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Broadening the Scope of Feedback to Promote Its Relevance to Workplace Learning

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Abstract

The common goal in medical education is to support the health care workforce, both present and future, in becoming and remaining competent professionals. Both during and after medical training, learning takes place in the clinical workplace. Yet, how feedback is defined in medical education and how it is practiced in clinical training situations, combined with a research focus on "what works," limits its potential for learning. This article explores the theoretical background of learning in interaction and current trends in medical education to broaden the scope of feedback and promote its relevance to workplace learning.

A new, wider perspective is outlined in which feedback could be redefined as "performance-relevant information" (PRI). PRI can incorporate all information that is deemed relevant to the learner, drawn from interaction in workplace learning and one's interpretation of performance in the clinical workplace. This information can, for example, come from the evaluation of patient outcomes after treatment; observations of role models' performance; evaluations and assessments; exploring feelings of failure or success; and responses of colleagues and peers.

PRI draws attention to learning opportunities that better fit the highly social learning of clinical workplaces and current trends in medical education. It supports the interpretation of individual or team performance in terms of relevance to learning. This allows for a comprehensive way of viewing and stimulating workplace learning and the performance of professionals, providing an opportunity to create lifelong learning strategies and potentially improving the care of patients.

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Clinical situations provide essential real-life learning opportunities for trainees that enable them to become competent professionals. This process already starts during undergraduate medical training and then becomes the major component of graduate education. The clinical context finally progresses to being the primary setting in which clinicians are expected to continue their medical education as lifelong learners. The existence of numerous evaluation tools and assessment systems supports the notion that performance feedback is part of workplace learning.[1–3] However, aligning learning through work with workplace-based assessment is a challenge.[4–6] The disconnect between feedback and learning implies that there are learning opportunities that are now being missed—despite the knowledge and wealth of research on feedback. Regarding feedback, we would argue that the rather "technical" approach toward the use of feedback in medical education should be broadened to better fit the complex reality of clinical practice. As an example, a review of the literature on feedback in clinical education from 2008 described 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."[7] This definition demonstrates the rather technical way that feedback has been applied in medical education. It emphasizes the use of formal and explicit feedback, limiting the potential use of information for learning that might naturally or more implicitly emerge from interaction in the workplace. A more recent meta-review by the same authors showed that most research regarding feedback focuses on instrumental aspects, such as how to give feedback effectively and which aspects of the message (i.e., source, form, content, timing) influence the outcome.[8] The pervading assumption seems to be that "giving good feedback" will lead to learning and performance improvement. This assumption does not align well with a more complex understanding of learning and behavioral change in workplaces.[9–13] This narrow definition of feedback therefore has limited value in supporting learning through work. Many research publications and recent initiatives in medical education emphasize the influence of social interactions and cultural aspects on feedback in workplace learning.[14–18] For example, Telio and colleagues[13] provided a rationale and framework to reconceptualize feedback in medical education. In short, the historical framing of feedback as a unidirectional content-delivery process has not yielded the intended effective feedback processes. The role of context and relationship in the feedback process has led to the "educational alliance" in which a supportive educational relationship is a central concept. Another example is the attention paid to programmatic assessments and the implementation of entrusted professional activities.[19–21] These examples suggest a trend in medical education that aligns with the philosophical and theoretical transitions that appear to shift from a postpositivist perspective on medical

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education (technical, outcome based) to a broader sociocultural view where context, individuals, and learning are intertwined. Nevertheless, when honing in on feedback itself, the "technical" approach is still dominant, and the shift toward a broader perspective on the context and relationship in the feedback process calls for a broadening of the scope of feedback itself. Therefore, rather than broaden the definition of feedback or replace the practice of giving and receiving feedback in workplace learning, we explore a broader scope for feedback.

We can say, then, that the way feedback is defined in medical education needs realignment with the highly complex, social learning processes of the workplace. To achieve that, we aim to broaden the scope of feedback, and explore the idea of including in this broader scope all potential sources of information for learners including implicit sources for learning as well as more explicit sources. The broader scope could deemphasize feedback as a singular key means to effect learning, decrease the unintended outcomes of the commonly used definition of feedback, and support workplace learning in line with current developments in our understanding of the feedback and learning processes in the workplace.

Performance-Relevant Information as a Broader Scope for Feedback

A broader scope for feedback should incorporate all information that affects learning in the workplace related to one's performance within that context. Although we could have broadened the definition of feedback, it would continue to be the concept of "giving and receiving" information. With feedback, the judgment of what is given to you as a learner lies primarily in the perception of others. With the concept of performance-relevant information (PRI), this perspective shifts to appreciate the importance of what a learner, with his/her perception, emotions, and experiences considers relevant, for his/her learning. This is a new approach and is very different from the perspective in which an observer provides his/her vision of what was observed. To reflect the numerous learning opportunities that are available to learners in the workplace setting, we first chose "relevant information" as a concept to broaden our scope. *Relevant information* is a more neutral term to describe facts or details that directly relate to the learner, whereas *feedback* encapsulates a judgment about how successful or useful something is. Because we aimed to address where the relevant information could be derived from, we added "performance," to yield the concept of PRI. We chose performance because the performance of learners in the workplace is an outcome of interaction, relationships between learner and context, knowledge, ideas, feelings, previous experiences, cultural norms, and so forth. In short, PRI as a concept focuses on how learners interpret their performance in the workplace in terms of what is relevant information for their learning. This notion of PRI includes all potential sources of information for learning arising from the interpretation of one's performance and interaction in the workplace. Among these are patient outcomes after treatment; the performance of role models; evaluations and assessments; responses of colleagues and peers in communication with you; and exploring feelings of failure or great successes. Workplace learning is based on an interpretation of relevant information for performance arising from social interaction and experiences in the workplace.[10,22,23] Social interaction influences individual learning because the interaction determines what the individual encounters as input for learning.[22] This creates a multitude of possible learning experiences for different learners.[10,23] As noted previously, medical education literature focuses increasingly on the influence of social interactions and cultural aspects on feedback in workplace learning.[14–18] The concept of PRI matches our understanding of the complexity of workplace learning, as it is much broader compared with feedback, and also includes active engagement with experiences in the workplace.

PRI focuses on how learners interpret their performance in the workplace in terms of what is relevant information for their learning. It includes all categories or types of information, ranging from the more explicit assessment feedback to the more implicit interpretation of workplace experiences, emotions, or patient outcomes.

Opportunities Emerging From the New Scope of PRI

Workplace learning

The definition of feedback in its primary association with performance improvement does not include aspects of growth or learning that are less visible, let alone measurable.[7] These include, for example, growth as a human being, deeper insights into oneself or others, awareness of workplace processes or cultural aspects, experiencing and identifying ways to deal with difficult emotions, or gaining confidence. All the previous examples could occur as instances of learning from PRI in the workplace, without necessarily resulting in altering one's practice routines. These less visible outcomes are, however, part of workplace learning and could play an important role in understanding how people learn individually and collectively in the workplace.[10] The first phase of the experiences–trajectories–reifications model explains that individuals create personal experiences through their interpretations of situations in the workplace. As the broader scope of PRI creates room to include learning that may not result in short-term observable performance change, it could also elucidate how individuals select and make sense of information that is embedded in the workplace. This can add to our understanding of how interpretations of situations in the workplace result in personal experiences. Furthermore, because PRI results from the interaction between learners and the workplace,[22,23] the central role of interaction may lead to increased attention being paid to the quality of the interaction, also suggested by Telio and colleagues[13] as an "educational alliance." Feeling safe within the social environment is also seen to support learners and prevent "adverse effects"—for example, shame and fear of failure.[11]

Lifelong learning

There is a tendency to focus on "what works" in medical education—for example, seeking aspects of residency training that determine the training of good specialist doctors and, even more, the outcome of high quality of care.[24,25] Although this effort makes sense in the way we value health care, the emphasis on organizing an educational system that will produce the desired outcomes efficiently and effectively also has a

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weakness. It distracts attention from the importance of the quality of the relation and interaction that are vital for workplace learning.[13,14] The focus on PRI and interaction between learners and their context that accommodates learning emphasizes process rather than product. This can also be highly relevant in lifelong learning, where the process of learning remains relevant throughout the years,[26] whereas the product of the learning process has a constantly elapsing expiration date.

Making mistakes

PRI holds another potential benefit for the health care system and for cultural aspects of the workplace and, hence, workplace learning. Although making mistakes is part of being human, the stakes are high in medical training situations in which there is limited room for trial and error. Shame, guilt, or fear of mistakes or failure are difficult to deal with. Very often, learners and teachers alike can perceive feedback as a failure too. Feelings of shame or guilt require an initiative to interact with others to share and discuss these feelings.[11,27] Therefore, it might be easier to overcome negative emotions when focusing on PRI and also to discuss these with others, as the focus is drawn to making sense of what happened and what is relevant in terms of performance, rather than "what did you do wrong."

Concluding Remarks

The broader scope of feedback, as we discuss and set out in this article, leads to the introduction of PRI as a way to support workplace learning. PRI as a concept starts with what learners interpret as relevant information about their performance, whereas in the feedback definition, the feedback is exchanged from an external source with the intention to change behavior. There are different questions and implications that arise from the concept of PRI. Because PRI also draws attention toward more implicit sources of learning, an important question is how best to support learning from PRI in daily practice. The "educational alliance" described by Telio et al[13] presents a framework that reorients the discussion of the feedback process from effective delivery and acceptance toward a negotiation in the environment of a supportive educational relationship. As PRI presents a reconceptualization of *feedback* in workplace learning, the educational alliance framework could support learning from PRI as it provides a framework to reconceptualize the *feedback process* in medical education. Voyer et al[15] found evidence of the value of the relationship between learner and supervisor in workplace learning in a pilot program. Their findings showed that residents perceived longitudinal relationships with a faculty member and feedback such as a conversation between faculty member and learner as elements of the program that resulted in benefits in their ways of working, learning, and feeling. In summary, this points out that the relationship or educational alliance can be considered a vital aspect in workplace learning, in which the concept of PRI fits well as it draws attention toward relevant information that is derived from interaction in the workplace. Furthermore, we explored how PRI would relate to workplace learning within the context of the competency frameworks that are globally implemented and important in guiding medical education. Van den Eertwegh et al[28] investigated residents' communication learning processes in the workplace and identified a five-phase model to describe the learning processes. The first phase is confrontation with (un) desired behavior or clinical outcomes. PRI could add to this first phase by shedding light on all sources for learning in the workplace—for example, also the implicit or patient-care related sources.

In summary, we propose how PRI promotes workplace learning, how it can benefit quality health care, and how it may influence medical education research. PRI supports and stimulates learners and those around them to find meaning and learning opportunities when reflecting on their performance. It fits with conceptions of learning as a social interaction between people and context. PRI broadens the scope of feedback in a way that will explicitly expand learning opportunities in medical education beyond the use of assessment information. Moreover, it acknowledges the complexity of the workplace context, taking into account aspects that are not easily measurable or talked about (e.g., feelings, trust, lying awake at night). PRI supports reflection by focusing on seeking out which information is relevant to you and why. It recognizes interaction as one of the processes to gather PRI, thus contributing to learning through social interaction. PRI may prevent harmful or adverse effects as the focus is on making sense of what happened and what is relevant in terms of learning. Finally, PRI matches our communities' broadening scope on learning and assessment in the workplace.

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