

EDITORIAL

PROFESSIONAL TRAINING OF ENGINEERING TEACHERS : A MUST FOR ALLROUND QUALITY IMPROVEMENT IN ENGINEERING EDUCATION

Every one is happy at the tremendous expansion of engineering education in the country particularly in the four southern states of Andhra Pradesh, Karnataka, Maharashtra and Tamilnadu, but laments at the dilution in the standards. Quality has become a matter of concern for all practitioners in the field of engineering education - the teachers, the HOD's, the Principals, the Administrators, the policy makers and the social scientists as well. Excellent measures - Performance Appraisal and Development System (PADS), Quality Circles Consultation, Research Development (R & D) Continuing Education Programs (CEP) etc. etc. have been debated and discussed for more than a decade and recommended for quality and excellence. All these measures are excellent but remain unimplemented. Why ?

Who is to implement these measures ? Not the government nor the policy makers and administrators. It is the job of Engineering teachers who shoulder the responsibility of operating the system. But why they are not implementing these measures ? It is because they lack commitment to the profession and one should note that this commitment can come only out of full understanding of the role and responsibilities of the profession - the teaching profession. We send our engineering graduates, ME and M. Techs and Ph.Ds into teaching profession without any formal or informal professional training. Though on the threshold of the 21st century, we in the engineering education field, look down upon professional training as something which is not relevant nor necessary and consider the knowledge of the subject matter that our BE, B. Techs, ME and M. Techs and Ph.Ds are supposed to possess, enough for a teacher. Granted that knowledge of subject matter is there, but how to deliver it ? What about the delivery system ? Knowledge is not inert and static, it is always growing, expanding and exploding and it is to be delivered to living being and not to be deposited nor stored in godowns. The knowledge with its expanding and exploding characteristics is to be imparted to

our youth who are endowed with qualities of head and heart. Can this imparting be done without any preaparation and training ? What we are doing today is ignoring the fact that a dynamic entity - the engineering education is to be imparted, not delivered to another dynamic entity - the students. The adult psychology and the processes of learning has to be studied and kept in mind. As long as we ignore these facts, any talk of quality and excellence is in vain. We must train the teacher first, for his role as professional. It is only then, that we can expect them to develop commitment to the profession, which is the prerequisite for enhancement of quality and excellence in engineering education.

A few induction programs and orientation courses is not the answer. The number of teachers to be trained is enormous. On a rough calculation, there are nearly 20,000 engineering teachers in our engineering colleges and polytechnics and nearly 75% of these i.e. about 15000 teachers need professional training. Our formal methods of regular full time courses - Training colleges or Academic staff colleges of which there are none engineering teachers - is not the answer nor the induction and orientation courses. Distance learning mode coupled with contact period is the only answer for this gigantic task of training 15000 engineering teachers.

Since AICTE has the responsibility of quality and excellence in engineering education, it should start training for engineering teachers on its own. If it cannot, it may approach IGNOU and start these courses, jointly with them. Such courses must start immediately with a target date of 31-12-99 so that as we enter the 21st century, quality and standards of engineering education no more remain a matter of concern for anybody and the engineering education system develops all ability and competence to supply the technical manpower to industry of the required quality and in adequate number and enable the industry - to face the stiff global competition which it has been called upon to face.

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