REVIEW ARTICLE

REVISITING FEEDBACK PRACTICES IN FORMATIVE ASSESSMENT OF INDIAN MEDICAL SCHOOLS

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The research in formative assessment (FA) has evolved over the years by shifting paradigms from its actual need in medical education to its important components (recent focus). The primary purpose is to make it more beneficial to learners for attaining mastery of educational tasks and to educational institutes to revisit and reorganize curricular strategies. The central component (i.e., formative feedback), though agreed principally, is practiced sparingly in Indian medical schools. The article reviews the emergence of feedback practices in FA in medical education. It proposes some alternative in-class techniques for sound feedback strategies that can be adopted in medical schools, which are otherwise facing the challenges of intensified workload and crammed schedules, to support learning.

FORMATIVE ASSESSMENT IN MEDICAL EDUCATION

Formative assessment (FA) is intended to help learner and the teacher to know the progress of the student in informal way and take remedial action in case of any difficulty. Educational experts earnestly recommend the use of FA in addition to summative assessment.[1] Importance of FA in student learning is generally acknowledged, but not well understood across higher education.[2] The focus should be on constructivist approach, emphasizing the principles of adult learning and placing emphasis on the student learning through constant feedback. However, in applying the wider educational literature to health care, it is still questionable if the paradigm shift in assessment culture has occurred as the majority of the existing literature is centered on summative assessment.

By revisiting the trends and beliefs of formative and internal assessments, among different medical institutes across India, few studies have attempted to highlight the watertight compartmentalization with regards to different forms of assessments.[3] The authors state that the mainstay should however be the continuous monitoring of students. A review of meta-analysis of meta-analytic studies indicates that feedback is the single most important factor to promote learning.[4] It is contemplated that for successful implications of FA as a tool for promoting learning, the results should be used not only to document the student's progress, but also to provide feedback while the student still has time to improve on the basis of the feedback. In fact, students have been reported to be more receptive to feedback in the absence of marks. It is appropriate to state that the primary concern of FA should be enhancement of the quality of learning, rather than measurement of limited learning.

FEEDBACK PRACTICES IN FORMATIVE ASSESSMENT

The concept of feedback in FA has been accepted and embraced across educational institutes to a certain extent, as evidenced by literature. Evidences suggest that quality feedback is not only just an essential component but also a central feature of FA. If FA and feedback is well planned and conducted in assessment practice, effective learning can be facilitated in everyday learning activity. Over the past two decades, there has been a shift in the way teachers and researchers write about student learning in higher education. Instead of characterizing it as a simple acquisition process based on knowledge transmission, learning is now more commonly conceptualized as a process whereby students actively construct their own knowledge and skills. Despite this shift in

conceptions of teaching and learning, a parallel shift in relation to FA and feedback has been slower to emerge. Studies have re-interpreted the research on FA and feedback to show how these processes can help students take control of their own learning—become self-regulated learners.[5] With this reformulation, there are seven principles identified for a good feedback practice that should be incorporated in FA s to help students develop lifelong learning capabilities. A feedback should:

1. Clarify what good performance is (goals, criteria, expected standards).
2. Facilitate the development of self-assessment (reflection) in learning.
3. Encourage teacher and peer dialogue around learning.
4. Encourage positive motivational beliefs and self-esteem.
5. Provide opportunities to close the gap between current and desired performance.
6. Provide information to teachers that can be used to help shape the teaching.

This shift in focus, whereby students are seen as having a proactive rather than a reactive role in generating and using feedback, has profound implications for the way in which teachers organize assessments and support learning.

Many studies define the formative role of a teacher in giving feedback and rate tutors practicing feedback as highly efficient. More recent findings ascertain the awareness of tutors with respect to their roles as primary providers of feedback.[5,6] However, the manner in which feedback should actually be delivered at different stages of training seems to be a matter of concern. Getting students cognitively engaged with assessment and feedback is more likely to be successful where there is a curriculum-wide approach rather than a module-by module approach where individual members of staff adopt different strategies or do not give feedback at all.[6] Faculties who consider adopting FA practices need to be aware of the various techniques that have an impact on the effectiveness on feedback. It is important to realize that they are intricately linked to enhancement of learning and have to be essentially interactive.[7] Unless there is a dialogue and the learner reflects on his/her performance and learning gaps, which is crucial for effective learning, it is worthless to supplement FA with feedback.[8,9] There are three elements recognized that make up constructive feedback: attention to the learner's production, appraisal against a reference framework to identify strengths and weakness, and an explicit response.[10] Grounding feedback within an overall approach that emphasizes ongoing reflective practice helps learners to develop the capacity to critically evaluate their own, to self-monitor, and to move toward professional autonomy.

OPTIMIZING FORMATIVE FEEDBACK

The rationale of formative feedback is to help learners to maximize their potential at different stages of training, raise their awareness of strengths and areas for improvement, and identify actions to be taken to improve performance. It is a part of the overall "developmental dialogue" or interaction between teacher and learner. It is most effective if it focuses students' attention on their progress in mastering educational tasks. It should be taken soon after a task is completed, and the student should be given opportunities subsequently to show learning from the feedback. A suggested set of standards for constructive feedback, developed after careful scrutiny of the principles, is given in Table 1.[11]

Table 1: Set of standards for constructive feedback

1. Well-timed and expected (as early as possible)
2. Based on first-hand data (without any intermediate source and through direct observation)
3. Confidential (to maintain trust and respect)
4. Quantity regulated (reasonable amount of information)
5. Balanced (appreciation for good things and suggestions for improvement)
6. Clear (in terms of goals, criterion, and standards)
7. Encouraging
8. Helpful (for teaching and learning activities, i.e., helpful in improving teaching and for achieving common academic goals)
9. Opportunistic (with opportunities for raising current performance to meet standard performance)
10. Purposeful (to plan a strategy, to improve results, to clarify standards, etc.)
11. Relevant and tailored (according to needs and interest of a student)
12. Factual (based on actual performance rather than assumptions or interpretations)
13. Descriptive (nonevaluative) specific (focusing the observed and changeable behavior).

With the evident increase in workload with demanding work profiles and increasing student strength lately, feedback is generally a neglected component after assessments. Though its merit is well acknowledged, the time constraints and the already compact curriculum do not allow adequate space for constructive feedback, reflect and re-perform to complete the cycle. Gibbs and Simpson[12] suggest few methods of implementing good assessment and feedback without dedicating excessive time, as stated below:

- Online, computer-graded homework and feedback.
- Peer instruction during class, posing questions,

student discussions about which answer is correct, voting on answer, instructor giving short lecture on which answer is correct and why.

- Regular in-class group exercises done in stages that include partial deliverables (sketches, lists, worksheet answers, and so on) that are discussed in class. Simply working in groups provides "instant" peer feedback (as above), and the whole class benefits from feedback that results from the instructor-led discussions at intermediate stages of the exercise.

- Just-in-Time Teaching: Web-based assignments due a short time before class, followed by discussion/lecture focusing on areas of student difficulty (often involves adjustment of teaching based on responses, for large classes, instructors usually go through a subset of the responses). Can also be implemented as quiz at start of class with electronically collected responses.

- Have some long-answer or essay-type questions on assignments, but only grade some of these (important to be clear to students that they will get some credit on a problem for turning something in, and a subset of those problems will be graded for marks—students won't know in advance which questions will be graded).

- Have multistage assignments with feedback in the middle that students need to use to complete assignment (way to get students to act on feedback).

- Peer assessment (important for instructor to provide good marking rubric). Imperfect feedback from a fellow student provided almost immediately can have much more impact than more perfect feedback from an expert many weeks later. Students learn a lot by doing peer assessments—particularly when done as a group activity.

- Self-assessment or reflection assignments (e.g., have students grade their own work using a rubric created by instructor, or have students go over a problem from previous assignment that they got wrong and explain what they did, and why it was not the correct approach).

- Two-stage exams: students take up exam individually first, turn their answers in, and then repeat the exam in groups. Students get timely feedback from each other and learn from the exam via reasoning with peers. They usually do significantly better on the group part *vs.* the individual part.

Varied techniques can be piloted and adopted for optimizing the worth of FAs. It is all about recognizing its worth and giving it space in an otherwise packed curriculum.

Literature recognizes considerable inequality between student and teacher perceptions regarding formative feedback and the need to coach learners to understand feedback to benefit from the same.[11-14] The quality of feedback includes both the accuracy/appropriateness of the teacher's response and effectiveness of communication to the learner. One common observation is that giving feedback is not a mandatory part of curriculum.[7] The curriculum should specify the feedback component in FA and consider it a mandate. Teachers should be motivated and trained to ensure feedback after FAs. Studies suggest organizing compulsory workshops and seminars for the teachers of the medical colleges to motivate and to ensure proper practice of feedback after the FAs.[15]

CONCLUSION

Systematic use of feedback as a support of student learning is a weak element in the educational practice of Indian medical schools, as evident by available literature. Likewise, teachers do not have systematic strategies for implementing feedback. Though giving constructive feedback in a time-bound manner is challenging, it is a worthwhile practice for its proven effectiveness in supporting learning processes.

Medical institutions across India have not yet developed a culture of assessment for learning with which all students and teachers are familiar. Students require a great deal of support in learning to use feedback; therefore, a consistent, curriculum-wide adoption of feedback in FA practices is preferable to smaller-scale, module-based reforms. Also, the students need to be active in the developmental process and become active partners in assessment issues related to their own learning. Studies should be undertaken to emphasize the importance of feedback practice in medical schools. Alternative simpler and less time consuming strategies of providing feedback should be explored to combat the challenge of increasing strength of students. Likewise, it is prudent to analyze the ways in which feedback is best received and interpreted by different set of learners.

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