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ROLE AND RESPONSIBILITIES OF THE ENGINEERING FACULTY

1. Introduction:

There are about 3000 Engineering Colleges in India, with faculty members almost equal to 4.5 lakhs. There are different types of institutions – State Government, Un-aided, Aided, Autonomous and Private Engineering Colleges, and similarly different types of Universities – State, Central, Deemed, Private and Technological Universities.

With this large number of faculty members, i.e. 4.5 lakhs, in India (and similarly 60,000 faculty members in Maharashtra), it is very essential that we have a careful look at the role and responsibilities of these faculty members, where each faculty member will be spending nearly 30 years as a faculty member. What are the roles and responsibilities? How do they change as they gain experience? What impact they make on the engineering education system in the country which concerns all of us. Hence, it is essential that we spell out these and observe how they play their role and discharge their responsibilities.

2. Different stages in the Engineering Teacher's Career:

Some faculty members may be with Post-Graduate Degrees and very few with Ph.D.s in their subject. Rarely, they may be aware of the profession of teaching and principles of pedagogy as applied to teaching at different levels.

1. Induction Stage: As they join as a teacher in any Institution, they are required to engage classes. For this, they must know the subject matter, as prescribed in the syllabus, very well. They must have a fairly well overview of the subject to be taught. Then, they should know how to teach and for this, they are not trained.

They simply know how they were taught by their teachers, and they try to adopt the same to their best of ability. But many a times, this may not be adequate. Hence, they must know the subject of pedagogy and get well versed in the art and science of teaching, and its application in a classroom. For this, the college authorities should provide them the facility of undergoing training courses in pedagogy.

Then, they must learn different methods of assessment and use them effectively. All this may take about 5-8 years. This only means, they should focus on this aspect and are free to get acquainted with the education environment in the college.

By this time, they should establish themselves as a teacher, as a trainer, as a facilitator and also as a mentor, the three aspects a teacher is called upon to perform.

2. Awareness Stage: It is time that the faculty member pays attention to quality aspect of education. He should study the dimension of quality, particularly quality at higher education, including that of professional education as Engineering.

He will come to know that quality does not come by chance. It has to be planned, introduced and worked continuously for maintenance and enhancement of quality. He should also note that quality journey has no end. Also that quality is not a local aspect, also operates regional, national, and global level. Also that, Quality and Excellence must go together. Once he understands the principles of global Quality and Excellence, he has to join hands with his colleagues and to plan how quality can be inducted, maintained and enhanced in institution in the context of professional and national development.

3. Enhancement Stage: Here, he has to study the system under which the college is functioning. A college/ institution may be an affiliated one or an autonomous one or even an independent entity, in different environments, quality will be required to be handled differently, adopting different tactics.

4. Maturity Stage: The environment of an Engineering institute is governed by the system under which it operates. It may be affiliated to University, or Autonomous,

or independent. Each system has some inbuilt channels and restrictions, and doesn't allow a college to grow and develop in the way it is planning to. At this stage, it becomes necessary that the environment itself may be required to be changed. How can this be done? Can the Principal or the Management or the University help the college in bringing about a change in the environment? For this, the Principal, the faculty, and even the Management will have to sit together, plan together and work out a road map.

3. Quality and Excellence to be the governing factor.

For every educational Institute, the pursuit of Quality and Excellence in the education they are imparting, is a should and must. In my opinion, the induction, maintenance and enhancement of quality is the main task of the Principal/ Director, of the educational Institute. Others may try to help them in this pursuit.

Whatever help or assistance is provided by others, the Management and Principal of a college, must undertake this task from the first day of the establishment of the college. This should lead to the concept of – **An institution can and should be born with a quality spoon in the mouth.**

Here, I may refer to the following documents or guidelines brought out by the Engineering Foundation, Pune. For details, you may contact the undersigned.

4. Components that go to make up a Quality Institution:

The guidelines provided by the Engineering Foundation, Pune are given below:-

- a) Quality Cell to be established in every Engineering College. This Cell should study literature on Total Quality Management in Higher Education and try to become a TQM Institution.

(Reference: Total Quality Management in Higher Education by Edward Sallis, Kogen Page Publication, U.K., Third or Latest Edition.)

Many other books and literature are available on the internet.

- b) Centre of Quality and Excellence to be established in every college.
- c) Consortia of Engineering Colleges at a given place to be formed.

- d) 10th September to be celebrated as Engineering Teacher's Day.
- e) IRCEE, i.e. International Resource Centre in Engineering Education should be established in all important cities.
- f) The faculty of the college should form a staff club, and this club should be given the task of inducting, maintaining and enhancing, on a continuous basis, the quality education of the Institution.
- g) This staff club should also critically study the system under which a college is functioning, and come out with suggestions for enhancing Quality and Excellence, not only in their own Institution, but in the total system of Engineering Education also, both at the state, national and even global level.

They should provide, wherever necessary, policy inputs for the policy makers of the state and the country. Not only this, they should put forth their demands in respect of the system which they think could be useful to the college. Thus, the staff club should take steps along with the Principal and the Management to see that their college takes to the path of Quality and Excellence at the earliest.

5. And now, National and Global Quality :

What has been mentioned in attempt 4, above, will bring out a Quality Institution, individually. This is good as it goes, but not adequate. The Engineering Education System has to grow and develop at State and National Level. Hence, the concept of Consortia given under 3(c) above should be adopted. Thus, growth at individual level is not enough. We have to grow together at the State and National Level, and even at the Global Level.

With this, I have no doubt that our Engineering Education System, which is, today in a very unsatisfactory state will soon find itself on the unending path of Global Quality and Excellence.

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