Twelve tips for developing feedback literacy in health professions learners

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Abstract

Despite feedback being widely-used by health professions educators as a tool to develop clinical competencies, strategies to guide its successful implementation remain limited. In addition, health professions learners are often dissatisfied with the quality and/or volume of feedback they receive. Efforts to better engage learners in feedback processes has resulted in the development of a number of theoretical frameworks to guide educators, one being feedback literacy. Feedback literacy can be conceptualised as a learner's ability to recognise, comprehend, generate and take action on feedback they encounter during their learning to aid health professions learners' clinical competency development. Here, we draw on both a conceptual framework of feedback literacy and other contemporary feedback literature to provide twelve practical tips by which feedback literacy can be developed in health professions learners.

Introduction

Contemporary perspectives of feedback suggest it is '…a process through which learners make sense of information from various sources and use it to enhance their work or learning strategies' (Carless and Boud 2018, p. 1315). Within health professions education, feedback is widely-used to augment the development of clinical expertise (Johnson et al. 2016) and can take verbal, written, or automated forms (Johnson et al. 2020b). Despite health professions educators agreeing that feedback largely serves this developmental purpose, there remains limited quality evidence supporting this notion (Johnson et al. 2016; Johnson et al. 2020b).

Feedback in health professions education has most often been delivered through one-way, educator-centered approaches (Noble et al. 2020). Seemingly intertwined with this traditional paradigm is the engrained, and often underreported, health professions learner dissatisfaction with the provision of feedback (Bing-You et al. 2017). Specifically, learners tend to disapprove of its informal, ad hoc and inconsistent nature (Van De Ridder et al. 2008), which can be further compounded by the high-pressure of clinical placement (Noble et al. 2020). Here lies the difficulty in facilitating effective feedback processes and strategies in cohorts of health professions learners—from learners in the early stage of their program to the clinical learning environment (CLE) setting—how to overcome feedback dissatisfaction to better engage learners in the feedback process, whilst not placing excessive burden upon educators?

Feedback literacy is an emerging concept in higher education (Carless and Boud 2018; Han and Xu 2019; Chong 2020) and may have utility in negating the limitations of feedback often reported in health professions learners (Noble et al. 2020). Feedback literacy is conceptualised as a learners' ability to recognise, understand, generate and take action on

feedback to improve their work or learning (Carless and Boud 2018). These authors propose a four-pillar framework for feedback literacy consisting of: 1. *Appreciating Feedback*; 2. *Making Judgements*; 3. *Managing Affect*; and 4. *Taking Action* (Figure 1). To expand on these concepts, *appreciating feedback* refers to the learner being able to conceptualise the value of feedback, and understand the importance of taking a central role in its process. *Making judgments* refers to the decision-making ability of students to judge the quality of both their work, and the work of others, whilst *managing affect* deals with the emotive responses to feedback, in particular negative emotions to critical feedback. Lastly, *taking action* denotes the subsequent action the learners take in response to the feedback they have received.

There is an emerging empirical research base describing the benefits of developing health professional learner feedback literacy as a strategy to increase their engagement with the feedback process (Noble et al. 2020), with the goal of improving clinical performance and patient care. We draw on the conceptual framing of feedback literacy described by Carless and Boud (2018), in addition to related contemporary literature, to provide twelve evidence-informed, practical strategies with which a wide-range of health professions educators can use to foster the development of learner feedback.

Tip 1: Guide learners in a safe learning environment

In contemporary feedback pedagogy, it is incumbent on educators to guide their learners to navigate and attain the knowledge, attributes and skills required for the development of feedback literacy (Carless and Boud 2018). Upon entering higher education, learners often do not possess the skills, nor the inclination to participate meaningfully in the feedback process (Carless and Boud 2018). When initially guiding learners through the feedback process,

educators are encouraged to consider the four elements of feedback literacy proposed by Carless and Boud (2018) in conjunction with their learning environment. A learning environment that fosters the development of feedback literacy relies on the development of a relationship between the learner and educator based on respect, trust and honesty—in other words, one that is psychologically safe (Sutton 2012; Johnson et al. 2016; Johnson et al. 2020a). The extent to which learners feel psychosocially safe when engaging in feedback-related activities, is strongly influenced by their sense of connection with and respect for the educator (Johnson et al. 2020a).

Educators can begin to develop a psychologically safe feedback environment by explaining the importance and goals of feedback (i.e. performance improvement for patient care), providing feedback that is based on direct observations of a learner's work, and encouraging two-way dialogue between an educator and learner (Johnson et al. 2016; Johnson et al. 2020a). Educators should also demonstrate behaviours that respect, empathise with, and respond to learner's emotive responses to feedback (Johnson et al. 2020a). Once the foundations for the learning environment have been established, educators should aim to guide their learners in developing progressive feedback autonomy, by shifting the initiation of feedback from the educator to the learner, and supporting the learner's intrinsic motivation by providing actionable and constructive suggestions (Johnson et al. 2016). Ultimately, this should facilitate development of feedback literacy in parallel with their key clinical skills.

Tip 2: Develop the learner's active role in the feedback process

Learner agency—the learner taking an active role in their education—is a central tenet of all contemporary feedback research and approaches, and is key to the development of feedback

literacy (Molloy et al. 2019). If a learner is to comprehend the value of feedback to their learning, they should be encouraged to recognise their central and active role within it (Carless and Boud 2018). Despite its importance, research indicates that for some health professions learners, the concept of learner-centered feedback is completely foreign (Noble et al. 2020). In their framework for feedback literacy, Molloy et al. (2019) identify the importance of learners taking an active role in the feedback process and eliciting information from others to improve their learning. Hence, to facilitate the development of learner agency and greater feedback seeking behaviour, educators should guide learners to: 1. Seek feedback proactively, and avoid passivity in the feedback process; 2. Understand that feedback can come from varied sources and media; and 3. Start and engage in constructive dialogue regarding their desired learning outcomes (Molloy et al. 2019). These strategies can be integrated into assessment items and learning activities, form the basis of extracurricular learning modules and seminars, or be a part of routine class dialogue and collaboration between the educator and learner. Ultimately, developing learner agency should improve engagement with feedback, assist in fostering feedback literacy, and improved clinical performance and work quality.

Tip 3: Foster an appreciation for the intrinsic value of feedback

To truly allow feedback to aid in the development in their educational and work skills, learners must first appreciate its intrinsic value (Carless and Boud 2018). In health professions education, feedback is utilised to progressively improve performance towards meeting competencies for safe and effective patient care. This rationale is often the focus when describing feedback's propose and value (Noble et al. 2020). However, for many learners in the early years of their study program, these end-stage outcomes are often too

distant to be relevant and meaningful (Noble et al. 2020). Therefore, educators should alter their strategies when developing an early-year learner's appreciation of the value of feedback. This could be done by breaking down larger clinical competency goals, into smaller and more appropriate-level skill acquisition goals, then matching feedback to each of these sub-competencies. As learners develop both their clinical competencies and feedback literacy, the messaging from the educator around the intrinsic value of feedback should then become focused on the learner's future professional work. By progressively shifting the focus and goals of feedback, the learners' feedback autonomy should develop in parallel, and form a key part of their future clinical skill education and learning more broadly.

Tip 4: Enhance evaluative judgement

Evaluative judgement—the ability to judge the quality of one's own work and that of others—is an important component in the development of feedback literacy (Carless and Boud 2018). Learners are unlikely to enter their training with an innate ability to make effective judgements of their own work and that of others, therefore these judgements should initially be facilitated by educators (Noble et al. 2020). Once the early concepts of evaluative judgement are introduced and contextualized, self-assessment can be an effective way of developing this capability (Tai et al. 2018). In this setting, self-assessment should not be outcome focused, whereby there is a focus on performance measures, such as the final or summative grades, but should place emphasis on the process and the identification and selection of criteria against which the work or academic performance is evaluated. Educators can provide guidance and feedback on the rigor and accuracy of self-assessment, allowing learners to hone their ability to self-evaluate. This can be achieved through the use of exemplars of differing levels of performance and work quality (Tip 8). In practice this may be

hard to facilitate, as it requires learners to engage with multiple sources of feedback, including peer feedback (Tip 9). Educators should encourage learner engagement with feedback. This engagement can, in turn, contribute to the development of evaluative judgment and development of feedback literacy (Tai et al. 2018).

Tip 5: Identify and manage affect

Emotions, feelings and attitudes—collectively known as affect—are a frequent barrier in the seeking and subsequent utility of feedback (Cannon and Witherspoon 2005). Learners may often consciously or sub-consciously avoid seeking feedback due to the negative emotions it evokes, or demonstrate defensive behaviours in response to feedback, particularly when it is critical (Forsythe and Johnson 2017; Yu et al. 2018). Despite a hallmark of feedback literate learners being their improved ability to manage the defensive emotions that critical feedback can create (Carless and Boud 2018), a defensive position is common—and arguably innate amongst many learners—representing a barrier to the development of feedback literacy (Bing-You et al. 2017; Forsythe and Johnson 2017). In addition to being important in the recognition and utilisation of feedback, the learning environment is a key driver in the management of learner emotions (Tip 1) (Xu and Carless 2017). If a learner feels comfortable with both their learning environment and their educator, they are more likely to ask for help in areas that require growth (Carless and Boud 2018). Learners can feel that seeking feedback can be a time burden on their educators (Noble et al. 2020), therefore in establishing this learning environment, educators should make clear that constructive feedback seeking and provision behaviours are the norm (Carless and Winstone 2020). The tone of feedback given can also deter the pursuit of feedback, with negative tones often invoking defensive attitudes (Cannon and Witherspoon 2005). In addition to promoting feedback seeking behaviours,

educators should utilise constructive language that focuses on performance improvement to allow feedback to resonate and take effect, and to ultimately overcome the many initial defensive and aversive attitudes to critical feedback (Forsythe and Johnson 2017; Tekian et al. 2017).

Tip 6: Enact feedback

Taking action on feedback ties together three pillars (*appreciating feedback*, *making judgements*, and *managing affect*) of the feedback literacy framework (Figure 1) to close the feedback loop (Carless and Boud 2018). Once learners develop an appreciation of feedback, they should be encouraged by educators and/or self-motivated to action the feedback—as without action, the goal of feedback is not achieved. How effectively a learner *takes action* on feedback received may be a marker of feedback literacy, but given the intrinsically low levels of feedback literacy presenting as a major hurdle amongst learners, enacting feedback may also require assistance from educators. Noble et al. (2020) suggests feedback literate learners act on feedback by performing tasks to further improve their learning (i.e. observations or learning modules), in the process not only actioning previous feedback, but also providing them with opportunities for additional feedback. Reflecting on this, it is important that learners employ some degree of measurement to evaluate if they have been successful in *taking action*. The obvious measures in health professions education are achievement of competency and academic scores (Tekian et al. 2017). However, more nuanced skills, such as verbal and non-verbal communication skills are harder to assess (Cömert et al. 2016). In this context, learners can use a feedback journal (Hoo et al. 2020) to note what they have done, and return to it at a later time period to analyse it, through such

means as a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis (Yang et al. 2017), a challenges and solutions analysis, or peer feedback (Tip 9).

Tip 7: Make feedback a curricula focus

An important contribution that educators can make to the development of feedback literacy is designing curricula in such a way that facilitates a learner's understanding of the value and purpose of feedback (Carless and Winstone 2020). Developing a high level of feedback literacy takes time, hence early integration of learning activities and content targeted at fostering feedback literacy into the curricula is critical (Carless and Winstone 2020; Malecka et al. 2020). Firstly, embedding dialogue and learning activities concerning the effective recognition and use of both educator and peer feedback (Tip 9) within the curricula allows learners to *appreciate* the value of feedback for improved work and performance (Tip 1) (Carless and Boud 2018; Malecka et al. 2020). This dialogue should focus on the development and delivery of effective feedback, as well as its benefits and challenges. Secondly, the addition of ungraded feedback-enabling tasks builds on a learners understanding, and allows for the development of practiced approaches to the provision and utility of feedback from both educators and peers (Xu and Carless 2017; Tai et al. 2018). The benefits of these activities are two-fold: the learners begin to become proficient and comfortable with the concept of feedback, as well as receiving timely comments on their work, rather than the classical, and typically delayed, post-mortem review approach (Price et al. 2011). Finally, these tasks and dialogues can be coupled to assessments, then integrated and progressively advanced throughout the curriculum, developing in concert with the learners' clinical skills.

Tip 8: Utilise exemplars of a varied quality of work

Exemplars—examples of work that are the same as the task to be undertaken by the learner—are an effective means of highlighting the hallmarks of quality work (Tai et al. 2018). The use of exemplars has occasionally elicited concern amongst educators due to fear of learner imitation, however when used effectively, they can be powerful tools to develop feedback literacy (Handley and Williams 2011; Carless and Chan 2017). Exemplars of varying standards not only facilitate engagement with the feedback process (Tip 2) and allow for the identification of varying levels of work quality (Tip 4), they can also promote academic self-efficacy—a strong predictor of academic success (Wimshurst and Manning 2013; Bartimote-Aufflick et al. 2016). The ability to thoughtfully critique one's own work, and that of others, across multiple formats is a key part of the feedback cycle (Noble et al. 2020). Additionally, structured critique of exemplars can lead to better educational outcomes, and stronger capacity for self (Tip 4) and peer-assessment (Tip 9), critical to effective feedback in learners (Yucel et al. 2014). In the health professions education context, this could involve using exemplar clinical examination or intervention videos, or rubric criteria with qualitative feedback as a way to enhance the quality of feedback learners' provide to themselves and their peers. This could be followed by small-group, or whole class discussion of the learners' performance and emotive responses, further enriching the learner experience. However, this is reliant upon learners to be proficient in managing affect (Tip 5).

Tip 9: Encourage peer feedback

There is emerging evidence suggesting peer feedback can be used to foster feedback literacy (Carless and Boud 2018; Han and Xu 2019). This is theorised to occur via facilitating learner *appreciation* of feedback, specifically their centrality in the process (Tip 2), and helping

learners manage *affect* (Tip 5) (Carless and Boud 2018). Beyond its notable benefit in building confidence alongside collaborative and social networks, it provides important opportunities for feedback generation and delivery (Han and Xu 2019). Peer feedback activities involve at least one other learner observing and critiquing the work of another in a structured context, often in tasks mirroring the assessment activities or desired competencies (Hoo et al. 2020). Receiving peer feedback, as opposed to educator feedback, is often perceived as being more helpful to learners, possibly due to choice of language used by peers (Nicol et al. 2014). However, for meaningful peer feedback to occur, students must *appreciate* the peer feedback process (Carless and Boud 2018) and develop a mutual trust between their peers (Sutton 2012). Peer feedback also affords learners the opportunity for timely feedback in advance of their graded submissions (Wimshurst and Manning 2013). Ideally, educators will introduce the concept of peer feedback to the learners with one strategy to implement peer feedback within health professions education being to structure the peer activities around key clinical competency assessments, which can be further augmented by attributing a small portion of the learner's grade to their provision of feedback to their peer(s). Regular, structured peer feedback activities appear to be a useful tool to foster learner feedback literacy. Ideally, activities should reflect either the assessment tasks, or key clinical skills in order to maximise the benefits to the learner's ongoing development, however, more research is required to support this link.

Tip 10: Use technology to augment feedback processes

The increased accessibility of technology-enabled feedback approaches offer an alternate solution to conventional one-way verbal or written feedback practices, with the purpose of integrating multiple instances of feedback (Winstone and Carless 2020). Strategies may

include incorporating audiovisual feedback, as well as applying computer-based assessments to facilitate timely feedback. Benefits of audiovisual feedback include the ability to replay the feedback at the learners' convenience, the ability to access it remotely, as well as the capacity to review it in the future (Hepplestone et al. 2011; Crook et al. 2012). Additionally, learners can use digital tools, such as an e-portfolio, to generate self-feedback, and use this to engage in further peer feedback activities (Tip 9) (Carless and Boud 2018). These strategies may facilitate greater uptake of, and *taking action* on feedback. The use of learning management systems to develop online formative quizzes may also support the feedback process (Winstone and Carless 2020). For example, online quizzes where learners can respond using their smartphones or laptops, provides anonymity and immediate feedback (Winstone and Carless 2020). This assessment strategy could be enhanced with custom qualitative feedback aimed at the learner's proximal zone of development. Additionally, adaptive release of grades—the release of feedback before the grade—has been shown to encourage feedback reflection (Parkin et al. 2012), which may promote learner agency (Tip 2), and hence feedback literacy. However, careful consideration and planning in terms of how the technology can be integrated into curriculum is important to ensure timely and valuable feedback and to prevent learner passivity in the process (Winstone and Carless 2020).

Tip 11: Continually evaluate and refine feedback processes

Evaluating the impact of strategies to foster feedback literacy is paramount, however, a lack of tools by which to measure this construct is challenging. Despite the recent emergence of feedback literacy conceptual frameworks that could guide its measurement (Chong 2020), quantitative outcomes specific to feedback literacy are currently difficult to analyse. However, learner evaluations of teaching and learning environment measures may provide avenues to quantitatively evaluate contributors to feedback literacy. When introducing

learners to a different conceptualisation of feedback, or working with early-year learners to foster feedback literacy, learners may perceive they are not receiving feedback, and respond to evaluations accordingly. As learners begin to *appreciate* this new orientation to feedback, it is anticipated that evaluation outcomes would normalise or increase. Improvements in learner grades in conceptually similar tasks following feedback may also be a surrogate measure of feedback literacy. This could be considered in how feedback activities are embedded in the curriculum (Tip 7). Qualitative approaches to evaluation of feedback literacy continue to provide a rich source of data by which its impact can be evaluated. Where resources permit, educators are encouraged to use this approach to data collection to improve and refine their feedback practice.

Tip 12: Start feedback early, then repeat and reflect

Health professions education curricula are often scaffolded with respect to course content and outcomes; feedback practices should parallel this scaffolding. This may sound simple in theory, but aligning and scaffolding feedback practices across either higher education and/or the workplace is difficult to implement. Hence, not only is it important for educators to foster an environment conducive to feedback literacy early on in a learner's academic journey (from classroom to CLE), but if learners are given adequate resources, exposure and guidance to facilitate feedback *appreciation* (Tip 3), the repetition and advancement of conceptually similar tasks over time can further develop these skills (Forsythe and Johnson 2017; Carless and Boud 2018). Viewing the development of feedback literacy through a temporal lens, there is scope for educators to leverage the progressive and longitudinal nature of learning outcomes, and integrate associated feedback tasks and assessments within these outcomes (Price et al. 2011; Carless and Boud 2018; Malecka et al. 2020). Practically, this could be

aided through the utility of a feedback portfolio, database or shared repository (Malecka et al. 2020). Here, learners could describe and reflect on their feedback experience and changes in their feedback conceptualisation and knowledge, hence promoting autonomy, experiential learning and more broadly, reflective practice and life-long learning.

Conclusion

As a concept, feedback literacy has the potential to improve both the provision and utility of feedback amongst health professions learners, overcoming some of the traditional limitations of feedback in this setting. Furthermore, health professions learners with a high-degree of feedback literacy should be better placed to develop and meet standards for clinical competency. This paper highlights not only that feedback literacy can be fostered in a practical way, but that the components that make up feedback literacy are inextricably linked and should be developed concurrently. Learners are unlikely to make meaningful improvements in feedback literacy by acting on these tips in isolation, but when guided progressively and holistically through them, they may contribute to the development of feedback literacy.

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Figure 1: Conceptualisation of the feedback literacy framework of Boud and Carless (2018), reprinted by permission of the publisher (Taylor & Francis Ltd, http://www.tandfonline.com).