Twelve Tips for Clinical Preceptors to Deliver Meaningful Feedback

Jeff Barbee[1], Melissa Alexander[2], Jeffrey Penman[1], Joseph Dynlacht[1]

**Corresponding author:** Dr Jeff Barbee jbarbee@iu.edu

**Institution:** 1. Indiana University School of Medicine, 2. Independent scholar

**Categories:** Educational Strategies, Students/Trainees, Teachers/Trainers (including Faculty Development), Teaching and Learning, Undergraduate/Graduate

Received: 16/11/2018
Published: 22/11/2018

**Abstract**

Most healthcare students look forward to their clinical rotations, where the preceptor will be their mentor and learning guide. Neither student nor preceptor may fully understand the disorienting impact of this scenario on the ability of the student to learn. With respect to feedback, it is not uncommon for students to report either absence of feedback, inadequate feedback, or a poor (disrespectful, inattentive) tone used with feedback. Some preceptors report that students are inattentive to, don’t learn from, or accept the feedback. There are a number of factors that lead to poor or perceived poor experience with feedback. Key elements to provide effective feedback include students knowing ahead time what their expectations will be and being allowed to practice with co-learners or simulated patients and to receive feedback on all of their skills. Students will need to develop these skills to navigate within the clinical learning environment, begin to improve patient safety, begin to formulate patient feedback strategies to enhance their health, and to learn to work collaboratively with other healthcare workers.

**Keywords:** Feedback; Medical Education; clinical skills; teaching and learning; assessment

**Introduction**

During healthcare students’ clerkship rotations, they will engage in workplace-based learning for the first time. Students are expected to apply their knowledge and skill attained from reading, lectures, and small group problem-solving in the clinical context. The cues students receive for problem-solving in the work environment are contextual, requiring different approaches to establishing facts in clinical reasoning and judgment. Although the amount of clinical exposure increases over time, the nature of being assigned to different locations for each rotation creates a new learning environment each month. Aside from the cognitive load imposed by the expected learning, some students can be unfamiliar with parking, hospital layout, where to find food, restrooms, etc., which increases extrinsic cognitive load and may decreases the intended learning. Learners must grapple with the culture and problems of the new context while attempting to recognize previously un-encountered patterns of patient
presentations, apply knowledge to differentiate between relevant and irrelevant information, and engage in a process of clinical reasoning to develop prioritized differential diagnoses and propose treatment plans. Situational factors and patient problems may interact to create unanticipated needs for adaptation. Students must be able to reflect as they learn and adapt their approach as new information emerges and reflect afterward to hone their approach to future encounters.

The burden of learning can be intense, requiring formative and summative assessments in the form of feedback from skilled clinical preceptors and others without formal clinical assessment. We are presenting 12 tips for improving preceptor feedback within the students’ learning environment. Applying these tips into one's daily activity will most likely increase students’ ability to not only understand the nature of the feedback being provided on their performance, but how to act to improve their skills.

**Tip 1: Understand the Purpose of Feedback**

In all formal learning situations, feedback is intended to help the learner close the gap between current and expected performance (Bandura, 1991). Strive to make the feedback informational, detailing to a student how and what improvements should be achieved. During medical training, feedback must be effectively delivered and received before learners can utilize it to achieve the milestones that will enable them to progress to the level of competent healthcare professionals.

**Tip 2: Understand the Importance of Feedback**

Feedback is information from an observer that is given to the performer about his or her observed performance in relation to the expected performance. Feedback is a critical component of learning theories: without adequate feedback, students are deprived of a crucial part of the learning cycle, thus preventing the change in attitude, knowledge, or behavior that signifies learning. Inadequate student feedback responses are especially detrimental to their learning when exhibited habitually. Educators are best equipped to change this pattern of inadequate feedback behavior when they can determine and understand the motivation behind individual learners’ feedback behaviors. This can be done by developing and staging an intervention that addresses learner motivation and uses techniques based on adult learning theory. Because the student has taken a role in a clinical rotation, negative feedback delivered in an insensitive manner can serve to threaten the student’s emerging professional identity and therefore, should be used with caution. Depending on the circumstances, the student may need on-the-spot feedback in front of the clinical audience (which may or may not include the patient and the family). To make effective use of feedback the student must have good self-regulation skills, which are the ability to manage one’s emotions, behaviors, and thoughts in response to a given situation.

**Tip 3: Identify the components of Feedback**

It is vital to have a firm grasp of what constitutes appropriate feedback. It is comprised of four different aspects: task, process, self-regulation, and the person. The most effective feedback focuses on the task, while the least effective is focused on the person (Burke & Pieterick, 2010).

Providing only negative personal feedback can have a lasting effect on students, since it could reduce their confidence, affect their approach to a problem, or could lead to their avoidance in receiving feedback (Burke & Pieterick, 2010). When providing feedback to students, the educator must understand their role in the student’s educational process, how to point out errors and guide students to resources. Students must be prepared to receive feedback and utilize it; educators should therefore also be ready to assist students in both the reception and
implementation of feedback (Burke & Pieterick, 2010). After receiving feedback, students should possess the cognitive ability to implement the received feedback in similar scenarios in the future (Burke & Pieterick, 2010). The responsibility for ensuring this should extend beyond the course instructor or clerkship director.

**Tip 4: Know How to Approach Students in an Emotionally Labile State of Mind**

When addressing a student in an emotionally labile state, feedback should be delivered in a very positive and supportive way (Bynum, 2017). How a student responds to this approach could depend on this first step (Bynum, 2017). Showing students empathy is one way to begin the process (Gill, 2014; Ziring et al, 2015). Feedback is most effective and likely will have the greatest probability of promoting motivation for the student to continue to grow and develop when it comes from a trusted assessor. The student also needs to be in a frame of mind that is conducive to learning and self-improvement for feedback to have an impact (Lefroy et al, 2015). There are many ways to provide feedback, however it is best to give it during the task/activity, or during a rehearsal, with the learner should be "doing" the task (Schon, 1987). Feedback should be given in a "change-oriented" fashion (Wolff & Santen, 2017); the learner completes a task, and then is given feedback on how improve the performance. If expectations are not envisaged, these benefits could become a false hope (Latham and Locke, 1991). When the goals are set first, the feedback can then be used as an aid that leads to improvement of performance.

**Tip 5: Apply the Appropriate Process**

Understanding how to provide feedback requires knowing the students' current level of knowledge. Schon (1987) provides two separate analytical pathways for the process of feedback and student reactions. The first, for a novice attempt, involves demonstration of the task by the teacher, with the learner observing, followed by imitation. After the task has been imitated, the instructor critiques the performance. The second and more "meta-analytical" way can be visualized using a two-column ladder system. The initial column requires the instructor to either provide a demonstration or a critique. Making the student perform the task again would constitute a step down in the next column. A step up could require a conversation or reflection of the process to that point (p. 114-117). This step up also signifies that the learner understands the process as indicated from successful completion (that is, performance to an expected standard) in their first attempt to complete the task or activity. A step down signifies that the student must put the feedback to work through another attempt.

**Tip 6: Build Self-Efficacy Among Your Students**

Self-efficacy is a common theme often found in the literature; it is the belief in your own ability to achieve learning or performance standards (Bandura, 1991; Bembenutty, Cleary, & Kitsantas, 2013; Latham & Locke, 1991; Sharma & Writer, 2015). Self-efficacy influences task choice, effort, and persistence, and can also help determine which learning strategies to apply to obtain maximum gain (Schunk & Pajares, 2009). It will be more fully developed through continued learning behavior (Bembenutty, Cleary, & Kitsantas, 2013). The level of self-efficacy is correlated with goal-setting and achievement: A student with greater self-efficacy sets higher goals and attains higher levels of achievement (Bandura, 1991; Latham & Locke, 1991; Zimmerman, 2008). Learners with high levels of self-efficacy tend to blame failure on a lack preparation, while those with low self-efficacy tend to blame their lack of ability (Bandura, 1991). Students with low levels of self-efficacy are more prone to allow negative feedback to have a negative influence on their performance and attitudes.

Learners improve their self-efficacy through learning to process goals and self-evaluation, or how to adequately
perform a procedure (Schunk, 1996), rather than product goals or mimicking a polished demonstration (Bembenutty, Cleary, & Kitsantas, 2013). This means that learning the process is more impactful than rushing through the details to get to the final product. If a student does not properly respond to feedback during the learning process, review the task(s) they were instructed to act upon and ensure they were clear. Positive feedback can provide encouraging support to a learner, while negative feedback can trigger a negative self-image or be a threat to the learner's ego (Lefroy et al, 2015; Sharma and Writer, 2015). Feedback from a successful performance promotes a student's self-efficacy (Hattie & Timperley, 2007) and instills confidence. By reinforcing positive beliefs in the student's ability and providing clear feedback to the task as well as opportunities for growth, preceptors will build the level of self-efficacy in learners.

Tip 7: Understand the Role Grades Play in the Feedback Process

According to a study by Lefroy et al (2015), grades had a mixed effect on a student's self-efficacy. For some learners, it served as a motivational tool, but for others it caused a reduction in effort. After failing an exam, nearly all students agreed that feeling disturbed would be an expected emotion (Machera & Machera, 2017). Even though emotional intelligence does not have a concrete definition (Machera & Machera, 2017) it can still be a factor in how a student reacts to a grade. Students with low self-esteem may struggle to handle their emotions and may need to develop a stress management program (Gill, 2014).

Tip 8: Enhance Students’ Self-Regulation

Self-regulation in early cognitive theories was considered to have three aspects that an individual monitors: self-observation, self-judgment, and self-reaction (Bandura, 1986; Kanfer & Gaelick, 1986). Self-observation is the deliberate attention a learner gives to their behavior, which is then used to regulate their internal standards and goals. A learner cannot manage their own motivation or actions if they are not cognizant of their actions. It is also important in the formation of goals, and evaluating progress towards their attainment (Bandura, 1991). Zimmerman (2008) uses three phases when discussing his model of self-regulation: Forethought, performance/volitional, and self-reflection. These phases are set in a cyclic pattern because learning happens continuously and causes changes to the learner’s cognitions, behaviors and affects (Bembenutty, Cleary, & Kitsantas, 2013). Forethought is the first phase that occurs before any action is taken on the way to accomplish a task. This is where goals and expectations are set, and are influenced by the learner’s level of self-efficacy. The second phase is performance/volition, where the task is in progress and is directed by either self-control or self-observation habits. Self-control strategies help the learner stay engaged, and self-assessment is where the learner evaluates their performance. Self-reflection, the final phase, is when the learner reflects on their performance and decides on the next step (Zimmerman, 2008). There are two processes to this step, self-judgment, and self-reaction. The former is the evaluation of the completed work and its assessment in relationship to the goals or expectations. Self-efficacy is strengthened if progress is made (Schunk & Pajares, 2009). Self-judgment is the final evaluation of whether the progress is satisfactory or not. Unsatisfactory progress does not mean that self-efficacy will suffer, especially if the learner feels they can perform better if given additional opportunities to do so.

Tip 9: Assist in the Application of Self-Regulation Skills

Preceptors often fail to have learners perform self-regulated steps before or after the task; rather, learners are often asked to perform self-regulated procedures during the task (Bembenutty, Cleary, & Kitsantas, 2013). The benefit of having learners practice self-regulated habits before and after a task is that the learner will have a deeper cognitive
understanding of their abilities and progress. This provides the foundation for understanding what are the necessary future adaptations or modifications. (Bembenutty, Cleary, & Kitsantas, 2013).

Bandura (1991) states that self-regulation is used to mediate outside influences to form purposeful actions by deciding what is important to the student, determining the needed skill level, and creating an understanding of their level of desire. Implementation of this practice is known as internalization (Bembenutty, Cleary, & Kitsantas, 2013; Schunk, 1999; Schunk & Zimmerman, 1997; Zimmerman & Schunk, 2004). Self-regulated learning often involves others to help steer a student to resources or guidance. At medical schools, lead advisors and competency directors may be called upon to assist in this manner.

**Tip 10: Use Goal Setting**

The use of goal-setting in self-regulated learning can be a powerful tool to help develop a student's ability to accept and utilize feedback. Finding a meaningful purpose is a natural need and can be incorporated into the goal-setting process (Bandura, 1991; Latham and Locke, 1991). Choosing the right goals for their desired progress must be determined by the student. Bandura (1991) concludes that future events, by themselves, do not serve as powerful motivators, but the vision of a desired future performance can serve as motivation to set their present goal. Goal-setting can help motivate the student to achieve goals that are outlined in the remediation process, but goal-setting alone is not found to be effective as an instrument on its own (Gill, 2014). Goal difficulty and performance are strongly correlated (Latham & Locke, year, 1991). Goals that are outlined and well defined tend to produce better results than challenging goals that are vague. A good example of a vague goal is "do your best" (Latham & Locke, 1991). Bandura (1991) writes that students who receive feedback while working to accomplish their goals perform better than students that do not receive feedback. However, even though a student shows a consistent improvement with feedback, eventually a learner's talent level will peak. There may also be a drop in performance if learners decrease their commitment or level of dedication to attaining their goals (Latham & Locke, 1991).

Learning a task is easy when the product produces an objective standard of accomplishment (Bandura, 1991). Either the learner met the expected level or failed. Students tend to want to improve upon past performances and they embark on self-comparison (Bandura, 1991). Learners tend to respond critically when they underperform, holding themselves accountable. However, if the learner believes unusual circumstances affected their performance, the learner blames these as the cause of sub-par performance. Learners with low motivation will make little progress without feedback and this will have a direct effect on the goals they set and the behavior they display. When faced with a low priority task, a learner will not expend many resources to complete the task (Bandura, 1991) and this should be considered when assigning learning tasks. Preceptors can help their students by holding them to their goals and reinforcing that they can be accomplished (Latham & Locke, 1991). This can be done in the following ways: using authority, providing encouragement, conveying that goals offer a chance at improvement, or challenging students on what they can do.

**Tip 11: Maximize the Powerful Student Learning Environment**

There are five conditions to consider when trying to improve a students' learning environment: Students should receive effective feedback, students have an active role in their learning, recognize the effect assessments can have on students, students should have the ability for self-assessment, and the ability to adjust the level of teaching to address what has been learned from assessments (Burke & Pieterick, 2010). Assessment activities can help show level of progress in a student's growth or development of a skill (Barbee, 2017; Orsmond, Maw, Gomez, & Crook, 2013). How students react to this feedback can often depend on how they value the feedback provider (Orsmond, Maw, Gomez, & Crook, 2013). Gill (2014) notes that tutors have a positive influence on students with assessment
activities. Students who received feedback in a one-on-one setting with a tutor or were immersed in a curriculum that included some type of corrective feedback showed large gains in test scores: one standard deviation above those who were not taught using these techniques (Senemogly & Fogelman, 1995). Tutors, who practiced empathy toward students, were better able to understand the individual needs for their student and developed appropriate plans for their success (Gill, 2014).

**Tip 12: Show Students Proper Examples**

Showing students an exemplary video of how a task or procedure is to be completed is also an effective way to teach (Orsmond, Maw, Park, Gomez, & Crook, 2013). These videos may be watched in small groups followed by group discussion (Orsmond et al., 2013). Nguyen et al (2016) noted that students who see solutions worked out and ask for more hints perform better on assessments (Nguyen et al., 2016). Another powerful form of learning is to set personal standards through observing and reacting to an influential person’s actions and standards (Bandura, 1991). Bandura (1986) refers to this as social modeling; displaying standards and appropriate reactions for underestudies to see and emulate. This is a powerful form of tutelage, as the instructor shares these values and builds mutual support. Exemplifying your standards for students is more effective than simply writing them out to be read and expecting them to be followed (Bandura, 1991).

**Conclusion**

The preceptor’s role in the clinical setting is to help the student transition from a didactic learning environment to one that is full of complex interpersonal interactions. The cognitive load of both intrinsic and extrinsic learning can be overwhelming for a student to correctly evaluate their performance. Applying these feedback tips will ease the intrinsic burden and allow for the student to gain a better understanding of their performance, and if needed, what improvements need to be made. Since clinical experiences will be a new experience for many of the learners, the preceptor should understand that students may have a wide range of needs. Some of these needs may include knowing where and when to locate extra resources, how to interpret feedback, how to handle negative feedback, and create an action plan to improve. To help the learners advance in an effective manner, feedback must be provided with empathy, be accompanied with tips and mechanisms by which performance may be improved, and be based on clear objectives using task-related statements while being delivered in a considerate tone of voice and appropriate body language.

**Take Home Messages**

- Feedback needs to be provided in a direct, clear manner. Not in passing or in vague descriptions.
- Set clear expectations for your students and describe specifically what needs to improve when their performance is lacking.
- Encourage your students to perform their best and to keep working towards improvement.
- Immediate feedback is the best, with oppertunities to apply feedback.

**Notes On Contributors**

Jeff Barbee D.M.A., M.A. is an Assessment and Evaluation Specialist at the Indiana University School of Medicine.

Melissa Alexander, Ed.D. is an Educational Consultant located in Indianapolis, IN.
Jeffrey Penman, MD, is a retired OB/GYN and the medical education director at Franciscan Health.

Joseph Dynlacht, PhD, is a professor and the practice-based learning and improvement competency director at the Indiana University School of Medicine.

**Acknowledgements**

None.

**Bibliography/References**

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1991). 'Social Cognitive Theory of Self-Regulation'. *Organizational Behavior and Human Decision Process, 50*, 248-287. [https://doi.org/10.1016/0749-5978(91)90022-L](https://doi.org/10.1016/0749-5978(91)90022-L).

Barbee, J. (2017). *Formative Assessment: What is it? Why Should I use it?* (Unpublished Paper) Indianapolis. Retrieved from: [http://www.jefferybarbee.com/classroom-teaching-resources.html](http://www.jefferybarbee.com/classroom-teaching-resources.html)

Bembenutty, H., Cleary, T., Kitsantas, A. (2013). *Applications of Self-Regulated Learning Across Diverse Disciplines: A Tribute to Barry J. Zimmerman*. Charlotte, NC: Information Age Publishing, Inc.

Burke, D., Pieterick, J. (2010). *Giving Students Effective Written Feedback*. Maidenhead: McGraw- Hill Education.

Bynum, W. (2017, April). 'Assessing for Learner Shame Should Be a Routine Part of Remediation for Unprofessional Behavior'. [Letter to the Editor]. *Academic Medicine, 92*(4), 424. [https://doi.org/10.1097/ACM.0000000000001585](https://doi.org/10.1097/ACM.0000000000001585).

Carracicco, C, Englanger, R, Gilhooley, J., Mink, R., et al. 'Building a Framework of Entrustable Professional Activities, Supported by Competencies and Milestones, to Bridge the Educational Continuum', Electronic before print: [https://doi.org/10.1097/ACM.0000000000001141](https://doi.org/10.1097/ACM.0000000000001141).

Gill, S. G. (2014). 'The Nature of Reflective Practice and Emotional Intelligence in Tutorial Settings'. *Journal of Education and Learning, 3*(1), 86- 100. [https://doi.org/10.5539/jel.v3n1p86](https://doi.org/10.5539/jel.v3n1p86).

Hattie, J. & Timerley, H. 'The Power of Feedback'. *Review of Educational Research, 77*(1), 81- 112. [https://doi.org/10.3102/003465430298487](https://doi.org/10.3102/003465430298487).

Kanfer, F. H., & Gaelick, L. (1986). Self-management methods. In F. H. Kanfer & A. P. Goldstein (Eds.), *Helping people change: A textbook of methods* (3rd ed., pp. 283-345). New York: Pergamon.

Latham, G., & Locke, E. (1991). 'Self-Regulation Through Goal Setting'. *Organizational Behavior and Human Decision Process, 50*, 212-247. [https://doi.org/10.1016/0749-5978(91)90021-K](https://doi.org/10.1016/0749-5978(91)90021-K).

Lefroy, J., Hawarden, A., Gay, S., McKinley, R., et al. (2015). 'Grades in Formative Workplace-Based Assessment: A Study of What Works For Whom and Why'. *Medical Education, 49*, 307-320. [https://doi.org/10.1111/medu.12659](https://doi.org/10.1111/medu.12659).

Machera, R., & Machera, P. (2017) Emotional Intelligence (EI): 'A Therapy for Higher Education Students'. *Universal Journal of Educational Research, 5*(3), 461-471. [https://doi.org/10.13189/ujer.2017.050318](https://doi.org/10.13189/ujer.2017.050318).
Nguyen, Q., Tempelaar, D., Rienties, B., & Giesbers, B. (2016). 'What Learning Analytics-Based Prediction Models Tell Us About Feedback Preferences of Students'. The Quarterly Review of Distance Education, 17(3), 13-33.

Orsmond, P., Maw, S., Park, J., Gomez, S., et al. (2013). 'Moving Feedback Forward: Theory to Practice'. Assessment & Evaluation in Higher Education, 38(2), 240-252. https://doi.org/10.1080/02602938.2011.625472

Schon, D. (1987). Educating the Reflective Practitioner. San Francisco: Jossey-Bass.

Schunk, D. (1999). 'Social-Self Interaction and Achievement Behavior'. Educational Psychologist, 34, 219-227. https://doi.org/10.1207/s15326985ep3404_3

Schunk, D. (1996). 'Goal and Self-Evaluative Influences During Children’s Cognitive Skill Learning'. American Educational Research Journal, 33(2), 359-382. https://doi.org/10.3102/00028312033002359

Schunk, D. & Pajares. (2007). 'The Development of Academic Self-Efficacy'. In A. Wigfield & J. Eccles (Eds), Development of Achievement Motivation, (16-33), San Diego: Academic Press.

Schunk, D. & Zimmerman, B. (1997). 'Social Origins of Self-Regulatory Competence'. Educational Psychologist, 32, 195-208. https://doi.org/10.1207/s15326985ep3204_1

Senemogly, N., & Fogelman, K. (1995). 'Effects of Enhancing Behavior of Students and use of Feedback-Corrective Procedures'. The Journal of Education Research, 89(1), 59-63. https://doi.org/10.1080/00220671.1995.9941194

Sharma, R., & Writer, S. (2015). 'Cognitive-Behavioural Approach In Mentoring College Students For Personal Effectiveness: An Empirical Study'. Scholedge International Journal of Multidisciplinary & Allied Studies, 2(5), 36-42.

Wolff, M., & Santen, S. (2017). 'Role of Informed Self-Assessment in Coaching'. In N. Deiorio, & M. Hammoud (eds). Coaching in Medical Education: A faculty Handbook. (20-26). American Medical Association: https://www.ama-assn.org/education/coaching-medical-education-faculty-handbook#Letter%20From%20the%20Editors%20&%20Preface

Zimmerman, B. (2008). 'Investigating Self-Regulation and Motivation: Historical Background, Methodological Developments', and Future Prospects. American Educational Research Journal, 45(1), 166-183. https://doi.org/10.3102/0002831207312909

Zimmerman, B.J., & Schunk, D.H. (2004). 'Self-regulating intellectual processes and outcomes: Social cognitive perspective'. In D.Y. Dai, & R.J. Stenberg (Eds.), Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development (pp. 323-350). Mahwah, NJ: Erlbaum.

Ziring, D., Danoff, D., Grosseman, S., Langer, D., (2015). 'How Do Medical Schools Identify and Remediate Professionalism Lapses in Medical Students? A Study of U.S. and Canadian Medical Schools'. Academic Medicine, 90(7), 913-920. https://doi.org/10.1097/ACM.0000000000000737

Appendices

None.
Declarations

The author has declared that there are no conflicts of interest.

This has been published under Creative Commons "CC BY 4.0" (https://creativecommons.org/licenses/by-sa/4.0/)

Ethics Statement

This paper does not fall under the needed approval guidelines.

External Funding

This paper has not had any External Funding

AMEE MedEdPublish: rapid, post-publication, peer-reviewed papers on healthcare professions’ education. For more information please visit www.mededpublish.org or contact mededpublish@dundee.ac.uk.