Effective Feedback Module

Learning Objectives:
- *Identify* the purpose of feedback
- *Revise* feedback to include the characteristics of effective feedback
- *Discuss* the barriers to effective feedback
- *Compare* models that can be used to provide effective feedback to learners

Purpose of Feedback

Quiz: *What is the primary purpose of feedback in medical education?*
To help the student refine their clinical skills
To help students develop accurate self-assessment skills
To correct what a student is doing wrong and reinforce what they are doing correct
To encourage students to be engaged in their clinical skills development

While feedback can be used as a tool to correct, refine, reinforce, encourage and engage students the primary purpose of feedback is to help a student develop accurate self-assessment skills. The ability to self-assess is something they cannot learn *without* feedback and it is critical to their future role as a physicians. When a student can accurately self-assess they will know when they need to ask for help.

What does the literature say?

"Effective learners are self-regulating, and feedback is integral to develop and underpin the process that constitute self-regulation, such as goal setting, strategies to progress learning, task selection and monitoring." - Murdoch-Eaton

"In a systematic review of 17 studies evaluating self-assessment, Davis et al. found that the self-assessments of practicing doctors and residents correlated poorly with external assessments in most studies. Level of training was not associated with better self-assessment accuracy." – Srinivasan

"Self-assessment accuracy improved after a practice-based learning exercise, but only when coupled with anchoring performance feedback. […] Our study reinforces findings reported in the existing literature on self-assessment: that without intervention and perspective, medical students, self-reflect inaccurately." – Srinivasan

"[A] systematic review found that in a majority of the relevant studies, physicians do not appear to accurately self-assess. Weak or no associations between physicians' self-rated assessments and external assessments were observed." – Davis

Students may also develop effective error detection skills, which lead to their own self-feedback aimed at reaching a goal." – Hattie

Characteristics of and Barriers to Effective Feedback

Definition of Feedback in Clinical Education: "Specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance." – van de Ridder

Instructions:
The following slides present information on four characteristics of effective feedback; informative/specific, credible, timely/relevant, and delivered at the appropriate level. As you progress through each slide you will be asked to refine the same line of feedback by incorporating an additional characteristic of feedback.
To avoid common hang ups associated with that aspect of feedback, each slide will also include information on the barriers to effective feedback.
For additional reading on any of the characteristics click on the "*What does the literature say?*" button.

Informative / Specific

In order to make the feedback informative and specific, discuss a specific skill or procedure with the student. The feedback needs give the student direction on how to improve in relationship to the defined learning objectives, in addition to refining their self-assessment skills.

Barriers to informative and specific feedback: The feedback too general and non-corrective, which can reinforce incorrect skills or frustrate a student who wants to improve.

What does the literature say?

"Those studies showing the highest effect sizes involved students receiving information feedback about a task and how to do it more effectively. Lower effect sizes were related to praise, rewards and punishment." – Hattie

"Praise for task performance appears to be ineffective, which is hardly surprising because it contains such little learning related information." – Hattie

"A large proportion of the feedback was non-specific, and generic phrases such as 'good history' and 'keep practicing' were very common. These merely describe what future action a student will take anyway. They are therefore almost useless in terms of effective feedback. Generic phrases do not give students guidance on their actual level of performance or on how to improve." - Nesbitt

Credible

Credible feedback is given by an expert and addresses something they and the student observed over a series of sessions. To facilitate credible feedback you can ask the student to give their self-assessment before offering feedback so that the feedback discussion is around a skill both parties observed. This will lend greater credibility to the preceptor's feedback and investment from the student in the process. Finally, the feedback is credible and effective when it builds on previous learning encounters.

Barriers to credible feedback: the feedback refers to an action that wasn't observed directly by you or when the feedback is inconsistent between other feedback sessions or students.

What does the literature say?

"One of the important components of effective feedback is encouraging students for self-assessment prior to giving feedback." - Al-Mously

"Feedback has its greatest effect when a learner expects a response to be correct and it turns out to be wrong. " – Hattie

Weak feedback includes "competencies that are not observable, uninformed or non-expert observer, second hand information".
Strong feedback includes "Well observed tasks and competencies, expert observer and feedback provider, personal observation". - Van de Ridder

"Students in the earlier year groups showed a tendency to discount feedback given be anyone other than senior academics. Senior students acknowledged the validity and value of feedback from sources other than senior members of academic staff, such as in peer feedback and self-evaluation." – Murdoch-Eaton

"Feedback is more effective when it provides information on correct rather than incorrect responses and when it builds on changes from previous trails." – Hattie

Timely / Relevant

In order to make feedback timely and relevant consider what you are addressing in the feedback. If your feedback is addressing verbal, procedural or motor skills it is appropriate to provide immediate feedback. If your feedback is addressing a transfer of learning or conceptual framework task it would be best to provide delayed feedback to give the student a chance to reflect and self-assess on their performance. Delayed feedback can also facilitate better retention of a new concept.

Barriers to timely and relevant feedback: the feedback is short and rushed in the moment or forgotten when delayed. The student can become frustrated if they don't feel like they receive adequate feedback before they are asked to perform again.

What does the literature say?

"Learning outcomes related to the acquisition of verbal, procedural or motor skills are enhanced by immediate feedback, whereas delayed feedback may be more effective for the transfer of learning or conceptual formation tasks. […] The positive benefits of delayed feedback indicate the development of higher-order problem solving and metacognitive behaviors, although in some learners delayed feedback may be demotivating and detrimental to skills acquisition." – Murdoch-Eaton

"Immediate error correction during task acquisition can result in faster rates of acquisition, whereas immediate error correction during fluency building can detract from the learning of automaticity and the associated strategies of learning." – Hattie

"Difficult items are more likely to involve greater degrees of processing about the task, and delayed feedback provides the opportunity to do this, whereas easy items do not require this processing and so delay is both unnecessary and undesirable." – Hattie

Appropriate experience level

Appropriate experience level feedback includes the right balance of reinforcing to corrective feedback and effort to ability feedback. Use the following for guidance:

Junior students prefe   effort   edback.

- Novice to advanced beginner: 3:1
- Advanced beginner to proficient: 2:2
- Proficient to competent: 1:3
- Competent to expert: 0:4

Barriers to level appr   ↕   t can lead to student demotivation and/or   ability   e students to perceive that they never received feedback.

What does the literature say?

"Junior students generally perceived the receiving of feedback as a passive activity and preferred positive feedback that confirmed their progress and provided reassurance. More senior students viewed feedback as informing their specific learning needs and personal development. They valued immediate informal verbal feedback and feedback from peers and others, as well as that from senior teachers." - Murdoch-Eaton

"Early in the course, students described valuing written feedback and appeared either not to recognize verbal feedback or to place little value on it. […] By contrast, more senior students perceived negative feedback as constructive 'so long as it gave specific ways to improve' and discounted the value of generally positive feedback." –Murdoch-Eaton

"Surprisingly, another report showed that faculties have reported providing more feedback than students perceived receiving (AAMC Medical School Graduation Questionnaire 2005)." – Al-Mously

"Even when feedback has been delivered verbally, a written record of the feedback is valuable for the student for reflection and for documenting progress." - Nesbitt

"Effort feedback appears to be credible in the early stages of learning, when students need to expend effort to succeed. As skills develop, and success should require less effort, ability feedback may become more credible." - Hattie

Models of Effective Feedback,
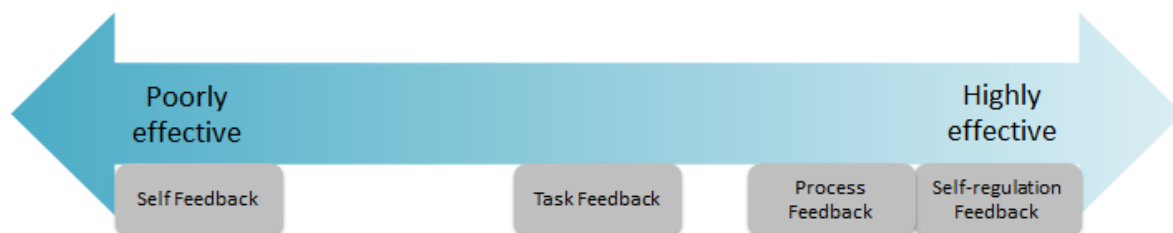Adapted from "The Power of Feedback" by John Hattie and Helen Timperley

One model of effective feedback is that effective feedback answers three essential questions. The essential questions can be remembered easily through the three different types of *feed*.

Essential Questions	3 types of feed…
Where am I going? (the goals)	**Feed** Up
How am I going?	**Feed** Back
Where to next?	**Feed** Forward

Another model for feedback is based off of the idea that all feedback addresses a focus; task, process, self-regulation, or self. Several of the focus areas incorporate some of the characteristics of effective feedback that were introduced earlier in the module.

Focus	Description
Task	Addresses how well tasks are understood / performed
Process	Addresses the main process needed to understand / perform tasks
Self-regulation	Encourages self-monitoring, directing, and regulating of actions
Self	Offers personal evaluation and affect (usually positive) about the learner

Effectiveness of these feedback models:

Type of Feedback	Description from the Literature
Self Feedback	Feedback can be personal in the sense that is it directed to the "self", which is too often unrelated to performance on the task. Ex: "Good presentation skills"
Self-Regulation Feedback	Feedback is focused on greater skill in self-evaluation or confidence to engage further on the task. Such feedback can have major influences on self-efficacy and self-regulatory proficiencies, since students are encouraged or informed how to better and more effortlessly continue on the task. Ex: "You already know the patient type, try to come up with a treatment plan."
Task Feedback	Feedback can be about a task or product, such as whether work is correct or incorrect. This type of feedback may include directions to acquire more, different, or correct information. Ex: "You need to include more about [blank] in your interview."
Process Feedback	This kind of feedback is more directly aimed at the processing of information, or learning process requiring understanding or completing the task. Ex: "This patient may make more sense if you review the article I gave you earlier."

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