Preparing for feedback in context of competency based medical education undergraduate training in India

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Abstract

Feedback is the essence of competency-based medical education (CBME), and an integral part of any assessment program. Though the competency framework provides multiple opportunities for feedback, it will have to be closely interwoven with every spoke of the wheel of the curriculum, as the curriculum rolls-over on the practical ground. The need to provide good feedback has been the major driver for advent of workplace-based assessment (WPBA) and other tools to assist criterion based and objective observations. Though it is essential to embed feedback longitudinally into the new competency framework and in CBA, we are uncertain as to how feedback is being currently practiced within the local culture; hence, a lot of groundwork needs to be done. We need to first identify opportunities for feedback within the competency framework, then reach a consensus on them through deliberations within our own departments so that feedback carves the much needed niche in the blueprint that universities will create to follow the competency framework in "letter and spirit".

Deliberate opportunities for feedback will have to be created in each phase and in the blueprint for each subject taught in that phase, in order to ensure that feedback becomes a reality rather than mere assumption. Preparedness at both the giver and receiver's end, in a nonthreatening, congenial environment, needs emphasis at this juncture. This article explains the purpose of feedback, components of an ideal feedback and functional logistics.

Key words: competency-based, medical education, assessment, formative assessment, feedback

Introduction

Competency Based Medical Education (CBME) curriculum has been introduced for the training of medical under-graduates in India which uses competency framework for teaching, training and assessment of undergraduate medical students in Indian medical schools. In the competency framework thus formalized; Competency-Based Assessment (CBA) will form a useful yardstick for assessing both learning and the learning behaviours.

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Competency-Based Assessment (CBA) will differ from traditional assessment in that while the latter was norm-referenced, CBA is criterion referenced and it is for this reason that criteria for assessment will have to be predefined. Acquiring competencies in CBME will be 'incremental' and hence, as learning of a given competency progresses, students will need guidance and feedback at every step (Assessment Module for Undergraduate Medical Education, 2019, MCI, 2019b). They cannot be left entirely on their own. CBA blueprint must offer multiple opportunities to promote longitudinal professional development of the students [Figure 1]. This paper focuses on various aspects of feedback and functional logistics in the competency framework so that feedback is received, given and utilized well as it wades its way through fragile alleys of complex human emotions.

Purpose of Feedback

The purpose of feedback will have to be specified and communicated well to the

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stakeholders. Sometimes the purpose of feedback understood by the two stakeholders -

Figure 1: The linkages of competency-based assessment

the teachers and the students is very different. Unification of the thought process will lay an even background for fruitful learning; otherwise the very purpose of the feedback will be defeated. Specific rather than generalized feedback, will be of greater value. Content specific assignments like skill training, clinical reasoning, establishing differential diagnosis, will qualify for specific feedback.

Utility of feedback in the CBME infrastructure

Since CBME offers more opportunities for two-way communication, facilitating student and teacher to converse during acquisition of competencies, the 'utility' and 'purpose' of feedback in CBME, must be well understood well and for this we suggest the simple acronym, ''RACE'' - R- Reality check, A-Assessment ally, C-Corrective, and E-Evaluation aide. Let's see how the significance of feedback in CBME can be summarized through this acronym "RACE".

R - Reality check: Along the path of realization of the outcomes

Timely feedback will help us decide whether the desired outcomes were realized or not during various stages of acquisition of a competency. Feedback should be based on direct observation and this is possible when using assessment tools like Direzct Observation of Procedural Skills (DOPS) and Mini-Clinical Evaluation Exercise (mini-CEX).(Singh, Kundra and Gupta, 2014, P.716; Singh and Sharma,2010, p.100). Objective assessment tools like Objective Structured Clinical Examination (OSCE) can be very useful when used judiciously (Gupta, Dewan and Singh, 2010, p. 211)

A - Assessment ally

Assessment and feedback are inseparable duo and in CBME, one feeds the other [Figure 1]. For feedback to be a true assessment ally, the criteria for actual performance and opportunities for feedback, especially during formative assessment, will have to be well defined at the outset.

We must keep in mind that while giving feedback, the process itself may introduce a bias in the mind of the teacher who eventually also assumes the role of an assessor (Cavalcanti and Detsky, 2011, p.993). Feedback may affect mental processes of evaluators as the human mind naturally tends to aggregate past performances, and impressions. This 'mentoring bias' may thus influence the final assessment, turning our strongest ally into a weakest link. It is for this reason that the art of giving feedback, internalizing feedback as a tool for learning, will have to be taught, not assumed to make feedback more authentic.

C - Corrective: Feedback signals where and what corrective measures to be taken

Feedback is anticipated to provide a platform for prompting timely change of behavior through corrective measures by offering solutions well in advance for the learner, before the eventual harm is done (Price et al, 2010, p.278). Hence, constructive feedback will be needed to guide cognitive and meta-cognitive processes much before the wrong concept gets calcified and lead to distorted learning (Vickery and Lake, 2005, p. 267).

E –Evaluation aide: For program evaluation

Feedback is the central point, the fulcrum, helping students to improve and the teacher to improvise. It shall be of great help during the process of implementation of CBME, for exploring gaps between the intent and the outcome. Feedback on teaching processes will inspire innovation and add context to the instructional design. Teaching methodologies and assessment methods can thus be aligned to competencies and eventually to professional needs.

Functional Logistics

Most often, in our routine teaching, the process of learning halts at the level of "task completion "only. This assumes that the task has been learnt as well as assessed; hence, the chapter can be closed. During this entire process, it may happen that the learners did not seek feedback or reflect on their performance. This may lead to incoherent-haphazard learning and lost opportunities to be mentored. The art of giving feedback will have to be taught, not assumed (Figure 2).

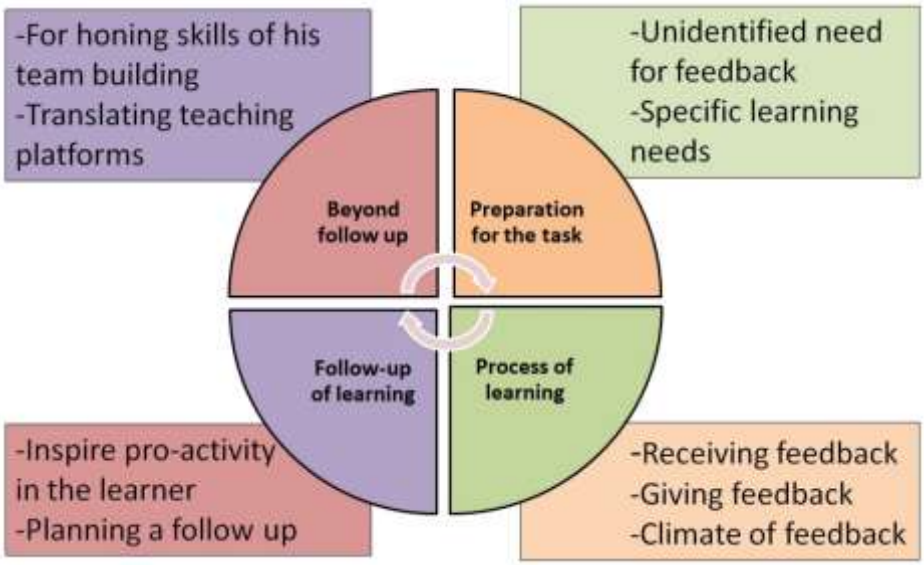

Figure 2: Feedback helping in task acquisition in CBME at different levels

We can initiate the culture using a stepwise approach:

STEP 1: Faculty sensitization for emphasizing the need for Feedback in CBA. The current Faculty Development Programs (FDPs) in India have a session on feedback for sensitizing faculty. However more such sessions can be taken at in medical schools, if required.

STEP 2: Deliberation in all subject specialties of different phases of MBBS, for identifying areas where informal opportunities for CBA exist in each subject area. During deliberations, these opportunities must be conceived and charted out.

STEP 3: Create a blueprint of CBA in black and white and outline feedback opportunities very clearly for example, feedback must follow formative assessments and at various stages of skill acquisition.

Feedback will provide collateral support to the entire process of learning and will support the fluid cognitive processes while they are being

consolidated in the mind. However, it will be most effective when woven into the blueprint in a manner that opportunities for feedback are neither too scarce nor too many to be annoying.

STEP 4: Improvise the blueprint through critical analysis at each step and introduce reforms and innovations in the blueprint. The modified blueprint can be used for subsequent sessions/ batches of students.

Research can be undertaken using this sequence of steps as it will give impetus to creating a culture of using feedback for improvisations through research and innovation. This process will have to be repeated until the program aligns with principles of CBA. The entire process will need patience and time.

How to Create a Milieu Conducive to Feedback

The feedback milieu comprises of three mutually interdependent components - the student, the teacher and the environment. Let us explore feedback in context to each of them for a constructive synchrony.

Students

Create self-awareness among students to seek feedback

For feedback to be effective, the receiver must be convinced that he/she needs it, only then will they seek feedback (Epstein, 2007, p.392). Introducing the 'disclosure model of self-awareness', also referred to as the 'Johari window', to students can be one of the early initiatives. They can be sensitized through small group discussions, role plays, videos, during foundation course and departmental orientation programs that seeking feedback can help them learn better by reducing the 'blind spot' and the 'hidden area' which represents lack of awareness about self. Blind spot represents a part of us, our abilities and inabilities, which is not known to us, but known to others (Luft, 1961, p.1). The larger the blind spot, the lesser is self-awareness. Feedback expands the 'open area' of Johari window which represents the space known to self and to others. As open area expands, each us becomes more evolved, more aware of our strengths and weaknesses and consequently more receptive to seeking and receiving feedback. This can help the learner improve upon their weaknesses and optimizing their strengths.

A Pro-active learner voluntarily seeks feedback and is neither hesitant, nor defensive. Staying proactive can be inculcated by creating opportunities for reminders in the logbook or setting up timelines to help track milestones.

Encourage students to reflect on specific learning needs / difficulties

This can be done by inculcating a habit of reflecting. Logbooks and Portfolios can document reflections and feedback so that specific learning difficulties are identified by the student himself/herself and the same can be timely sorted out.

Teach the art of 'receiving feedback'

Receiving feedback gracefully is an art, a behavior, a complex psychological process which is as relevant to the learner as giving feedback is to the teacher or instructor. If the receiver is unable to perceive the benefits of the feedback or is not taught how to receive the feedback, even the best of the feedback will fail. Factors that can help the learner to receive feedback positively have been underscored in Box 1.

Box 1: Factors that can help learners receive feedback positively

- Identification of the need for a specific feedback
- Requesting a specific feedback by prior self-analysis
- Balancing emotional responses to the feedback received
- Preparedness for accepting faults

The learner must remember that the purpose of feedback is not to be praised or applauded; it's an opportunity to interact with the teacher for self-improvement, irrespective of the way it is conveyed. Though most teachers know how to envelope the bitter truth into a palatable sandwich, the prepared mind knows how to concentrate on its learning goals and together, they can overcome the initial bottlenecks better.

Teachers

Teachers must Practice the art of giving feedback

Teachers must consciously practice the art of giving feedback. The learner may hesitate to come to a teacher for seeking feedback for fear of being rebuffed and humiliated or due to the rigid hierarchical trends. If the teacher can take the first step forward, ask students to spell their inhibitions and problems and make a conscious effort to reach out to them, and then it is likely that these mental roadblocks clear up. Informal, but deliberate problem-solving sessions and group discussions can break patriarchal patterns

A. Scaffolding as a model for corrective feedback: Scaffolding can be a useful model, especially when giving feedback to students with different levels of competence. It has not only been found to correct errors but also to improve retention and memory of the learned facts (Finn and Metcalfe, 2010, p.951). It uses cues to find gaps in learning. Learners at a higher competency levels need fewer numbers of cues than those at a lower level of competency. Scaffolding does not involve overt remarks and hence is a student–friendly, courteous way to correct, explore the weak links in task acquisition and to give specific feedback. It thus offers a platform for supervised, specific and yet camouflaged hand holding for relatively slow learners. Hattie and Timperley, (2007, p.83) state that though the average effect size of 0.79 has been documented for feedback in literature, all forms of feedback don't have the same effect. Cues and reinforcement have the highest effect size of 1.10 and 0.94, respectively, compared to praise (0.14 effect size) and reward (0.31 effect size) (Hattie and Timperley, 2007, p.83).

B. Avoid cognitive load during feedback: The cognitive theory propounds that our working memory and the extent to which we can imbibe new concepts, is bound by the limitations (Jong, 2010, p.105). The extent to which new information must be fed will depend on the complexity and level of competency being addressed. Try not to give too many learning points on a single occasion. Use multiple opportunities. The teacher giving the feedback must be able to assess the acceptable cognitive load based on these characteristics of the competency being addressed.

Anticipate receiver's preferences for group / individual feedback

Group feedback is often preferred by the learners as it is less emotionally challenging. For group tasks like discussing paper cases, real cases, problem based learning, case based learning, scenario based learning, critical analysis and reasoning, bed side teaching, case presentations, seminars, group feedback may be effective as well as time saving, provided it is not derisive. However, individual feedback may be given to poor performers/ low scorers or for repeated mistakes by the same student as he/she may need counseling on one-to-one basis and this must be documented in the log book even though limited amount of literature is available on the effectiveness of oral versus written feedback.

Environment: the climate of learning

This is a set of intangible factors that can influence the process of feedback to a variable extent. An encouraging environment, with due consideration to cultural differences can optimize learning through feedback in paternalistic and hierarchical culture, as is more prevalent in our country. Students must be encouraged to seek feedback in such a manner that it does not impinge on their self-esteem or else it shall be rejected at the very outset. A non- threatening environment is perceived as conducive to seeking feedback.

Essential Characteristics of a Good Feedback

In order to check if the acquisition of skill is taking its desired course, it is imperative that the essential dialogue must go on. Teacher will not be merely a preacher, perched high on hierarchical pedestal, but should be more of an approachable mentor. Those giving feedback must keep in mind certain essential characteristics that make feedback more worthwhile are:

Constructive

The most effective feedback is the one which is corrective and provides a sense of direction by suggesting an action plan (Hattie & Timperley, 2007). A follow up plan not only helps giving directions for future improvement, but it can also be used as a platform for setting higher goals for the next meeting. The students thus stay motivated in the intervening period. It has been reported that negative connotation in a feedback can be restrictive and can snatch away the motivation (Hattie and Timperley, 2007, p.81). If the feedback has to be given for repeating a competency, it can be expressed in a manner that it does not seem derisive or discouraging.

Timely

Concurrent /immediate feedback may be useful when performing simple tasks, during acquisition of simple skills in competency-based curriculum (Hattie and Timperley, 2007, p.98). However, the very same immediate feedback may be destructive to flow and spontaneity required for simulation based tasks. But feedback for acquisition of complex competencies like communication skills and professionalism can be dealt differently. For these competencies, spontaneity and flow of learning is best left unhindered until the completion of task. In such situations feedback may be noted down for all critical steps but conveyed at the end of the task. However, complex tasks must be observed carefully, and the teacher should be able to deconstruct it into smaller steps if the need for a specific feedback arises. This deconstruct can be planned beforehand, based on standard procedural steps/protocols, past experience of the teacher and the common mistakes of learners.

Based on direct observation

Feedback must be based on direct observation; hearsay may not reveal the right picture and to qualify as authentic (Shah et al, 2016).

Specific

Since some competencies will be documented in the logbook and will have to be compared with standard criteria, such tasks can be preceded by explaining the criticality of the competency and explaining the rights and the wrongs precisely and succinctly.

Opportunities for Feedback in CBME

The success of CBME depends heavily on learner's ability to use feedback for honing skills and the teacher's ability to translate teaching platforms into opportunities for informal teaching and formative assessments .The all too familiar routine activities like cadaveric dissections, lab procedures, report interpretation, clinical encounters ,history taking ,ward leaving, seminars, journal clubs, case presentations have been and shall continue to be great opportunities for giving and receiving feedback without additional cognitive load, if systematically and intentionally added to the blueprint.

For skill acquisition, all opportunities for workplace-based assessments and the competencies to be acquired using skills lab, fall in this category. One can ask students to practice a skill and seek feedback in the beginning to confirm if they are going the right way. They may then practice the skill to their satisfaction and then again seek feedback during any stage of learning or when they feel they have mastered it. Guided instruction, a video library of carefully created or selected videos can be useful in the intervening period of self-practice.

Conclusion

The primary purpose of feedback resides in shared understanding of the purpose of feedback. For a teacher, the purpose may be encouragement and error correction while for the student it may be self-realization, seeking help and practicing the skill to perfection. An encouraging environment and words that inspire will be needed or else the feedback will be that deliberate sharp pebble strewn along the path, which bleeds the feet of the competency framework trotter.

Competency based medical education, when backed by a robust system of feedback, can bring about a change in behavior, perception and attitudes and inspire excellence in all domains of learning (KSAC). When judiciously and timely used, it can convert even the most basic curriculum into a document that spells excellence.

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