Effective Feedback and Coaching: Taking Your Learners from Good to Great

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What have been your experiences with giving effective feedback?

Intended Learning Outcomes: After completing this workshop, you will be able to:

- Appreciate the importance of feedback in medical education
- Identify key elements of feedback
- Illustrate the limitations of self assessment and the importance in moving towards new models
- Participate in small and large group sessions applying key principles of effective feedback
- Propose ways of changing the feedback culture within our institution

The Power of Feedback

Feedback

Definition:

“The process by which the teacher [peer] observes a student [peer] performing an activity, analyzes the performance, and then provides information back to the student [peer] that will enable the student to perform the same activity better in the future.”

Ende J. Feedback in clinical medical education. JAMA 1983
Closing the Loop: Feedback

Faculty
Evaluate
Content
Trainee

Feedback Believers
- Business Community
  - “People need to know where they stand”
  - “Most workplaces have a serious lack of candor”
- Competitive Athletics
  - Phil Jackson – 11 NBA titles
  - Coaching and feedback style credited for teams success
- Medical Societies / Organizations
  - Liaison Committee on Medical Education (LCME)
  - ACGME
  - Alliance for Clinical Education
  - American Medical Association partnering with Press Ganey

The Effectiveness of Feedback
  - Synthesis of >500 meta-analyses, 450,000 effect sizes from 180,000 studies, 20-30 million students,
  >100 factors influencing educational achievement (average or typical effect of schooling 0.40)
  - Looking at 12 meta-analyses -> Feedback fell into the top 5 to 10 highest influences on achievement
  (Average effect size 0.79)

FEEDBACK IS POWERFUL

Requirements for a system to give maximum support to performance

Feedback literature
Feedback has been cited as an important facilitator of learning and performance
- Bandura, Organizational Behavior and Human Decision Processes, 1991
- Fodor, Research in Personnel and Human Resources Management, 1991

In the Medical Education literature
- Improved Performance on History and Physical Examination
  - When encounters videotaped and feedback provided.
    Scheidt PC. J Med Educ. 1986
- Improvement in physician judgment
- Critical component of high-fidelity simulation training
  - Simulation been shown to improve patient outcomes
    Issenber SB, McGaghie WC. Med Teach. 2005
Quite a few studies/reviews that have reported either no effect or debilitating effects on learning

- Kluger & DeNisi, Psychological Bulletin, 1996
- 1/3 of total studies reviewed in the above two meta-analyses demonstrated negative effects of feedback on learning
- Mory, Handbook of research on educational communications and technology, 2004

But not everything has been rosy......

"Feedback during clinical rotations appears to be a rather intractable problem in medical education"

Irby DM. What clinical teachers in medicine need to know. Academic Medicine 1994;69:333-42

1. Evaluators lacking necessary skills in giving effective feedback
2. Learners not recognizing the reinforcing or constructive information they receive as feedback
3. Confusion around the terms evaluation versus feedback

Training in giving feedback appears to be a rather intractable problem in medical education. Irby DM. What clinical teachers in medicine need to know. Academic Medicine 1994;69:333-42

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General Principles of Effective Feedback Informed by the Literature

Barriers to Overcome

- Fear of commitment
- Fear of upsetting trainee / peer or damaging the relationship
  - Murray Bowen’s Systems Theory
- Fear of doing more harm than good
- Trainee being resistant or defensive when receiving negative criticism

A Model of Feedback to Enhance Learning:

Of these, the most powerful feedback addresses:
  - Processing of tasks
  - Self-regulation

How we do this **effectively** is the evidence-informed art of providing feedback.

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**Key Elements of Feedback:**

*Shute VJ. Focus on Formative Feedback. Review of Educational Research, 2008*

Focus feedback on on the task, not the learner

Feedback to the learner should address specific features of his or her work in relation to the task, with suggestions on how to improve.

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**Formative Feedback Guidelines to Enhance Learning (things to do)**

Present elaborated feedback in manageable units

*Present in small enough pieces so that it is not overwhelming and discarded*

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**The Effectiveness of Feedback**


- Comprehensive literature search
- More than 100 documents, including articles, dissertations, abstracts, books and conference proceedings used
- Goal of applying findings from these documents to creating a set of guidelines related to formative feedback

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**Formative Feedback Guidelines to Enhance Learning (things to do)**

Be specific and clear with feedback message

*If not, may impede learning and can frustrate learners. Try to link feedback clearly and specifically to goals and performance*
**Formative Feedback Guidelines to Enhance Learning (things to do)**

Keep feedback as simple as possible but no simpler (based on learner needs and instructional complaints)

Simple feedback is generally based on one cue (e.g., verification or hint), and complex feedback on multiple cues (e.g., verification, correct response, error analysis). Keep feedback as simple and focused as possible. Generate only enough information to help learners and not more.

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**Formative Feedback Guidelines to Enhance Learning (things to do)**

Reduce uncertainty between performance and goals

Clarify goals and seek to reduce or remove uncertainty in relation to how well learners are performing on task, and what needs to be accomplished to attain the goal (Action Plan).

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**Creation of an action plan**

- Creation of an action plan leads to change
  - Feedback alone does not cause change, it is the goals that people set in response to feedback (Locke et al, 1990)
  - 5 Principles of goal setting
    - Clarity
    - Challenge
    - Commitment
    - Feedback
    - Task complexity

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**Feedback: Action Plan**

SMART

» Specific
» Measurable
» Attainable (Agreed)
» Relevant (Realistic)
» Time-bound
Formative Feedback Guidelines to Enhance Learning (things to do)

Give unbiased, objective feedback

Feedback from a trustworthy source will be considered more seriously than other feedback, which may be disregarded.

Formative Feedback Guidelines to Enhance Learning (things to do)

Promote a "learning" goal orientation via feedback

Formative feedback can be used to alter goal orientation – from a focus on performance to a focus on learning. Craft feedback emphasizing that effort yields increased learning and performance, and mistakes are important part of the learning process.

Formative Feedback Guidelines to Enhance Learning (things to do)

Provide feedback after learner’s have attempted a solution

Do not let learners see answers before trying to solve a problem on their own.

Formative Feedback Guidelines to Enhance Learning (things to do)

Check for understanding

Important to assess the learner’s understanding of what was said.

Formative Feedback Guidelines to Enhance Learning (things to do)

Ask for self assessment

Encourages self reflection and provides an opportunity to assess insight.

Feedback from the Learner’s Perspective: A Discussion of Self Assessment
Definition of self-assessment

A personal evaluation of one’s professional attributes and abilities against perceived norms (in relation to other people’s views).

Challenges of self-assessment

- Poor, shaped by culture and gender, no evidence for the effectiveness of self-assessment using this approach.
- Little accuracy or reliability in self-assessment of competence:
  - Overestimation of competency by those with least proficiency and most confidence.

Benefits of self-assessment:

- Provides opportunity to assess insight of learner.
- More likely to generate learning goals from self-perception.

Challenges of self-assessment

- Methodically flawed
  - Behavior and performance are informed by our unconscious minds.
  - Unconscious self is focused on self-preservation.
    - Helps to explain the lack of effectiveness of feedback that threatens self-esteem (fundamental attribution error) or contains only praise.

Benefits of self-assessment:

- Provides opportunity to assess insight of learner.
- More likely to generate learning goals from self-perception.

New conceptual models for self-assessment

- Models grounded in social cognitive theory.
  - Learning occurs in a social context.
- Multiple sources affect self-assessment:
  - External
  - Internal
  - Tensions

Nomenclature:

- Multiple names for new models:
  - “Directed self-assessment”,
  - “self-monitoring”,
  - “Self-directed assessment seeking”
  - “Reflection in- and on-action”
- All models underscore:
  - Need to facilitate integration of external feedback with self-perceptions.
  - View self-assessment as a LEARNABLE skill.
Strategies for improved self-assessment:

- Similar to strategies for giving effective feedback to learners

Strategies include:

- Focus on specific task/skill
  - Avoid assessment of global performance or knowledge-base
- Consider set-up for self-assessment:
  - Establish shared, clear goals for educational activity
  - Make specific time for self-assessment
- Acknowledge effect of multiple factors on self-assessment including:
  - Internal factors e.g. emotional response to feedback
  - External factors e.g. feedback culture of institution
- Link to personal goals/action plan

Formative Feedback Guidelines to Enhance Learning (things to avoid)

Do not give a normative comparisons

Avoid comparisons with other students – directly or indirectly. Do not draw attention to “self” during learning

Formative Feedback Guidelines to Enhance Learning (things to avoid)

Be cautious about providing overall grades

Feedback should note areas of strength and provide information on how to improve, as warranted with and without overall grading. Effective feedback is related to the content of the comments

Formative Feedback Guidelines to Enhance Learning (things to avoid)

Do not present feedback that discourages the learner or threatens the learner’s self-esteem (avoid being too critical or too controlling)

Draws focus to self and away from the task at hand
**Formative Feedback Guidelines to Enhance Learning (things to avoid)**

Use “praise” sparingly, if at all

Direct learner’s attention to self which distracts from the task and consequently from learning

**Formative Feedback Guidelines to Enhance Learning (things to avoid)**

Try to avoid delivering “biased” feedback

Consider the mode of delivery (neutral “manner” good)

**Formative Feedback Guidelines to Enhance Learning (things to avoid)**

Do not interrupt learner with feedback if the learner is actively engaged

Interrupting a student who is immersed in a task can be disruptive and impede learning

**Formative Feedback Guidelines to Enhance Learning (things to avoid)**

Avoid using progressive hints that always terminate with the correct answer

Although hints can be facilitative, they can also be abused, so if they are employed to scaffold learners, provisions to prevent their abuse should be made. Consider using prompts and cues (i.e., more specific kinds of hints)

**Formative Feedback Guidelines to Enhance Learning (things to avoid)**

Minimize use of extensive error analysis and diagnosis

May not provide sufficient benefit to learning

**Formative Feedback Guidelines in Relation to Timing Issues**

- **Immediate Feedback**
  - Can help fix errors in real time, producing greater immediate gains and more efficient learning
  - Better if learner is learning a difficult new task
  - To promote learning and performance on verbal, procedural, and even tasks requiring motor skills

- **Delayed Feedback (minutes, hours, weeks, or longer)**
  - Student learning a relatively simple task (may prevent feedback intrusion, annoyance)
  - May be better to promote transfer of learning (although initial learning may be depressed)
Formative Feedback Guidelines in Relation to Learner Characteristics

High Achieving Learners
- Consider delayed feedback
- Use facilitative feedback
- Verification feedback may be sufficient

Low Achieving Learners
- Immediate feedback
- Directive (or corrective) feedback
- Use scaffolding
- Use correct response and some kind of elaboration feedback
- Low learning orientation (or high performance orientation), give specific feedback

Setting Up Effective Feedback – Putting It All Together
- Establish clear, shared goals for educational or clinical activity
  - Let the learner know where the target is
- Establish rapport
- Demonstrate learner readiness for feedback
  - Is this the best time?
- Let them know feedback is coming
- How would I feel if I received this feedback?

Approach to Feedback Session
- Self assessment
- Respond to self-assessment
  - Give feedback on self-assessment if insightful, mature, etc.; encourages reflective practice

Approach to Feedback Session
- Describe notable aspect of performance
  - Based on observation (event/behavior)
    - "I observed".... Or "I noticed".......
    - Checklists or other tools may be beneficial
- Wait for response.......wait some more
- Assess impact
  - A description of the effects of the facts/observations (results and/or reactions)
- Commentary
  - The facts and impacts explained in the context of the goal

Approach to Feedback Session
- Recommend next step to enhance performance
  - Encouragement
- Check for understanding (ask them to summarize)
- Closure
  - Retry
- Ongoing reinforcement

Feedback In Your Institution/Department – Promoting Mindfullness and Instituting a Cultural Change
**Culture of Feedback**

- Supported sequential process rather than a series of unrelated events
- Need to established, longer-term professional relationships
- While the apprenticeship model may not work in current day medicine.....
  - Still need to develop forms of supervision to help collate sources of feedback

Archer JC. State of the science in health professional education. Medical Education 2010;44:101-106

**Summary**

- Feedback, if done correctly, can significantly improve learning and performance
- Rely on evidence-informed guidelines for delivery of effective feedback
- Must find a way to promote mindfulness in our learners
- To collectively raise learners from good to great, institutions (not just individuals) need to start looking at their feedback culture
- An evidenced-based cultural shift is required

**Questions and/or feedback**