

FDR's suggestions on FOSTERING EXCELLENCE AND INNOVATION IN INSTITUTIONS

With reference to MHRD's policy on 'Establishment of World Class Institutions'

Achieving the status of World Class Institute or become an Institute of Excellence is a gradual process. According to World Bank, "To become a member of the exclusive group of world-class universities is not something achieved by self-declaration. This elite status conferred by the outside world on the basis of International recognition". Such an effort is the result of consolidation of knowledge and incremental progress. Therefore, it is important to understand that in order to build world class institutions, the country should continuously foster innovation and excellence.

Three significant aspects are important in order to develop such institutions:

1) Public sector driven research; 2) Complete autonomy and 3) Coordination between appropriate heads/ministries/departments of the sectors

I. Public sector driven research :

Owing to India's strengths, emerging needs of the country and the contemporary global developments, the government should focus on areas of public sector research that have tremendous potential. Instead of establishing new institutions, identify existing institutions with expertise in different sectors, having the potential of excellence and develop them. Parcel out each institution with respect to its field of expertise, according to their capacities, such as -

Energy sector: In the energy sector, The Energy Resources Institute (TERI) has emerged as an independent research institute recognized globally for its contribution to scientific and policy research in the realms of energy, environment, and sustainable development.

Agriculture research including Genetically Modified crops: In agriculture research, The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) head quartered in Hyderabad is an international non-profit organization that undertakes scientific research for

development with the vision for a prosperous, food secure and resilient dryland tropics to reduce poverty, hunger, malnutrition and environmental degradation.

Civil engineering and material sciences: Indian Institute of Technology, Roorkee (IIT-R), has a well-recognized core competence in traditional engineering and its benefit is harnessed for the country's industrial and economic growth. The Institute is making rapid strides in developing collaborative research activities with Centre for Scientific and Industrial Research (CSIR), Indian Space Research Organization (ISRO), Central Power Research Institute (CPRI) and Defence Research and Development Organization (DRDO) through Sponsored Research and Industrial Consultancy (SRIC).

Pharmaceutical industry research including vaccines: In Pharmaceutical sector, academic institutions can be identified or established by the Government in collaboration with the frontier pharmaceutical companies which bring in the element of top notch research and expertise.

Genetic research: In genetic research, the Centre for Cellular & Molecular Biology (CCMB) is a premier research organization in frontier areas of modern biology. The objectives of the Centre are to conduct high quality basic research and training in frontier areas of modern biology, and promote centralized national facilities for new and modern techniques in the inter-disciplinary areas of biology.

Medical research including validation of traditional knowledge: In medical research, Hyderabad Eye Research Foundation, L.V. Prasad Eye Institute has concentrated on molecular genetics of inherited eye diseases, devising molecular diagnostics for early detection, microbiology of eye infections, biochemical features of cataract, and stem cell technology for reconstruction of the damaged ocular outer surface. Support for these projects come from competitive grants received from the Department of Biotechnology (DBT), Department of Science and Technology (DST), Council of Scientific & Industrial Research (CSIR), and the Indian Council of Medical Research (ICMR) – all from India, as

well as the National Eye Institute (NEI, National Institutes of Health), USA regarded as one of the top institutions for medical research.

II. Complete Autonomy:

- 1) Selection of top leadership of such institutions should be through an independent, high powered and credible search committee.
- 2) Selected head of the institutions shall be of the caliber of a Nobel Laureate and should be vested with complete autonomy in decision making and a fixed tenure subject to renewal with mutual agreement.
- 3) Competitive remuneration on par with global salary scales.
- 4) Appointment of faculty must be at the discretion of the head of the institution and comply with the salary grants laid by the Government of India.

III. Coordination between appropriate heads/ministries of the sectors:

There should be coordination between In the Ministry of Human Resource Development, Ministry of Science and Technology, Ministries of various sectors of development and other key agencies.. Develop these institutions by establishing collaborations with the end users such as industries, which are the major stakeholders in these reforms.

Creating such environment of advanced learning institutions will also retain the best talent within the country and encourage innovations that are the hallmark of world class institutions.

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