace learning. Understanding quality concerns how medical trainees come to grips with the expert practice required to work as a doctor. However, notions of an unsafe or an exceptional practitioner shift over time and in different situations; for example, many medical practices from the last century are no longer appropriate today. Therefore, trainees must also understand the

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dynamic nature of quality; it changes over time and varies across settings and patient circumstances. Trainees, like all doctors, must continually recalibrate their notion of what constitutes quality practice, over time and across different contexts. They do so by looking to both external standards and local practices.[25] However, practitioners do not simply absorb professional values and standards like a sponge.[26] Rather, as suggested by relational interdependence, they construct their own sense about how to enact quality and, in so doing, also shift how these values or standards play out in unique practice environments. For example, medical practitioners must interpret clinical guidelines to enact them in relation to a particular patient in a particular clinical setting. In this way, doctors take account of patient circumstances, patient preferences, or available resources. Therefore, when developing their evaluative judgement with respect to a particular situation, doctors come to know more than the text of the guidelines; they also learn what quality looks like in different practice contexts.

In addition to understanding what quality is, doctors develop their evaluative judgement through appraising work, both their own and that of their colleagues. In so doing, they need to know what workplace cues indicate quality practice. Practitioners calibrate their performance through PRI, such as patient responses, patient outcomes, and collegial cues or comment. They complement this information with feedback discussions about their own and others' performances. We suggest that, in this way, doctors and their workplaces continually develop notions of quality together.

In this first section of the paper, we have covered a considerable amount of territory. To recap, we have explored how the workplace forms a "practice curriculum," distinguished between the interrelational nature of feedback and PRI, and described how evaluative judgement is a key part of working without supervision. This next section describes how these various ideas intersect and the consequent implications for medical training in clinical environments.

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Feedback Interactions That Enable Working Without Supervision

It is worth returning to our starting point: trainees learning to manage complex, ambiguous, or novel situations. We have proposed that feedback focused on developing evaluative judgement may be a means for trainees both to develop these capabilities and also to continue to learn without formal supervision. How might this happen practically?

A useful pedagogical technique is to explicitly discuss good practice as part of orientation to a particular clinical environment. Clinical supervisors can frame a placement by exploring, guiding, and debating how quality is generally constituted in workplaces. Quality is a tacit notion and, therefore, is almost impossible to explicitly articulate; heuristics and narratives can build a rich notion of what good practice might be. Conversations around these can allow for joint meaning-making, particularly when the supervisor remains open to the trainee's views and experiences. After all, as many supervisors state, working with trainees keeps their own practice fresh.[27]

Developing evaluative judgement also requires the opportunity to appraise one's own and others' practices. The objective is not to revisit self-assessment or evaluate like an expert assessor but to become aware of (and seek out) the relevant cues and/or PRI that indicate good practice in particular situations. Good practice could be reviewing patient responses and outcomes, or it might be identifying when information about one's own practice is required. Formal curricular materials can be useful here; competency frameworks, work-based assessments, or clinical guidelines can provide the foundation for discussing standards. Trainees therefore can come to recognize how their own work aligns with codified notions of quality in a nuanced way. Supervisory feedback conversations about specific performances offer arguably the richest opportunities to develop evaluative judgement. Feedback conversations, including those prompted by workplace-based assessment, can reveal the tacit standards of what constitutes good

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professional practice. These conversations tend to be corrective. However, when reviewing a specific performance either informally or formally, through a work-based assessment, both parties can discuss the qualities of the work. This type of discussion can connect the present experience to stories of past work, which provide exemplars and salutary failures, to inform improvement. These conversations are different from those of a purely collegial relationship; the supervisor is more powerful and more knowledgeable than the trainee. Therefore, supervisors need to lead these discussions by encouraging appraisal, offering their own views and revealing how and why they may still struggle with making their own evaluative judgements.[28] These can be delicate conversations that require trust, vulnerability, and interpersonal connection. Forming longitudinal relationships with key mentors that span more than a few encounters may be particularly important.

Feedback therefore offers more than correction. Supervisors can help guide trainees in understanding what appropriate PRI is and how they might collect it, judge it, and calibrate it. They can provide heuristics and experiences about how to manage PRI in practice. Together with trainees, they can mutually agree on what quality might look like in particular clinical situations. This makes for a very different approach to feedback from the traditional model. Guided conversations help learners assess if their practice was appropriate to the particular circumstances. This approach highlights the role of PRI and prompts learners to challenge their notions of quality and how to judge those notions. It also acknowledges the situated nature of learning and the place of formal documents such as guidelines, curriculum frameworks, and work-based assessment forms. This type of feedback can develop an understanding of practices that are difficult to observe and quantify, such as professionalism. It provides a means to support trainees in complex areas of practice that take years to learn, such as managing time, uncertainty,

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collegial conflict, or self-care. This approach to feedback is about coming to understand how to know if one's practice is sufficient.

These conversations are not necessarily common in medical practice. We suggest that discussions about what makes for quality could be a more explicit part of the practice curriculum: Overt discussions of what constitutes quality could be integrated into all parts of workplace practice, not just into formal training. Feedback conversations could focus on differences in evaluative judgement, not with a perspective of the expert always being right, but with a genuine sense of inquiry into and co-construction of what the practice demands and what the individuals bring to the practice, given the particularities of the situation. These supervisory conversations form part of the sociohistorical legacy of each individual.[14] Supervisors and trainees will take the legacy of their feedback conversations into their future work. Through these acts of co-construction, practice itself can be remade.

Future Research

This paper has charted a course through various conceptions of feedback, PRI, and evaluative judgement and situated them within a sociocultural perspective on workplace learning. Too little is known about how trainees learn to manage ambiguous and complex situations or how the practice curriculum already develops trainees' evaluative judgement. We suggest a series of research programs might usefully frame future endeavors. First, it would be valuable to understand what trainees regard as challenging aspects of professional expertise that take years to develop, how they come to learn what quality practice looks like in these situations, and how these notions of quality shift over time. Next, it is critical to know how trainees are currently building evaluative judgements of their practice into the workplace. Questions include how do current modes of feedback support building these judgements, and how do trainees think about

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and use PRI? Finally, it is worth considering how faculty development could help supervisors with an approach to feedback that develops trainees' evaluative judgement.

Conclusions

Traditional views of feedback focus on short moments of learning rather than on development across a trajectory that spans months and years. However, learning to work without supervision is a progressive process that involves learning over extended periods to deal with complex problems. Feedback pedagogies that promote evaluative judgement in a rich, dynamic practice environment may provide a means to support trainees through the most complex, ambiguous, and dynamic challenges—and provide them with strong foundations for future practice.

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