

Editorial**Research in State Engineering Colleges -****Strategic Roadmap for Research Activities**

We have, about 2000 Engineering Colleges, in India. All these are mainly teaching institutes, mostly affiliated to State Universities and Technological Universities. 80 % of these Colleges are having a standing of more than 10 years. Yet, a look at the Quality status of the System indicates that all is not well in respect of Quality. With quality indicated by the Accreditation carried out by the NBA, we find that only 20 % of these Colleges have been accredited so far. One of the main reasons for this dismal picture is, there is a general lack of Quality Consciousness amongst the Management, the Principals and the Faculty. The concept of Quality is not properly understood. It is said that the NBA Accreditation is mandatory, but in practice, it is not so. On analyzing the situation, it is seen that research is almost absent, and there is no desire to bring in Research, even in a small measure. Our application for Washington Accord is still pending for years before the International Forum. NBA has been separated from the AICTE as required by the Washington Accord, but NBA nor the AICTE, have taken steps to enhance the quality of these colleges. It is with this consideration that the Editorial Board of this journal is bringing out, this Special Issue on **“Research in State Engineering Colleges - Strategic Roadmap for Research Activities”**

“Teaching and Research should go, hand in hand, in any professional Institution, if it has to strive for excellence. The research culture will strengthen the knowledge of the teacher, improve his competence and confidence levels and increase his professional credibility. Moreover, the imbibed research culture and the improvised infrastructure attracts revenue generation through consultancy, testing and cater to the R&D needs of industries’ “says Dr. B. S. Samaga, in his article in this Issue.

According to Dr. V. M. Pandharipande, Vice Chancellor, B A M U University, Aurangabad”. “Basically research means going deeper into the process of ‘looking’ for something. It also helps in sharpening one’s senses and improving alertness, in addition to expanding awareness about futuristic needs. Research also means living and growing with questions. One has to always ask, why it is like that? What is the principle involved in any Physical or Chemical action / reaction? If some problem exists, ‘how’ it can be resolved with socio-economic criteria taken into account? Research is an active, diligent and systematic process of enquiry in order to discover, interpret or revise facts, events, behavior or theories or to make practical application with the help of such facts, laws or theories.’

Authors from different levels, different categories and different parts of the country, have contributed articles for this issue. That Research should be an integral part of the teaching process, that research enhances the quality of faculty and without this, the quality and Standards of the System will not go up, that the Faculty should be enriched to guide research activity in the institutions by involving themselves and the students, has been emphasized by one or the other, of these authors. A few authors have presented - a Road Map for the State Engineering colleges, which are mainly teaching Institutes, to become teaching cum research Institutes.

Here, Research, is to be in a small measure, just an introduction, or to put it in other words, it is research mindedness, research attitude making the graduates aware that there is an option for them to choose research career, besides teaching and industry when they come out of the portals of their colleges.. They should be enabled to pick up the excitement of research attitude and its application in day to day affairs i.e. to leap into the unknown and get to know something; it is with this mind that a road map needs to be drawn. The road map mentioned below also covers the deliberation & discussions presented in the Special issue. Of, course, all this needs to be supplemented by further discussions and deliberation in workshops, seminars and conferences at different levels.

The problem of Research in State Engineering Colleges involves the Management, The Principal, the Faculty and the Students on one side and on the other-The Universities, to which most of the Colleges are affiliated and who prescribe the syllabi, and the AICTE which sets up the norms and standards and lays down the policy for the growth and development of the entire Engineering Education sector of the country. Each of these, should come forward to work for inducing research, in a small way in the Engineering Degree programs.

A Strategic Roadmap for Inducting Research Activity in State Engineering Colleges:-

- 1) There is a need for generating Research cult amongst the Heads and the Faculty of all institutions and their Managements.
 - 2) State Authorities should include research activities in State Engineering colleges, in their Policy Statement.
 - 3) The Accreditation Agencies like the NBA, NAAC and the ISO should give visible weight age for such Research activities in their accreditation process.
 - 4) Universities should modify the Engineering Degree Syllabi and introduce Research Methodology and prescribe research orientation to the "project" topic, which is, now, dealt with, without any research orientation,.
 - 5) Enrich Faculty resources, substantially, to guide "Projects", and make it research oriented. Faculty should themselves be made to involve in research activities by pursuing PhD, if they are not having the same and Faculty with PhD should be made to involve in research by taking 1-2 M tech/ PhD candidats under their guidance, on a regular
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basis.. Due consideration should be given to such Faculty in their teaching load for such research activities.

- 6) Offer incentives to Colleges and faculty for taking up meaningful and applied research by collaborating with Industry.
- 7) Generate and sustain a culture of Research by inviting leading researchers from IITs/ IISc and leading R & D Laboratories to be members of the Governing Bodies of the Engineering colleges.
- 8) Encourage a dialogue between the academicians and the industrial professionals. Encourage industry executives as visiting Faculty, wherein they may like to provide seeds/ideas for further research.
- 9) Establish Innovation and Incubation centres in leading Engineering colleges where in ideas can be nurtured and developed into products and services.
- 10) Increase QIP centres for enabling the faculty to study for their PhDs.

Such a Road map is sure to enable the present Engineering Colleges to become a Teaching-cum - Research Institutes. This will be an important step for these Institutes who are supposed to be marching and should be marching, on this the path of Quality and Excellence.

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Editor
