

EDITORIAL

Professional Training of Engineering Teachers.

The higher Education system in India, particularly Engineering Education System, which deals with the Diploma and Degree level Engineering Institutions, are often criticized for its lack of relevance to the needs of the Industry and Society. The reasons for such an attitude are many but prominent amongst them are unplanned proliferation of the Engineering Colleges and Polytechnics (located mainly in the four Southern states) lack of infrastructural facilities, unemployed / underemployed Diploma / Degree holders in branches like Civil Engineering, increase in problems of discipline amongst these Institutions and erosion of moral values. The responsibility of bringing about changes in the existing system lies considerable with Engineering Teachers, who should initiate several changes in areas, such as teaching methodology, upgrading the syllabi, examination reforms, liaison with industry, research in Engineering Education programs and so on.

But today we find that fresh engineering graduates are recruited as teachers in Engineering Colleges and Polytechnics; these teachers take up the jobs without any knowledge of pedagogy, principles of educational technology, methods of curriculum design and its significance; performance evaluation, the demand of Industry on Engineering Education and the need that the teacher and the institution which are subsystems of the whole education system should and must be relevant to the needs of the system and society. Without knowledge of the role of teacher vis-a-vis the Industry and the society, without any knowledge of the teaching - learning process, how can we expect these partly equipped teachers, equipped only with the subject matter and without any scientific and professional delivery system and the social environment in which they are operating, to bring about these changes?

These teachers have the potentiality, but need to be professionally trained for the multi-roles they are called upon to play from time to time, as they play their roles as teachers, as H. O. D., as Principal, and may, later on, be called upon to be, or assist, the directorate of Technical Education at state level, the A. I. C. T. E. and the M. H. R. D. at national level. Today, there is no provision for any such training worth the name. Very feeble and half-hearted attempts are made to tackle this problem -- Professional Training of Engineering Teachers. Hence, our system remains unchanged in this fast changing world in which it has to operate.

Hence priority should and must be given to Professional Training of Engineering Teachers. U. G. C. responsible for higher education has taken the right step by establishing about 50 Academic Staff Colleges. On similar lines, Staff Colleges for professional Training of Engineering Teachers must be started on a larger scale. The efforts of T.T. T.I.s which work for Government/Aided Polytechnics can cater to the needs of only a fraction of the Polytechnic Teachers. For teachers of Engineering Colleges (whether Govt./aided/self financed), at present, there is no provision for any sort of formal/informal training programme. It is high time that the policy makers and planners address themselves to this task.

Governments have always been slow in realising the need and much more so in fulfilling such a need. Hence, without waiting for Government to move and act, private colleges which have come up in a large number, should themselves come together and establish such Academic Staff Colleges for Engineering Teachers on self financed basis, and cater to this basic need. Voluntary organisations can and should come up to offer such educational services. The need is urgent, the problem is on the massive scale and the services needed must come up using all possible formal /informal /open systems. The private enterprises, which could be Federation of Private Engineering Colleges and Polytechnics which have been recently formed at State / National level should undertake the job. Also individual efforts through Educational Trusts and Voluntary organisations must be encouraged. For significant changes in the system, train the key role-player - the teacher, the H. O. D. and the Principal and within a short period of a decade, significant improvement will take place in the overall system itself. Let us act and do our bit, wherever we are, without any further delay. This challenging task needs to be attended by Central and State Governments, the AICTE, Federations of Self-financed Engineering Institutions and Voluntary Organisation and even individual efforts need to be encouraged and supported.

The question of Course contents, duration, mode of teaching - formal / Distance Learning / Open /mixed mode need to be decided after necessary consultations with the concerned elements - The Administrators, the policy makers, the educationists, the Principals, the H. O. D.s and the Teachers: this is actually subject matter for a seperate workshop / seminar and should be taken up accordingly.

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