

## *Editorial*

### **TECHNICAL UNIVERSITY FOR MAHARASHTRA STATE- -NEED FOR A WHITE PAPER**

Hon. Shri Rajesh Tope, Minister for Higher and Technical Education, Govt. of Maharashtra, declared that it is proposed to have a separate Technical University for 312 Engineering Colleges of Maharashtra and that it is expected to be functioning from the next academic year.

The talk about Technical University was in the air for more than a year and since a person, no less than a minister, has made a public declaration; it appears that this will soon be a reality.

**Growth of Engineering Colleges:** In 1983- 84, the Govt adopted the policy of privatization of Engineering Education. The number of Engineering colleges which was 9 in 1982-83, consequent to the privatization of Engineering Education increased to 60 in 1983-84 and this number is increasing every year; and now, in 2010-11, there are 312 Engineering Colleges in Maharashtra. These Engineering colleges are affiliated to 9 traditional Universities of Maharashtra. University of Pune, Mumbai and Nagpur have more than 60 Engineering Colleges affiliated to them and Solapur, North Maharashtra Dr. Babasaheb Ambedkar Marathwada University and S.R.T. Marathwada University have less than 20 Engineering Colleges affiliated to them.

**Why a Technical University:** The necessity of Technical University was felt, may be due to the following reasons:-

- i. The present traditional Universities have become unwieldy due to the large number of colleges of different disciplines (including Engineering) affiliated to them.
- ii. There is a complaint that the Universities do not contribute in any way to the enhancement of quality, to the shaping of Engineering Education nor to the enhancement of professional practices in Engineering Education. Here, a question could be asked, does the University contribute in any way to other disciplines like Arts, Commerce, Science, Mathematics and Philosophy etc?

Hence, we need to be clear about our expectations from the University, in respect of each discipline, which go to make up the University.

**Time to revisit the concept of the University.** Pandit Jawaharlal Nehru, in his convocation address to the University of Allahabad in 1947, summed up the basic objectives of the university and its role in national life: "A University stands for humanism for tolerance, for reason, for the adventure of ideas and for the search of the truth. It stands for the onward march of the human

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race towards even higher objectives. If the universities discharge their duties adequately, then it is well with the nation and the people.”

The Yashpal Committee Report describes the University as “A University is a place where new ideas germinate, strike roots and grow tall and sturdy. It is a unique space, which covers the entire universe of knowledge. It is a place where creative minds converge, interact with each other and construct vision of new realities, established notions of truth are challenged in the pursuit of knowledge”.

So, before we decide to have a Technical University, we must re write our concept of University in the context of Technical University, we propose to establish. The reason to re visit the concept is, all our Universities have become examination bodies and just provide a mechanism to award the degrees; may be, with some exceptions. Here, it may be pointed out that these ideas about a University are applicable not only to the Universities of liberal Arts, Commerce and Science which was the case long ago, but they are equally applicable to the technical/ technological Universities of today.

**The optimum number of affiliated Colleges.** The answer to this question will have to be found within the frame work of the aims and objectives of the University, and its present set up with Vice Chancellor, Pro Vice Chancellor, Senate, Academic Council and Board of Studies etc. Such a set-up is not adequate to enable the University to Enhance Quality in any given discipline, to shape the Education in that discipline and bring in Qualitative Reforms in the professional practices; hence, the present set up of the University needs to be recast so as to provide frequent interaction between the faculty of different colleges, practicing professional experts and leaders in that discipline, **so as to generate synergy and keep the Educational Practices relevant to the changes in the Technology in that particular discipline.**

#### **Affiliation System - a curse**

The affiliating system of colleges is a legacy of the British Raj. UK has long back given up this system and has gone in for autonomous Institutions. But, we are still clinging to this outdated system of affiliation. Why not plan to replace it gradually and think of a new system of autonomous colleges, may be a cluster of these colleges (not more than 20 to 25) under the umbrella of one University.

**Learn from others** - Experiences of Technical / Technological Universities. It is necessary to carry out an in-depth study of the experiences of the various Technological Universities in other states of India and even abroad and draw inferences from these and see how they could be adopted for our proposed Technical University

**Broad Based or a Single Discipline University?** On one side, our IIT's are opening their doors to new disciplines like medical and we in the traditional State Universities are thinking to go for a single discipline like a Technical University. Could there be a unique answer to this question or should we allow both the streams of broad based Universities and a single discipline University to co- exist. I think, we should allow, both the streams to co-exist.

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**Number of Technical Universities ?** As per Yashpal Committee the optimum number is 200; this is for a general University with all different disciplines as our State Universities are today. If it is a single discipline Technical University, it could be even 50. If so, a Technical University with a single discipline of Engineering, (Maharashtra has 312 Engineering Colleges) we will have to think about 6 Technical Universities for Engineering. On the same lines, we will require similar number of Universities separately each for Business Management, Architecture, Hotel Management and Pharmacy and so on.

**Some Suggestions:** In view of the importance of the engineering profession, since it is directly connected to the growth of economy of a country and ultimately with welfare of the masses, a Technical University should have not more than 50 Engineering Colleges affiliated to it.

- a) Accordingly, there should be 6 Technical Universities for Engineering Disciplines, for 312 Engineering Colleges of Maharashtra. One of these should be a Technological University whose main object should be Research and Development, Generation of Technology, Transfer of Technology, Commercialization of Technology and Application of Technology for the benefit of the people, at large. The remaining 5 Universities -Technical Universities should be of affiliating type, mostly concerned with teaching as well as research. But the policy should be to encourage the affiliated Engineering colleges to go autonomous, and still be, not only permitted to be with the universities with full autonomous status but allowed full participation in all the University bodies, with full freedom to have their way in their College matters, be it curriculum or pedagogy or examination system.
- b) Over and above the present set up of university, the Statutes should provide for regular meetings at different levels of faculty from the V.C. to the lecturer, for exchange of views and sharing of experience so as to **generate synergy and work for continuous improvement of processes and products**, always aiming at global Quality and Excellence.
- c) The Vice Chancellors should provide visionary leadership and the University should work on the Philosophy of Total Quality Management.
- d) The Committee to be set up for the proposed Technical University should include experts who are / were Vice-Chancellors of Technological Universities, Directors of IIT's / IIMs of India and experts even from abroad.

The abovementioned suggestions seem to be radical. But if we want India to be a Super Power by 2020, such radical changes will have to be made. Maharashtra should lead the rest of India and take steps to take India on the global plane with global concepts of Quality and Excellence.

**Need for a White Paper:** Considering the points mentioned above, the problem appears to be very complicated. However, it is said, that every problem has an inbuilt solution in it and our task is, to discover this solution. It is a challenging task, indeed, but we shall have to take it up. With our collective wisdom, long experience, academic and general expertise, we should be able to tackle this problem with confidence and find a solution acceptable to all our stake holders.

Why not the State Govt. bring out a “White Paper on Technical Education,” and spell out its idea of a Technical University, as a first step in tackling this problem of a Technical University.

### **About this Special Issue:-**

This special issue is unique in the sense that it has raised very important question on the draw backs of the present set up of Universities which have given rise to the need for a Technical University. The answers to these questions are likely to provide a road map for the proposed Technical University.

It has dealt with a wide spectrum of the different aspects associated with the University like number of affiliating colleges, affiliated or autonomous colleges, pedagogical training of Engineering Teachers, individual accreditation of Engineering Teachers etc.

Your attention is drawn to the articles by : Prof. Prem Vrat, Former Director IIT Rurkee, former V.C. UP Technical University. Dr. B. S. Sonde, former V.C. Goa University, Dr. A. Kalanidhi, Vice-Chairman, Commonwealth Science and Technology Academy for Research and Former V.C. Anna University. Dr. M. Anandkrishnan, Chairman Board of Governance, IIT Kanpur. And former V.C. of Anna University. Dr. R. P. Joshi, Secretary, Association of Un-Aided Institution of India and Dr. N. R. Dave, V.C. North Gujarath University.

As such, this issue is expected to provide a complete road map for the proposed Technical University and therefore, we propose to provide copies of this Special Issues to all the members of the committee on the Technical University which Government of Maharashtra is likely to appoint, shortly.

We may add further, the Govt. should also include experts from the Technological Universities from other states, from IITs, IIMs of India and even from technological Universities from other countries, and should not confine the membership only to the usual state experts.

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