



SUMMATIVE EVALUATION OF TEACHING USING STUDENT FEEDBACK

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Abstract

The MET Project lists feedback as one of the benefits to student surveys, explaining that results can identify strengths and weaknesses. Evaluation of feedback can be formative or summative way. In the present study we have evaluated the overall quality of biochemistry teaching in Karpagam Faculty of Medical Sciences & Research over a period of one year using summative feedback, as a tool. A total of 135 second year MBBS students were included in the study. Feedback form, in the form of questionnaire, which included 27 questions, was asked to be filled by the students. Around 43% of the students said that there was very good student-teacher relationship throughout the first year in the department of biochemistry. 80% of the students in this study said that the teaching helped them score. Only 1% found lectures to be boring. 57% of students preferred small group discussions. 42% of students gave four stars to teachers and the department.

Key Words: Formative, MET, Summative Feedback, Student-Teacher Relationship.

Introduction

Feedback is central to medical education in promoting learning and ensuring that standards are met.¹ It is a dynamic process that involves the teachers and the students to confirm positive behaviours' (by encouraging repetition) and correct negative ones (by encouraging a change).² The purpose of teaching is to promote and enhance learning. A multi-faceted and fair approach to evaluate the quality of teaching can identify strengths and weaknesses and allow teaching excellence to be rewarded or additional training to be provided where appropriate. There are large number of possible sources of feedback and evaluation data on both teaching and course quality. The most common source of input to teaching is feedback from students. Feedback from students' help teachers make good choices about what and how to change/refocus, if necessary. However, student feedback cannot be the sole criteria for judging the success of a course.^{3,4,5}

Advantages of using student feedback to evaluate course and teaching is that input is received from students, who have consistently observed the teacher over many hours, therefore the reliability is usually quite high.⁶ Limitations of using student feedback for evaluation of teaching includes: some of them are poorly constructed; in some systems, administrative procedures have not been standardized, so that results are not comparable from one faculty member to the next; some systems fail to take into account extraneous influences such as class size, student academic motivation, or course/disciplinary difficult; and, technical and statistical support is lacking for some systems, so that interpretation of results is problematic.⁶

Evaluation of feedback can be informative or summative way. Formative evaluation is aimed at personal teaching improvement. It provides an instructor information he/she can use in current and future classes. It is best done before the semester ends, so that changes made will directly impact the learning going on in the classroom. Summative evaluation on the other hand, is an after-the-fact assessment of a course e.g., end of semester evaluations.⁷

Research shows that student evaluations often are more positive in courses that are smaller rather than larger, and elective rather than required. Also, evaluations are usually more positive in courses in which students tend to do well.⁸

Questionnaires are well-established and widely used approach to obtain a systematic feedback from students. It helps to know how a large number of students have reacted to various aspects of a course or programme of study. A questionnaire is of different types and requires some knowledge and skills for construction. Either we can use an existing questionnaire, or, modify an existing questionnaire, or, devise one from scratch.⁹

To get a valuable feedback from students following things should be kept in mind:¹⁰

- Teachers should help students understand the distinction between criticism and feedback. Feedback describes what took place and what did not take place in terms of goals.
- Anonymous feedback should be taken.
- Encourage the students to focus their responses on behaviours and processes, not your personality.



- Teachers should use the data for improvement.
- Respond to students' feedback with proposed changes to the course.
- Reinforce mutual feedback by thanking students for their input.
- Reassure students that their feedback will not impact their grades.

There is no evidence on the number of times a teacher should be rated by their students each year. However, multiple feedbacks in one year could be more reliable and also reflect growth during the year.¹¹ After gathering feedback from students, it is important to analyse and interpret the feedback, agree on action, implement changes, and let the students know.¹² Students should know the actions that will or will not be taken on the basis of their feedback; else they will become less motivated to participate in future evaluation processes.¹³ It's up to faculty to respond to their feedback in ways that make it a learning experience for both parties. Some of the issues raised by students may be quite easily and quickly addressed and evidence of the actions that are being taken should be made explicit to students.¹⁴ Other issues that arise may not be so easily addressed and may require attention and action over an extended period of time.¹⁴

In the present study we have evaluated the overall quality of Biochemistry teaching in Karpagam Faculty of Medical Sciences & Research over a period of one year using summative feedback, as a tool, from second year MBBS students.

Materials and Methods

This study was done in Karpagam Faculty of Medical Sciences and Research, during the year 2014. A total of 135 second year MBBS students who have passed in biochemistry exam in first year were included in the study. Feedback form, in the form of questionnaire, which included 27 questions, was asked to be filled by the students. Questionnaire was based on student-teacher relationship and teaching in department of Biochemistry during their first year (2012-13) (Annexure I). Statistical analysis was done using Microsoft excel 2010 & SPSS 12. Percentage was calculated to evaluate the teaching in department of biochemistry.

Result

A total of 135 students were included in the study. Feedback was taken in the form of questionnaire. 27 questions in the form of multiple choices were asked to be filled by the students. Questions were based on student-teacher relationship in department and the overall learning/teaching experience of students in the department of Biochemistry for a period of 1 year (2012-13). Result of the study is expressed as percentage and presented as bar-chart and pie-chart.

Fig 1 shows bar-chart which represents student-teacher relationship in the department of biochemistry during the year 2012-13. Fig 2 shows bar-chart which represents students' learning experience in the department for a period of 1 year. Fig 3 shows a pie-chart, which represents the preferred type of teaching by students. Fig 4 shows pie-chart which represents the learning techniques. Fig 5 shows pie-chart which represents the students' participation in class discussions. Fig 6 shows pie-chart which represents what students want to be changed in department. Fig 7 shows pie-chart showing how the students rate the overall performance of department.

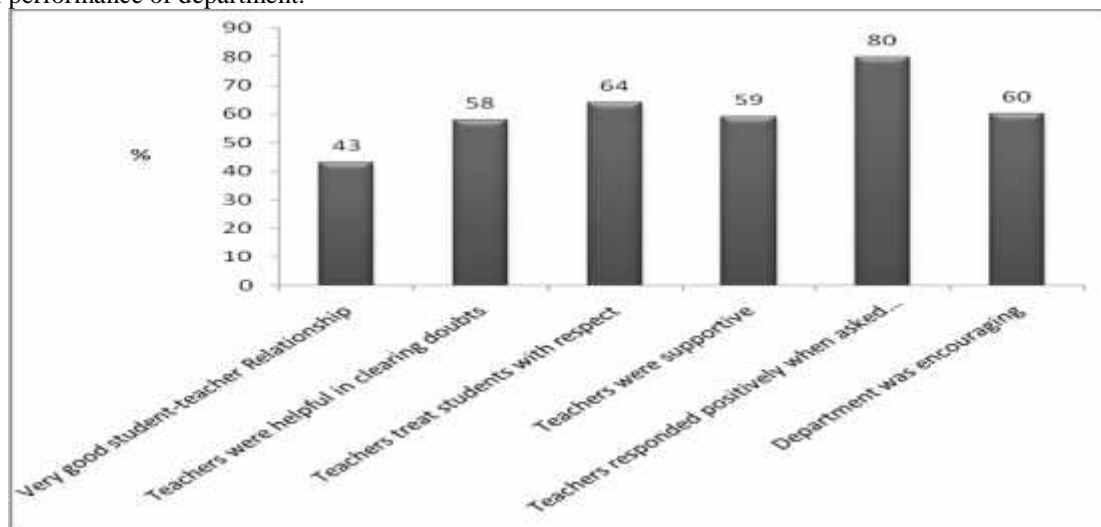


Fig 1: Student-teacher relationship



Fig 2: Teacher evaluation

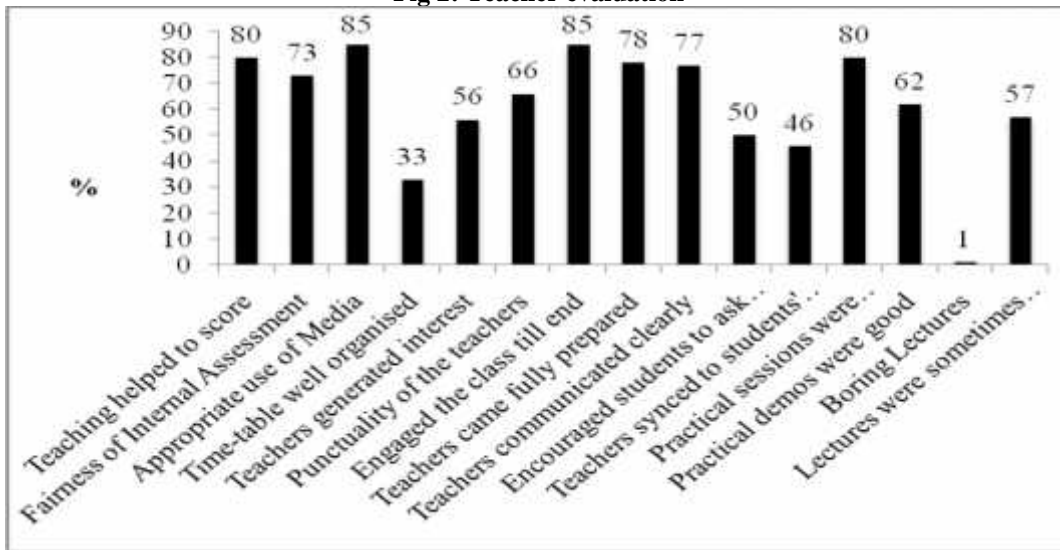


Fig 3: Type of teaching preferred by students

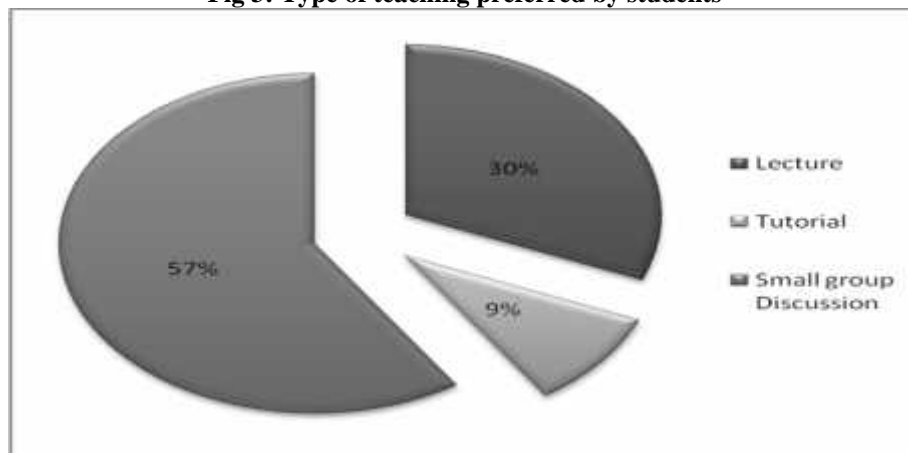


Fig 4 : Learning techniques

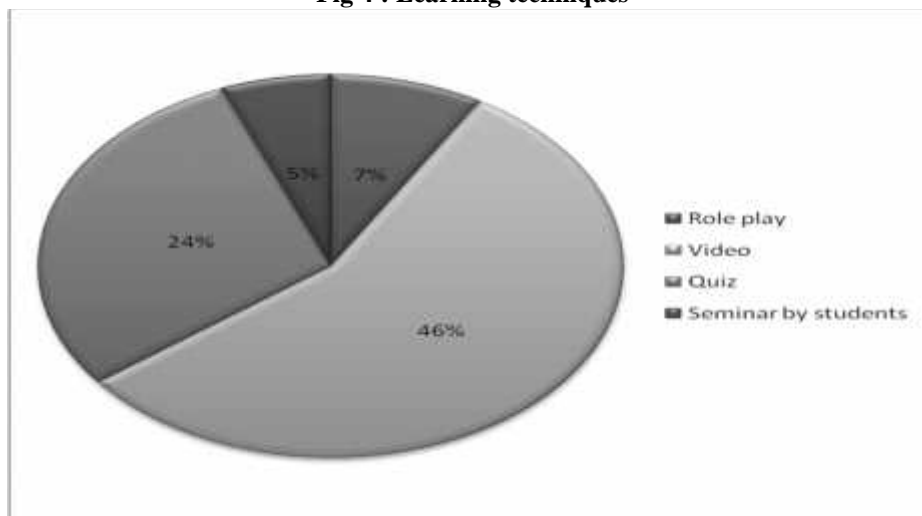




Fig 5: Student participation in class discussions.

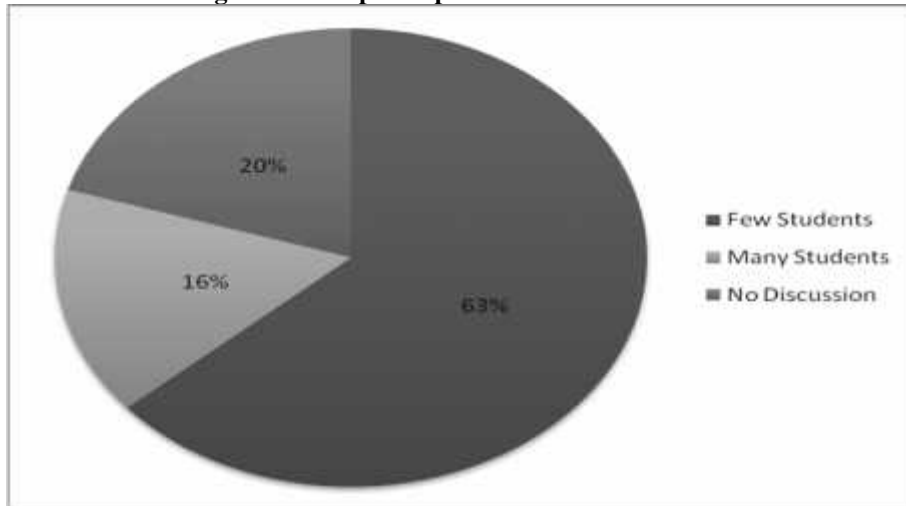


Fig 6: Changes to be made from existing teaching methods.

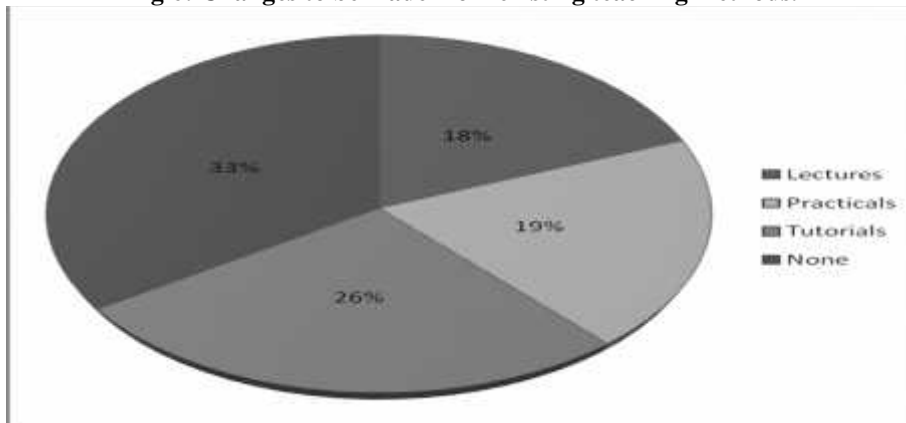
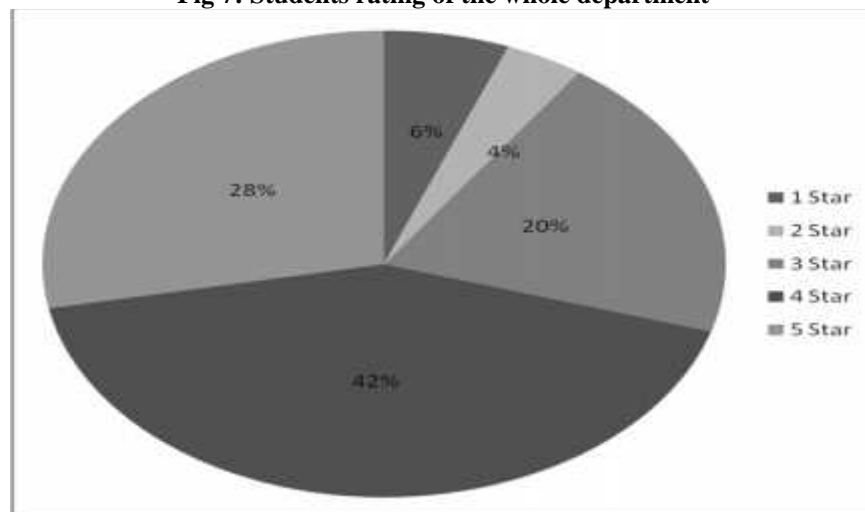


Fig 7: Students rating of the whole department



Discussion

Feedback is not praise or blame, but rather an indicator of what you did or did not do. Asking for student feedback connects students and instructors and creates a sense of good will. All we need to do is ask, and then be prepared to listen and act. A



useful feedback tells you something you did not know, which you want to improve, and indicate to you how to improve. Getting this type of feedback is usually difficult because students may be fearful of retribution, they may not be accustomed to being asked for input, and it conflicts with how they perceive their role in the class.

In the present study, we took an anonymous feedback. We took feedback from the students who have passed biochemistry to avoid subjective bias. If we collect the feedback from first MBBS students, who are appearing for the exams, they might not give correct feedback fearing that they may get victimised. Students were given enough time to fill the feedback questionnaire.

Teachers can affect student motivation in ways that either facilitate or impede learning.¹⁵ 80% of the students, in this study, said that the teachers responded positively when asked doubts (Fig 1). 64% of the students said that teachers treated them with respect (Fig 1). Around 43% of the students said that there was very good student-teacher relationship throughout the first year in the department of biochemistry (Fig 1). Richard Tiberius said, teaching simply cannot happen without teachers entering into a relation with their students.¹⁶ He ads, relationships are as essential to teaching as the flour in a cake. A personal connection between teacher and student is most important for student growth and for students' satisfaction with their education.^{17,18}

As teachers we have all seen two types of students. Some students are interested in the subject, willing to try new things, ask questions in class, and seek out new ideas. Some students are performance oriented ones. They are only interested in what is required for the grade. We as teachers should examine our own attitudes toward these students and their behaviour.¹⁵ We should never criticize them for their failures; rather, encourage them when they make progress. Whitman said in his study, teachers are motivators and experts.¹⁸ Of the factors that influence student learning, motivation is one of the most potent. 56% of students in this study said that teachers generated interest in the subject. 46% of students said that teachers synced to students level by adjusting the pace of class (Fig 2).

Engaging students in learning is principally the responsibility of the teacher, who becomes less an imparter of knowledge and more a designer and facilitator of learning experiences and opportunities.¹⁹ In our study, 85% of students said that teachers engaged the class till the end of the session, and, media (OHP, power-point, etc.) was used appropriately (Fig 2).

80% of the students in this study said that the teaching helped them score. Around 78% students said that teachers came fully prepared for the class and communicated clearly. 57% of the students felt sometimes lectures were very lengthy and that too much than required was taken in class. Only 1% of students felt lectures were boring. Around 33% said that time-table was well organised (Fig 2). Proper time-table helps to organize the classes well and help students learn better and score better. Teacher preparation of the lesson is important in delivering the lecture clearly and appropriately.

In the present study we found, 57% of the students preferred small group discussions, whereas, 30% of the students preferred lectures and, only 9% of students liked the tutorial sessions (Fig 3). The lecture is probably the oldest and most widely used method of teaching used throughout the world.²⁰ Lecturing is especially useful to convey knowledge.^{21, 22} In designing a lecture, teachers should make the material meaningful for students by assessing students' background knowledge of the topic. Lecturing has some limitations since the students are mostly passive during a lecture and this result in their attention waning quickly.²³

Active learning is a well-tested approach that teachers committed to student learning should consider adopting.^{24, 25} 46% of students in our study felt showing videos can help them understand the subject better, and, 24% of student wanted quiz programme to be included in the curriculum (Fig 4). Carl Weiman, a Nobel-winning physicist, said students learned more from interactive teaching methods (i.e., small group discussion, quizzes using personal response systems or "clickers," demonstrations, and question-answer sessions) than they learned from a lecture.²⁶

In our study, 63% of students said that discussions during the lecture were dominated by few students (Fig 5). Discussion is defined as a two-way, spoken communication between the teacher and the students.^{27, 28} Discussion helps in developing students' thinking skills and higher-level learning such as application, analysis, synthesis, and evaluation.^{21, 22} It is difficult to get students to participate in a discussion. To promote participation in discussions we should ask general questions; avoid looking only at the students' talking; control excessive talkers; ask for examples and illustrations; be sensitive to feelings and emotional reactions; and, encourage and recognize students' contributions.²⁹



In this study, when asked the students if any teaching technique has to be amended. 26% of students wanted change in tutorials, whereas, 33% of students said that department is fine and that they do not want any change (Fig 6). Effective teaching can be demonstrated in many ways, and no instructor should be expected to demonstrate proficiency in all methods and styles. Moreover, teaching methods may vary, depending upon the course content, student characteristics, and size of class. In our study, 42% of students gave four stars to teachers (Fig 7). According to a study, the correlation between student ratings and class size are not biases, because students who are interested in the subject matter actually tend to learn more and, hence, give their teachers higher ratings.^{30, 31}

Evaluation helps to determine the overall value of an outcome based assessment data. Decision making process helps to design ways to improve the recognized weakness, gaps, or deficiencies.²⁶ Therefore, after evaluation of feedback it is important that we work on the drawbacks. Different plans have been employed by various institutions.^{32, 33, 34} In some, the department head is expected to serve as “mentor” to the faculty, using evaluative feedback to provide suggestions for improving and monitoring efforts to implement these suggestions.⁷ At others, a faculty development office has been established with one or more professionals who devote their time and energy to consulting with faculty members about ways to improve their instructional performances.⁶ Improvement occurs only when new knowledge valued by the teacher is acquired and when the teacher is motivated to change.³⁰ Using student feedback to become a better instructor requires us to separate our affective reaction from a more reflective, cognitive consideration of student comments.³³

By organizing better time-table and by keeping pace with students’ level of understanding we would like improve the teaching in our department. Newer methods like including quiz videos, etc. to improve learning and understanding the subject better will be worked upon. All efforts will be made to improve student-teacher relationships.

In conclusion, feedback is necessary and valuable. It should be part of every adult educational program. Feedback form is taken to strengthen the quality of teaching-learning environment and to look for opportunities to improve teacher’s performance in classroom engagement with students to bring excellence in teaching and learning. If we want to bring about transformation in medical education we need to be learners as well as teachers. We need to embrace our own continued learning so that we can live up to the work with which we have been entrusted.

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