

STUDENT EVALUATION IN ENGINEERING EDUCATION

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Introduction

An attempt is made in this paper to assess the usefulness of "Student Evaluation in Engineering Education". The problems of effective implementation of Evaluation process in the Engineering Education institutions of the country is considered. For reasons best known to them, most institutions are still following the highly conventional and traditional pattern of student evaluation.

Introduction of new structure and/or improved processes like semester system, continuous assessment and flexible credit system are expected to eliminate many of the drawbacks present in the conventional patterns.

Drawbacks in Conventional Patterns :

- (i) Makes the student lazy and irregular during the study period, and over worked and nervous during the examinations due to long span of time for study with little provision for feedback to students at intermediate stages.
- (ii) Assessing the student on the performance of a single test at the end

of a prolonged period of study extending to an year.

- (iii) Assessment is made with the entire emphasis on the written expression of the students. Therefore skill of brain, tongue and hands remains undeveloped and untested.

Continuous Evaluation

The evaluation could be more rational and less painful in semester system. The progress of the student can be continuously assessed with the progress of semester.

A semester can roughly be divided into three sections. The time duration of each section should be six weeks. There can be three tests at the end of each section. The first two tests are based only on contents of syllabi covered during the particular section concerned. The last one being a comprehensive test based on the entire syllabus of the semester. The ratio of weightage given to the three tests can be 2 : 2 : 3 or 3 : 3 : 4. However, such a system may not allow much time for extra curricular activities which are vital for fuller development of a student's personality.

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Internal Evaluation :

In this system same teacher is involved in teaching, testing and evaluating his student's. Wherever internal evaluation system is adopted, it is imperative that the valued answer book be returned to the students for their review. The teacher is answerable to the doubts raised by the students, regarding the marks awarded and corrections made. Thus in this process both the teacher and students (the taught) are getting feedbacks. Through this feedback each one comes to know the errors he has committed and gets ample chance of correcting his wrong impressions.

Problems with this system :

1. Possibilities exist for a teacher to be lazy and easy going attitude as setting a very simple test paper.
2. Possibilities of favouring attitude in teacher.

These problems to some extent can be checked by the formation of examination committees.

External Evaluation (Test Paper) :

The test paper should be designed so as to bring out the best from the teacher as well as the taught. Following are some features to be incorporated in setting the test paper, to be considered by teachers.

1. Every test paper must contain both subjective and objective questions.
2. Semi-objective and semi-subjective can also be prepared.

3. Numerical problems should find due place in test paper concerned with Science and Engineering.
4. Certain questions based on topics left for self study.
5. The three hour examination should be replaced by one hour test and two hour comprehensive test.
6. Marks allotted to each question should be clearly marked in the test paper.
7. The language and vocabulary used while setting the test paper should be simple and well defined.

Oral (Viva-Voce)

The thinking and oral capabilities of the student should not be left undeveloped and untested. In fact a paradoxical situation exists today as the universities are assessing the students by written expression and the employers are assessing the prospective conditions on the basis of vocal expressions.

In view of this a good number of viva-voce tests are necessary in evaluation system.

Experimental and Project Work :

In subjects concerned with science and engineering, the laboratory and workshop skills of students need to be tested. Careful procedures are to be evolved in the internal assessment of the experimental skills of students. Through project work the student will exhibit their individual competence and confidence.

Conclusion :

The worn out traditional patterns are to be necessarily replaced by more effective and just methods. Different assessment procedures are to be carefully evolved for assessing the theoretical, practical and project work of student. Viva-voce tests should find their due place in the scheme of assessment in Engineering Education.

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