

33. Continuous Feedback Approach for Adaptive and Effective Teaching in Engineering

^{1,*} Bhaskar Pandey

¹Assistant Professor, Dept. of Mechanical Engineering, Babu Banarasi Das National Institute of Technology & Management, Akhilesh Das Nagar, Faizabad Road, Lucknow, Uttar Pradesh
227105

[*bhaskarpandey.p@gmail.com](mailto:bhaskarpandey.p@gmail.com)

According to our ancient scriptures, there are four paradigms of a 'Teacher'. First is adhyayan (learning), second is adhyapan (teaching), third is acharan (behaviour), and fourth is prasaran (communication). Continuous learning by teacher with effective communication in the disciplined environment yields to effective teaching. Communication in class room must be a two-way activity between teacher and students, so that both can adjust with each other. But as we cannot expect the highest sincerity from students, then most of the efforts must come from teacher's side.

New academic session or new semester comes with new challenges for the faculties in engineering colleges. Often it is observed that first few weeks are very volatile as far as student's attendance is concerned. Reason may be many but this absenteeism of student results in the loss of their interest in the subject. This loss of interest may arise from lack of correct perspective about subject or due to lack of understanding about

the fundamentals taught in earlier lectures. If this problem remains unaddressed then it will lead to more absenteeism and consequently poor performance in class tests and end term exams become inevitable. Loss of interest in class may also arise, if the methodology of delivering subject matter by faculty is not in sync with student's level of understanding.

To overcome the above said challenges, conventionally feedback forms are used as instrument of information gathering about the shortfalls and methodology adopted by the faculty during the current semester. Often this feedback session is done at the end of semester. End semester feedback approach has some intrinsic implementation problems, such as the suggestions and improvements can be implemented for the next semester only, so the problems of current student remain unaddressed. On the other hand, new students in next semester may have different attitude and aptitude so may be possible that many of the suggestions become irrelevant for them. Even if same students and faculty get involve in new semester, then also the scenario is quite different because of the nature of subject matter (numerical or theoretical). Due to aforesaid reasons faculties generally try to know from students by asking in the lectures whether they understood or not. But in crowd the real needy voices get subdued.

To improve the feedback mechanism, continuous feedback approach can be adopted. In this approach first feedback must be carried out between 15 to 20 days after the start of new session (at the initial to mid stage of first unit). Second

feedback may be carried out after the completion of first unit. Third feedback can be carried out after first test (comprise of 1 to 2 units). Fourth feedback may be carried out at the end of the semester. First feedback must be taken in following manner:

- a. Students must be instructed to take out a piece of paper, on which there is no need to write their name or anything which they believe can reveal their identity.
- b. Then they must be taken into the confidence to write feedback fearlessly.
- c. Advise them to write the concepts, topics or anything which bother them, ask for critical comments.
- d. Also ask them to write about what they find good in lecture delivery.

After collecting the first feedback and analysing it thoroughly, problems can be addressed in following manner:

- a. Due to initial absenteeism students can't catch up in the later classes and this problem become more serious later on. After first feedback faculty may get to know where the students are facing problem. As it is done about in third week, which is the initial stage of first unit so one lecture can be given to address the specific concepts mentioned by students in feedback. Due to this revision session student can catch up with further subject matter and they can feel some confidence. With this they can better orient themselves towards further readings.

- b. With this feedback faculty can analyse the standard and expectations of the students and simultaneously can modify the whole strategy of content delivery to fulfil the same.

Second feedback after the completion of first unit, reflects that whether the improvements done are reaching to the students or not. Successful implementation of suggestions and improvements will definitely lead to confidence building between student and faculty. This will result into a healthy communication between the two and students can express themselves in better way. Third feedback after the first test (constituting one to two units) will reflect the exam preparation and concepts implementation issues. So at this stage a holistic advice and counselling must be given to the students to cope up with examination related issues.

Forth feedback at the end of semester will reflect the reaction of students over the whole journey of learning with the faculty, and the comments as well as complements can be used for the future course of action. It is to be noteworthy that all the feedbacks should be conducted as the first one was done. In contrast to conventional end semester feedback system, continuous feedback approach is practically more effective, as it helps in the improvement at every crucial stage. Student and faculty both can get benefitted the most through this. Continuous adaption by faculty leads to efficient delivery of content. Better communication between students and faculty make the learning a joyful journey for the quest of knowledge.