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Student Feedback in Medical Teaching Evaluation: Designing the Perfect Mechanism

Latika Mohan*, Rajesh Kathrotia and Sunita Mittal

Department of Physiology,
AIIMS Rishikesh

Ongoing evaluation and audit of the effectiveness of a teaching program is essential to constantly upgrade and improve upon the teaching learning experience, and do course correction for appropriate learning outcomes. There are several sources of information about the effectiveness of teachers. Faculty rating by students can be a useful and constructive tool for formative and summative assessment of an educational system (1). In the present context in medical education in India, it remains controversial and poorly utilized. Student feedback mechanisms are not professionally organized or planned. The instruments for feedback are not thoughtfully designed, validated and implemented. There is apprehension in the faculty about negative ratings with a potential fallout in terms of “professional melancholia” or a witch hunt by the administration (2, 3). This study aims to address the reasons why student evaluation has not formally been established into the system in Indian medical education, discusses what positive outcomes could be achieved by regular feedback and attempts to suggest solutions and methods to develop a simple feasible method of evaluation which can be effectively applied.

Medical education scenario in India: issues and difficulties

Student feedback has been proven by research to be valid and reliable and can provide valuable information for faculty, students and administrators for improvement of various courses in higher education (4). However, in medical education in India it is still controversial, and its mechanism poorly understood. Even if data is collected it does not find useful application in improvement of the curriculum or its implementation.

Most research on student evaluation of higher education has been from non-medical curricula, where faculty ratings are well established as a part of the system. These studies cannot be applied to medical education as the Medical curriculum differs in the four important ways which reflect teaching quality, i.e the structure, the processes, the learning outcomes and the individual teachers (5). The scenario in which a feedback mechanism from the students has to be designed is complex and needs to be understood if the feedback generated is systematically organized and to be used to improve the system.

The medical curriculum offers fewer choice options, and a fairly rigid structure is followed. The course is not modular and is covered over several years by various teachers on varied topics rather than it being taught in discrete cohesive modules. There is limited integration of various disciplines and in many instances the significance of a particular course of

***Corresponding author :**
Latika Mohan, Department of Physiology, AIIMS Rishikesh
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teaching is only understood by the student at a much later date. Designing a pretest, posttest and feedback for a concise module is relatively simple and specific, and feedback gained can be effectively applied to constantly improve upon the module and teaching effectiveness. The traditional Indian medical curriculum is vast and disconnected, and does not lend itself easily to constructive useful feedback and has been fairly resistant to change.

Clinical teaching and problem based learning are a significant part of the curriculum, making the process very different from other higher education teaching learning experiences (6, 7). Vast theoretical knowledge, practical training and deductive reasoning are intricately interwoven into the final outcome. The student imbibes the skills and attitudes of a doctor as he progresses through the system and often the process is physically and psychologically grueling. The best teachers are often the most unpopular.

The outcome of the process ideally would be to have a good basic doctor, well trained to deal with the Indian medical challenges. The assessment system, that is to evaluate this ability, has become more and more theoretical and reliant on multiple choice questions which do not efficiently evaluate the proficiency of the student in the field, in a practical setting. There is a parallel system of coaching for post graduate entrance examination, which occupy the students time and focus, and often are more “popular” with the students. The final learning outcomes of the two processes are different, the medical curriculum focusing on developing a good basic doctor, with clinical skills and appropriate attitudes, and the coaching class increasing the knowledge base with expertise in solving multiple choice questions. The latter becomes more attractive to the students, ambitious to reach the next level. There are therefore inherent biases to student feedback on assessment process, which would come in the way of designing an appropriate feedback tool.

Finally, a medical teacher performs multiple roles in teaching, research and patient care. Resources to teach are often inadequate and most institutions are plagued by shortage of teaching staff. There is pressure to develop a research profile on the faculty which has over the last few years become essential for placement and job enhancement. The clinical load in most teaching hospital is substantial, leaving the medical teacher with little time to prepare for the teaching activity.

There is much scope for improvement in the present system, and keeping in mind that the fundamental structure and implementation of the curriculum is not likely to change in the near future, there is a need to identify those aspects which feedback would be useful and how it may be implemented and incorporated into the system.

With the above aspect in mind a short online survey was carried out among faculty members of different medical colleges to explore some questions related to student feedback. We received about 39 replies and on evaluation the following points could be highlighted.

In response to question of ‘should student evaluate teachers?’ we found majority (78%) of the teachers agreed that student should evaluate teachers while only 9.38% disagreed. The rest were not sure (Fig. 1).

Opinion to second question‘ what points should student evaluate the teacher’, we found majority (75%) opined that teaching quality should be evaluated. However, some also supported that curriculum and process of teaching syllabus and assessment methods should be evaluated (Fig. 2).

When asked about the advantages and disadvantages of obtaining feedback from student. Most teacher (84%) selected improvement of teaching methods as best advantage while identifying teaching shortfall and better preparation for lectures were other advantages (Fig. 3). Most (86%) suggested that the utilization of feedback by administration against faculty as most dreaded disadvantage while decreased confidence among teacher as other disadvantage (Fig. 4).

This points are further dwelled upon in details and an attempt is made to explore valuable ingredients

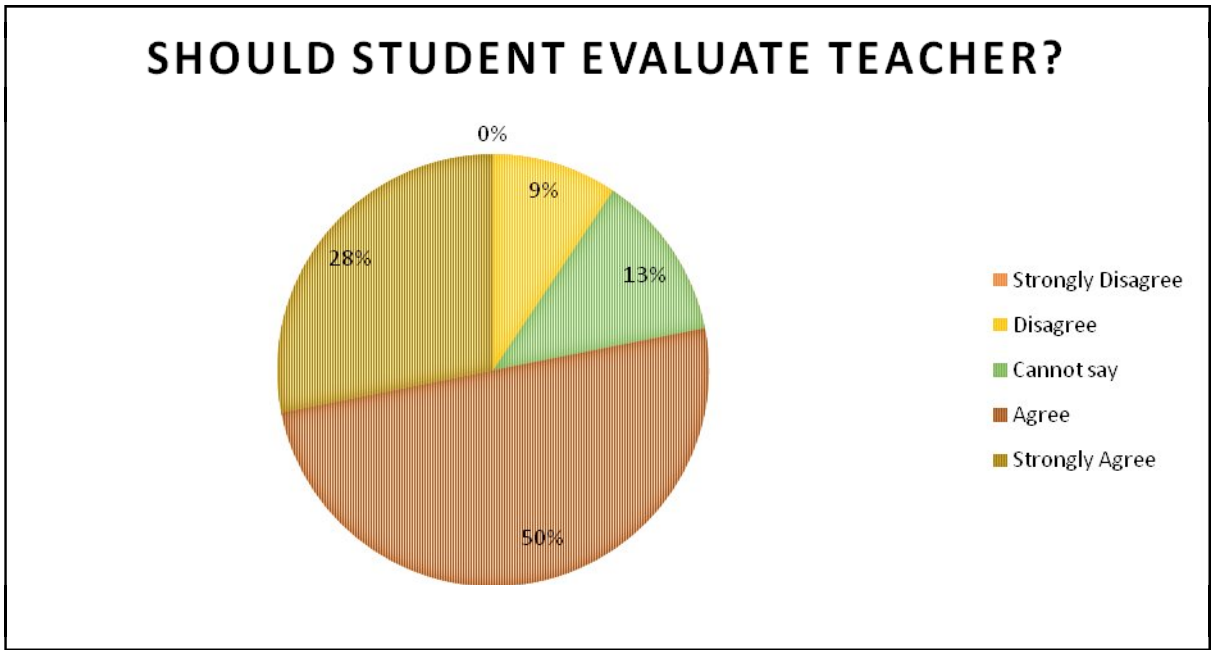

Fig. 1: Should student evaluate teacher? Responses as percentages.

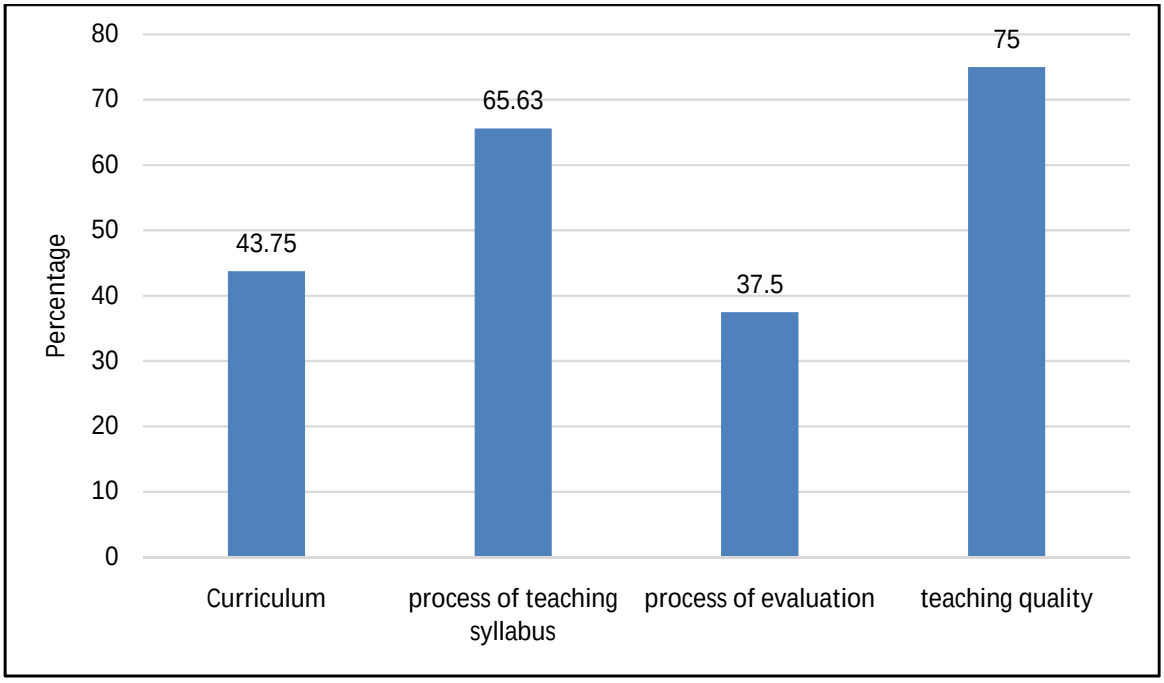

Fig. 2: What student should evaluate? Responses as percentages.

to be included in feedback to make a robust system.

Are students qualified to rate their teachers? What are the sources of bias

There are limitations to student ratings, and there are several aspects of the teaching learning experience that the students are not qualified to rate. The depth and breadth of the professor's knowledge, the content expertise are beyond the scope of student evaluation and should not be included in the

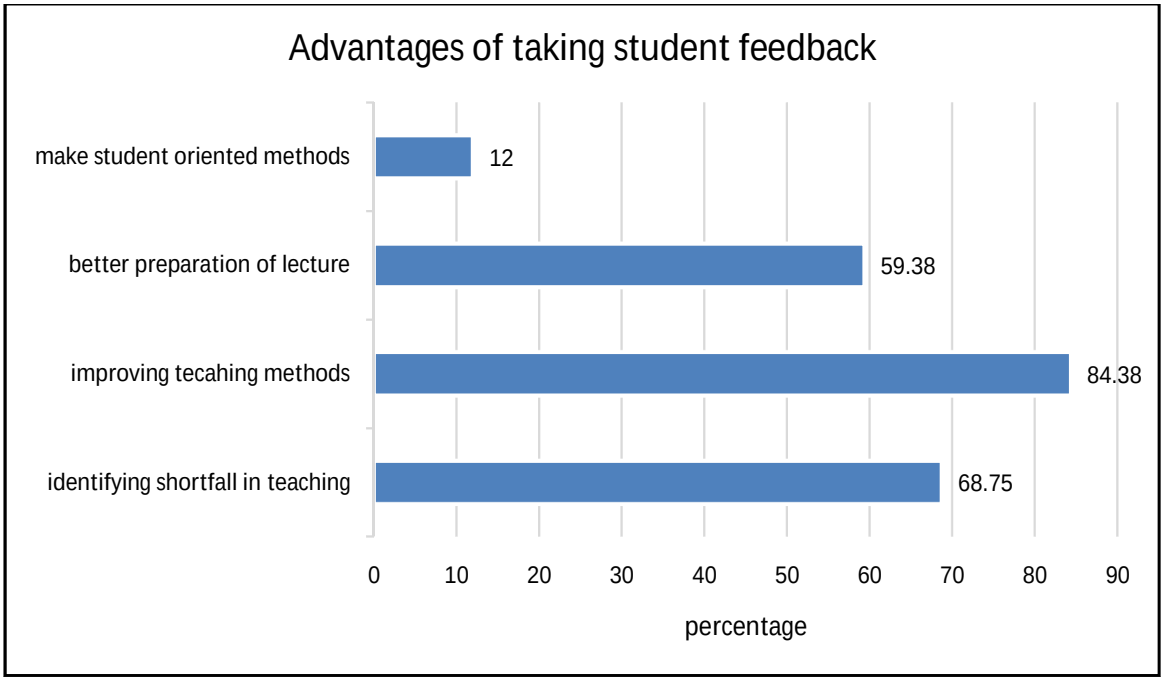

Fig. 3: Advantages of taking feedback from students-responses of teachers as percentages.

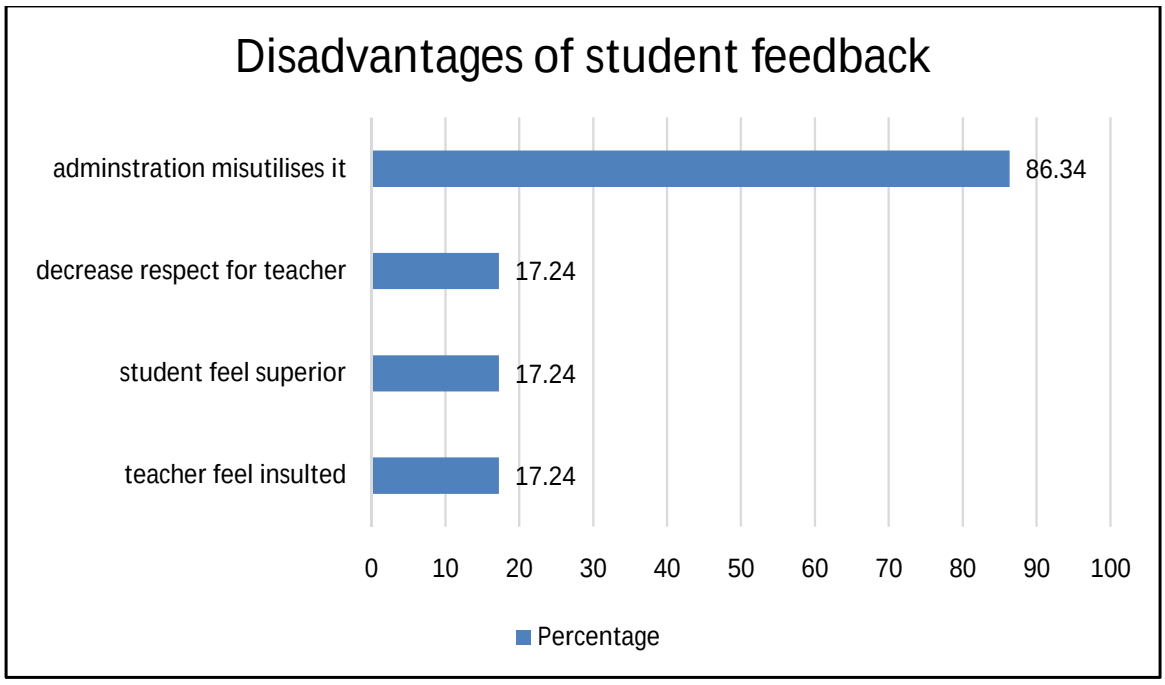

Fig. 4: Disdvantages of taking feedback from students-responses of teachers shown as percentages.

instrument designed for the purpose. Other aspects which contribute to teaching effectiveness such as teaching methods, use of technology, assessment methods students can give a certain degree of feedback, but it must be complemented with peer review or other professional methods of feedback (8). Students give only one facet of the information that is required to judge teaching effectiveness and if that alone is used it is incomplete and biased. There are several other sources of evidence for teaching

effectiveness. These include peer observation, peer review of course materials, external expert ratings, self ratings, videos, exit and alumni ratings and learning outcome measures to name a few.

Students are certainly qualified to express their satisfaction or dissatisfaction regarding the teaching learning experience, but there are several sources of bias which may be inherent, one being “Popularity” of the teacher. Good showmanship doesn’t necessarily mean a good teaching in terms of the final educational outcome. However, the students may express the classroom experience with a popular teacher in a very positive evaluation (3, 9).

Students grading and performance in examinations can be another source of faculty evaluation, but this too has its pitfalls. If other factors are controlled, research suggests that lenient inflated grading by a teacher in assessments can increase students ratings of a teacher, not necessarily reflecting better teaching quality (10).

The type of course taught, its relevance to the student’s final professional requirement may also have a bearing on the student evaluation or assessment, where highly theoretical courses which may be mundane or boring getting poorer ratings as compared to practical more clinically relevant courses which students enjoy. Both aspects may be essential to the final curriculum (11).

Finally, it is questionable whether students are qualified to rate the teaching quality while still in a course or not. Many believe that students understand the significance of a learning experience only several years later when working in the field. There have been studies on this which suggest that student ratings are fairly consistent over time and teachers or courses which were highly rated while in the course of instruction are still rated highly even after 13 years of joining the work force (3).

Research suggests the most consistently reliable outcome measure of a classroom experience is assessment of the learning outcome. Learning outcome may be assessed in an ongoing day to day formative manner, using both theoretical and practical tools (12).

What are the characteristics that students can rate and what is the purpose?

Purpose of collecting student ratings may be towards formative or summative assessment (3, 13). Formative assessment aims to use information collected to review and improve the teaching effectiveness. Information may also be collected to make decisions upon merit, promotion and tenure, and qualifies as summative assessment. Summative assessment should rely upon several sources of information aside from student feedback alone, and various other resources used as mentioned earlier in the text. Summative assessment that relies heavily upon student’s ratings alone is a main source of anxiety and disfavor amongst faculty. Centra (1993) suggested that all teacher evaluations by students be for formative purposes only initially and should help and encourage teachers to identify what is required of them (14, 15).

Once the purpose is defined, there are several domains of the teaching experience which the students can observe and these have been discussed in various reviews A Student evaluation tool designed in a management institution through a rigorous process involving students and faculty identified 10 key areas that the students can observe (16) :

Course Design

Instruction skills

Depth of knowledge

Facilitation skills

Student faculty interaction ability to motivate

Quality of assignments

Organization of assessment

Quality of feedback

A focused group discussion with medical faculty brought out the following elements :

Arousing interest in the subject that is taught

Organization of content in a sequential and logical manner

Quality of transference of information

Ability to contextualize the learning

Effective utilization of teaching aids

Ability in facilitating appropriate psychomotor skills

Role modelling appropriate attitude

The fundamental point is the ability of the teacher to engage the attention of the student, stimulate the learner to understand the topic being taught, and connect with previously known information. Clinical medical teaching also requires transference of psychomotor skills and attitude building of correct communication skills and empathy and compassion. These factors can be kept in mind while constructing an appropriate evaluation tool. It is important to keep in mind while designing the tool to ensure that one is actually objectively assessing teaching effectiveness and not “consumer satisfaction”.

Another aspect of discussion is that whatever the evaluation tool developed the students need to be sensitized as to the purpose of the tool and how to use it. The final purpose is to foster open communication and a climate of trust between the teacher and the learner. At no point should the teacher feel humiliated or the student be placed in a position that he/ she may be victimized (18, 19, 20).

Formal and informal Methods for taking student feedback after a single class or short course by a teacher :

The two ways to ensure that a system is followed are either to keep it very simple and informal, or to configure it into routine practice and into a time table. Faculty has traditionalized taking attendance at the end of a lecture. Formative feedback mechanisms have to be similarly structured into the system and reviewed in an ongoing manner, as either a self-evaluation by the concerned teacher or by peers or the administration.

Simple methods of self-evaluation feedback are informally practiced by almost all faculty in the form of eye contact, discussion, clarifications and similar activities. A quick and useful model at the end of a course of instruction is to pass around a shoe box, where written anonymous feedback can be collected. Once the chits are read, very often teachers “blind spots” or tricky areas come to the forefront and can be rectified. An oral vote at the end of a class regarding teaching effectiveness can be taken. Technology and smart phones are available with most students and faculty, and quick online surveys can be designed which can be filled up using social media.

To develop a validated tool which can be applied to give continuous aggregated quantitative assessment data, which can be applied across medical colleges across the country requires deeper research, using focused discussions between all stakeholders, students, administration and faculty with gradual sensitization of the whole community that the process of feedback is essential, its purpose not to victimize, and part and parcel of a healthy academic milieu. The students rating scale has to be tailored to the specific medical education scenario, where clinical teaching is akin to an apprenticeship, and developing psychomotor skills and appropriate attitude are also kept in mind.

After designing an appropriate tool, the student ratings data can be continuously collected using even a smart phone application. Daily classroom feedback data can be generated as can cumulative data collected over courses to give percentile feedback over several classes or even a complete course. In the present scenario, legal aspects would also be have to be considered, including confidentiality of data generated, its potential for misuse and these issues would have to be factored into the system (1, 3).

Conclusions

The use of student ratings for evaluation of teaching effectiveness in medical education in India is in the

present context is in its infancy. Most institutions have disorganized or limited systems for feedback, of cosmetic value rather than serving a systematic purpose for audit and improvement. The curriculum as it is being implemented at present does not take the student as a stakeholder in the education process. It is the need of the hour to develop a robust feedback system that can be applied for formative assessment and improvement of medical teaching across institutions in the country.

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