

**TOWARDS DEVELOPMENT OF KNOWLEDGE SOCIETY THROUGH BEST
TEACHING - LEARNING - RESEARCH PRACTICES IN TECHNICAL EDUCATION –
A CRITICAL REVIEW**

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Abstract : In this research paper the author outlines the quality of technical education today. The paper discusses at length the role to be played by a teacher in the institution and the behavioural attributes necessary for a teacher. It further discusses several effective teaching-learning practices leading to the acceptance of a teacher by the student community. The paper also discusses the need for the faculty development programmes. The self evaluation of a teacher, outlined in this paper, is one the success mantra for the development / refinement of a teacher in his / her profession.

Key words : teaching, learning, quality, faculty development programmes

1. Introduction :

Quality of education seems to have failed to keep pace with the fast track expansion in its quantity. In the recent days, quality of education has become major concern for the policy makers in the country. Among the entire gamut of factors that influence quality of education, the most important is the teaching process as operationalised by the teacher. In most of the discussions on quality education, lack of dedication, motivation, commitment and competence in teachers invariably emerge as the dominant reasons responsible for producing poor quality teaching and education. Therefore, besides recruiting quality teachers, there is always a need to create among teachers sustained motivation and commitment for quality teaching and their competence have to be continually upgraded.

2. Quality of Technical Education :

Today, the faculty engaged in higher education is facing many challenges in the dispensation of teaching responsibilities. It is not merely the command over the subject and the communication ability that counts. The teacher in higher education has to be reached for facilitating, motivating and inspiring students in the acquisition of knowledge, skills, and values. Besides, teachers have to play a role in the development of the horizons of their respective disciplines by way of involving themselves voluntarily in research & administrative activities. To help teachers perform these roles

successfully, their orientation towards the profession and its values, communication skills, use of media, evaluation procedures, process of academic and scientific enquiry etc., is essential. Faculty development would mean that process which is undertaken to bring about qualitative changes in the faculty to facilitate and improve the professional competence of individual faculty members in fulfilling their obligations to achieve goals and objectives of their institutions. Thus any faculty development intervention should fulfill the twin objectives of meeting harmoniously the individual and institutional needs whereby, on the one hand, the individual reaches higher level of satisfaction and motivation and on the other hand the institution is able to achieve goals of education at a higher standard and in order to be effective, it should be planned keeping a balanced view of both those integrated ends in mind. For an effective implementation of the idea of faculty development and its successful management, the role of the managerial personnel in the institutions of higher learning like the Management, Principal and HOD's can hardly be overemphasized.

3. How to go ahead ?

The following are the steps suggested for going ahead to address the problem:

- a. Visualizing the staff development needs
- b. Identification of the suitable avenues already available or to be arranged.
- c. Disseminating these information among the faculty.
- d. Motivating them to join the programmes arranged internally or externally.
- e. Providing necessary administrative and financial support.
- f. Taking up any follow up action.

It is often said “Teachers are born, not made”. But the statement is not true in the present day context. There is a teacher in everybody and this aspect can be developed by proper training. Coolidge said ‘few men are lacking in capacity, but many fail because they are lacking in application’. Hence any person, who has liking for the teaching profession, can become an effective teacher. The present day policy is ‘Education for all’. Hence there is need for training a large number of teachers.

4. Role of Teachers :

A teacher who is engaged in technical education area needs to analyse the approach he has to take in teaching-learning process. In this context, the under mentioned approaches appear to be more practical.

i) Examination orientation :

- a. We think students want education, but they want degree.
- b. We think they want degree, but all they want is a job.
- c. We think they want job, but all they want is money.

Though this is said in lighter sense, there is nothing wrong to earn more money by legal means. Nobody will give the money, without doing job properly and nobody gives the job without having appropriate qualification and nobody gives degree without being educated properly.

Though the awarding degree based on examinations is criticized often, no other system better than this is evolved. There may be some modifications in the system, but examination system remains the time tested means of evaluation.

Good marks scored consistently by a candidate show his intellectual ability and his commitment to the duty assigned to him. Hence the teachers have to train the students to face the examination.

ii) Research aptitude :

An academically excellent teacher is always respected by students, which in turn help the students to learn more. If we have obsolete teachers, we will get only obsolete pass out, we will have only obsolete technology and performance.

iii) Commitment & team works :

“When brought together, Indian erupts in dispute, while the Japanese perform wonders”. Hence there is need to train our students not only for competence but for commitment and team work. These qualities can be imparted by co-curricular activities. There is need to balance curricular and co- curricular activities and manage them well.

5. Teaching – Learning Strategies :

Technological improvements in the processes of the transfer of information have made a great demand on strategies of teaching-learning processes. The under mentioned teaching learning strategies appear to be more suitable in technical education scenario.

(i) Lecture Plan :

A full-length lecture can take listener into a confused state of mind apart from boring him to distraction. Very often, students do not properly understand classes on concept definitions or clarifications. Any lecture becomes meaningful to a student when a lecture plan is available to him. When a student is aware of the lecture plan he is able to plan himself for the listening processes as well as note taking processes.

(ii) Comprehension :

A lecture is concluded not when it is delivered but when it has been comprehended. The language used, the examples presented and the interaction generated help a listening scholar comprehend not only the theme, but also its associated thoughts. A successful lecturer has to evaluate every lecture that he delivers. Sometimes it is necessary that making a restatement of important points either through a summing-up or through a written support make the comprehension complete.

(iii) Notes :

There are number of arguments that are provided by traditional teachers in favour of dictating notes. They say it helps the students to reemphasize what had been heard during the lecture, acquire speed in writing, the matter can be recalled faster during the examinations and even improve handwriting. Many of these are necessary skills, but not necessarily to be developed through writing down notes that are dictated in the class.

(iv) Breaks :

It is said that no adult can concentrate on a monologue for more than eighteen to twenty minutes, and they say, it is ten to twelve minutes for children. If someone wants to continue a monologue, the speaker will have to break it after eighteen to twenty minutes, interact or bring a diversion, and thereafter he may go on for another twenty minutes. What is to be stressed here is that the break has to be a designed one, so that it comes within the grip of a teacher.

(v) Question - Answer Session :

A lecture has its limitations of being a one-way communication strategy. A lecture with questions designed for clarification has a better impact. Most of the teachers avoid question-answer session either because of lack of time or because of lack of skill or in both. Therefore, discussion, one may call it clarification or removing of confusion or additional matter or even a repetition, recollection or interaction; is an important part of any lecture.

(vi) **Absolute silence :**

If a teacher believes strongly in his ability to lecture the students to silence, it is wrong. He has to encourage the students for interaction.

(vii) **A brilliant student :**

Very few lecturers are capable of recognizing a very simple truth that some of the students can be more brilliant than the teacher himself, the most brilliant in the class should be asked to produce the best out of him for the benefit of the entire class.

(viii) **Content beyond curriculum :**

The popular belief of lecturers that anything beyond the syllabus is not necessarily a matter for the student is very unfortunate. It is true that from the point of view of an examination the lecturer is correct. But, after all, the objective of the education is not a mere pass or grade in an examination.

(ix) **Few Points :**

(1) Q : Is it right to expect perfect silence in classroom?

A : Not for the full period. It can be perfect silence for 18-20 minutes. Then there can be little diversion but this should be in the grip of the teacher...

(2) Q : Should there be diversions from subject matter ?

A : No. Instead it can be in the form of questions on portion covered till then.

(3) Q : What if the student is better than faculty in subject?

A : Faculty should not have inhibition to encourage such student.

(4) Q : Maintaining one type of lecturing for 18-20 minutes is it not too long duration?

A : It can be tackled by breaking monologue in systematic way.

(5) Q : Class has heterogeneous mass. Who is to be kept in mind for teaching?

A : It is to be the average student.

(6) Q : If every thing is available on-line due to recent IT tools, then what teacher has to do?

A : Classroom lecturing is better.

(x) **Order of Presentation :**

The teacher should layout the plan for the entire term, in the light of the objectives of the subject and its relation to the curriculum. The order of presentation should be from familiar to the unfamiliar, from simple to the complex, from that which is easy to that which is most difficult.

(xi) **Physical Comfort :**

In the class room the physical comfort of the students and of the instructor is important if full attention is to be centered on the subject matter.

(xii) **Occasional glance (Notes / PPT) :**

Prepare adequate notes and master them so that an occasional glance is the most help you will need from them. Thoroughness of preparation is what is wanted.

(xiii) **Criticize yourself :**

If you have previously taught the same material, criticize yourself. Look for improved approaches to the subject, which will make it more stimulating to both the students and yourself. The most practical way of doing this is to write comments to yourself on your lecture directly after giving it. When you come to it next year, these comments will remind you to the changes which you should make.

(xiv) **Coverage Vs. clarity :**

Do not try to cover too much material at the expense of clarity and complete comprehension. Plan provocative questions and illustrative problems and situations in order to stimulate the student's interest, oral discussion and critical evaluation of the subject.

(xv) **Quick help :**

Do not be too quick to help a student who is struggling with a problem. He may have to muddle around in a subject for quite a while before it becomes clear to him. This muddling process is at the core of all creative thinking.

(xvi) **Personalized attention :**

Level your attention and planning at individual students, not to the class as an impersonal body of people. Develop a warm friendly relationship in the student instructor team. Practice the habit of calling students by name whether in class room or corridor.

(xvii) **Linkage :**

Begin with a short review connection the previous class work with the new material you intend to present. To learn effectively and efficiently. The student must first have the desire to learn. He will have the desire if he understands why the new material is important and if he feels that he is making steady progress that he is getting somewhere.

(xviii) **Repetition of concepts :**

It is only by varied reiteration that unfamiliar truths are forced upon reluctant minds.

(xix) **Receptor Senses :**

In teaching, try to appeal to as many of the receptor senses as possible. Among the five senses (sight, touch, hearing, taste & smell), the most effective in the learning process usually is sight. Retention is generally poor from hearing, if unaccompanied by other stimuli. It is for this reason that lecture material is much more readily understood, absorbed and retained if the lecture makes effective use of the black board, of models and other visual stimuli while speaking.

(xx) **Voice only :**

If a speaker has to proceed without any of the teaching aids, and has to rely on voice only, then at least learn to use hands, facial expressions and body language.

(xxi) **Time Management Skills :**

As a teacher one is expected, apart from class-room teaching, to involve in innumerable activities, ranging from guiding the students in their project work, carrying out own research work and publishing papers: pursuing higher studies: net-working with other teachers and researchers in the field of interest: attending workshops and seminars: presenting research papers: valuation work: consulting work: counseling of students to routine administration work. The time management skills are some of the most important career skills. Many people achieve very little success as they spend more time on trivial things and don't concentrate on the right things. Every morning one should prepare the To-Do list for the day and before closing the day, he should review how much he has achieved.

(xxii) **SWOT analysis :**

It involves analyzing oneself for his

Strengths: What advantages do I have ? What do I do well ? What relevant resources do I have access to ? What do other people see as my strengths?

Weaknesses: What could I improve ? What do I do badly ? What should I avoid ?
Do other people seem to perceive weaknesses that I do not see?

Opportunities:- Where are the opportunities knocking at me? How to capitalize them?

Threats:- What obstacles do I face ? Is changing technology making me redundant ? Could any of my weaknesses seriously threaten me professionally?

Some of the parameters against which the teacher could evaluate himself are:

Whether I have good communication skill ?

How deep is my knowledge of the subject ?

How do I perceive my personality ? and how do the students perceive it ?

Whether I have good command over language ?

Whether I manage my time well ?

Whether I am able to build good rapport with the students ?

Whether I am keeping abreast with latest developments in my field of specialization?

Whether I am spending enough time in research activities, publishing papers, etc.,

?

(xxiii) Effective Communication :

Key ingredient of good teaching is effective communication and the greatest single stumbling block to real communication is the one – sided nature of speaking. A well organized lecture prepared with an interactive method of delivering lecture with enthusiasm should generate enough curiosity among the students and accepted by them as a good lecture.

6. Summing-up & conclusions :

A teacher is a classroom leader, leading a group of wards to learning, to development of skills and to resource effectiveness. Teacher empowerment alone can guarantee innovations. If we need quality we have to innovate. The sooner we try, the better the education we provide.

Poor Teacher - **Tells**
Good Teacher - **Teaches**

Excellent Teacher - **Demonstrates**
Outstanding Teacher - **Motivates.**

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Biography :



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