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# INFORMATICS

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## I NEWS

### **Technology Policy Draft Released.**

The new technology policy draft released by the central Govt. proposes to generate resources for research and development and refinement of critical technologies from the industries based on their annual turn-over. Among other things, the government plans to take innovative steps to attract scientific talents of Indians all over the world to double the number of career research and development personnel within seven years. The base of polytechnics, technical and vocational institutes and engineering institutions would be enlarged with the full participation of industries. Thrust areas will also include energy related technologies, technologies for conservation of land and water, technologies to save people from natural calamities, technologies for better agriculture prospects, biotechnology, electronics, communications, ocean development and soft ware promotion.

### **B.E. in Geo-informatics :**

Anna University's Institute of Remote Sensing (IRS) is starting a Bachelor of Engineering course in Geo-informatics, having an intake of 15 students after taking into account the critical shortage of experts in remote sensing and mapping techniques.

Remote sensing using sophisticated techniques enables computerised "push-button" aerial photographs and satellite images are translated into maps and survey data within a short time-frame, providing accurate information to several user agencies.

The course is started as a component of a 6-crore German-aided project to expand IRS's activities.

### **Ph.D In Engineering Education**

The Technical Teacher's Training Institute, (T T T I) Madras offers a 3 year full time ph.D Programme for master Degree holders in Engineering / Technology / Science / Arts / Commerce / Business Administration / Education, from the academic year 1993-94. This is the first time that a University offers Ph.D. in Engineering Education in this country and the T T T I Madras is the first institute offering it.

### **Corpus Fund For Self-Reliance**

Indian Institute of Technology (IIT), Indian Institute of Management (IIM) and the Indian Institute of science, Bangalore will create a corpus fund of Rs. 100 crore in the next five years. Contribution and donation from the alumni, faculty, industry, foundation and consultancy work could be considered for this purpose. Such fund would make it possible for these institutions to offer educational programmes comparable to the best in the world and undertake internationally competitive research. It would also make it possible to progressively achieve self-reliance consolidating their resource base and strengthen interaction with the industry.

### **Vocational Institute at Bhopal :**

A central institute of Vocational Education is proposed to be established at Bhopal, which will be an apex research and development body under NCERT. The Institute will provide to the states and Union Territories necessary support for taking up a variety of vocational educational programmes.

### ***Haryana to Boost Technical Education :***

The Haryana Chief Minister Mr. Bhajanlal announced recently in Chandigarh that Rs.500 crore would be spent on the expansion of the technical education during next three years.

### ***Orientation Course for New Lecturers :***

A ten day orientation course for newly recruited lecturers was conducted by Andhra Pradesh State Council of Higher Education at Lal Bahadur College, Warangal. About 30 lecturers participated in the course.

The topics covered in the course were; Higher Education- Prospects and Retrospect, Education commission reports ; Educational Philosophy ; Aims and Objectives Curriculum Design; Class Room Technique and presentation ; Teaching methodology; Concept Philosophy of Education; evaluation strategies ; Teacher-Students , Education Technology , Time Management , communication skills, Art of Teaching, Professional ethics and work cultures, Class Room Discipline, Motivation Role and social Behaviour, Teaching Aids, Role of Teacher in Extension Services, NCC, NSS etc., what makes a good teacher, questioning strategies, Micro teaching Creativity in students, Student Counselling, Lesson Plans, Annual Plans and maintenance of teaching diaries.

### ***Gujrat To Allow Private Technical Institutes :***

The Gujrat Govt. has decided to allow private individuals, trusts, or other institutions to open colleges to impart teaching in various fields of engineering and Pharmacy provided they adhered to the norms set by Govt. The State Government would provide no grant or any financial assistance or land at concessional rates for such colleges.

The college would be allowed to introduce two-tier system of fees, one would be normal as prevailing in the state run institutions and other would be higher. 50 % students will be paying normal fees and others will be paying higher fees. All admission will be strictly on merit basis, irrespective of student paying normal or higher fees. An institution would not have any say in admission of even a single student which will be done under Government supervision and on merit. Financial soundness of a trust or an institution would be the major criteria and prior clearance will have to be obtained from AICTE.

### ***Vocational Courses by Distance Education :***

The book " Technical And Vocational Programmes Through Distance Education" published by Dr. B. R. Ambedkar Open University was released by Governor of Andhra Pradesh, Shri.Krishan Kant. The book is based on the papers presented by distinguished experts in distance teaching at the international seminar on " Technical and Vocational Programmes Through Distance Education".

## ***II VIEWS***

### ***Education Responsible for Alienation :***

The Vice President of India, Shri. K. R. Narayanan, while delivering the convocation address of Andhra University, remarked that higher education in this country invariably resulted in alienation between the elite and the masses and brain drain towards developed countries. He said that the education had been widening the gaps between the rural and urban people, the rich and the poor, the politicians and the vast illiterate electorate.

### ***Autonomy :***

Prof. G. Ram Reddy, while inaugurating the two day UGC sponsored seminar on " Colleges in Haryana need reforms " organised by Kurukshetra University, stressed the need for granting autonomy to good colleges to improve the standard of higher education. He pointed out that the

colleges world over were autonomous and their principals enjoyed a status almost equal to that of a Vice-Chancellor but, in India, colleges were treated as minors.

He said autonomy to colleges was necessary to promote efficiency and it should be viewed in the context of liberalisation and globalisation because students could compete with others only if they were efficient. He regretted that in India the old British model is still followed although the British had given up their old concept.

#### ***Vocationalisation in Higher Education :***

In the same speech prof. G. Ram Reddy said that the UGC appointed committee on the restructuring of courses was likely to suggest how to vocationalise higher education. He further said that a college or a University should be like an enterprise. It should run short vocational courses in addition to regular ones so that it could earn some money.

#### ***Views of some Eminent Scientists, Leading Educationists and Renowned Scholars Expressed in National Debate on " The India Education System: Need for Change " Organised by Maharashtra Academy of Engineering and Educational Research (MAEER) Maharashtra Institute of Technology (MIT) Pune.***

##### ***Dr. Jayant V. Narlikar, Director - IUCAA Pune.***

Dr. Narlikar stressed the need for holistic approach to the entire sequence from pre-primary to University Education.

Airing his views on our school education, he remarked that our school curriculum fails to meet the basic objectives viz. (1.) Information which may be of use to a student in later life as a responsible citizen and may provide with a spring board for higher education. (2) Provide analytical ability enabling a student to search for new information and to process it for the needed purpose. The main drawback of the present school education are : it is overstuffed with information which the child may or may not need. The class-work, home-work and work for examination hardly leaves any time for analytical reasoning so necessary for understanding the subject matter. The child is not expected to be a walking encyclopaedia but it should be encouraged to find information from some books. His suggestions are :

- 1) Reduce the course contents to half.
- 2) Drastically curtail the excessive factual contents in subjects like History , Geography and Civics.
- 3) Emphasize mathematics and science which satisfy curiosity by analytical reasoning and/or direct verification by experiments.
- 4) Present highlights of creative arts and literature.

##### ***Dr. Raghunath Mashelkar, Director, NCL Pune.***

Dr. Raghunath Mashelkar was of the opinion that the university / institutes should forge numerous connections with society, commerce and industry, developing outreach programmes with the help of modern communications and information technology and networking of all kinds tuning with the national laboratories and other research institutions through joint programmes as well as giving them status of deemed universities.

Every effort should be made to increase the industrial involvement in education which will help in revenue generation through consultancy services to industry, refresher courses. Industry should support and maintain a full fledged institution specially tailor-made to suit a specific type of industry.

***Dr. Yash Pal, Former chairman U. G. C. New Delhi***

He suggested that science should not be treated as an additional, extraneous activity, not only a tool, not as a something which necessarily must arise in some better developed countries and come to us second hand; instead, it should be a part of a culture of society integral to our living, integral to our thinking, connected with our dreams, connected with concepts of ethics, beauty and spirituality.

He is of the opinion that " We can't do any Science and Technology nor for that matter anything else that is meaningful unless we pay enough attention to education. We are supporting education in a fair way but not adequately enough. He points out that to create capabilities matching with those of developed countries, we ought to be spending on Science and Technology education at higher education level to a tune of Rs. 13,000 crores a year even with a very conservative estimate. We spend about Rs. 1100 crores a year on all higher education. The difference is obvious. We may have to grow it slowly but there is no question that the resources to be spent on science and technology education need to be increased by an order of magnitude. Further he stresses that the amount of resources for science and technology education and for doing S & T should be about the same.

Therefore, it is important to realise firstly that we have to increase the resources in the education sector and secondly that a lot of research and development has to be done in educational institutions if we want to make the process of growth sustainable.

### ***III NEWS FROM ABROAD***

#### ***Reforming The Academic Year***

A radical reorganisation of the traditional 30 week, three term academic year has been proposed for Universities in U.K. to make the increase in student number in Universities and colleges as economic as possible.

Universities could teach up 50 % more students by opening through the summer vacation bringing forward the start of the academic year and asking group of students to attend at different points during the year. Teaching through the summer may mean that degree courses can be completed in under three years. One aim is to save money by making use of existing building all year round thus alleviating the need to put up new lecture theatres and halls of residency to accommodate the expansion in student numbers.

#### ***Performance Appraisal of Teachers***

University of Connecticut has drawn up a criteria against which professors will be measured and given scores on scale one to five in ten categories. The categories include research productivity, service to the state, national reputation, undergraduate teaching and post graduate teaching.

Professors in each department set their own goals and measured over the year on the extent to which they are meeting those goals. Behind the performance appraisal is a desire to ginger up the academic staff and to show the state legislative that professors were indeed worth the money spent on them.

#### IV FORTHCOMING CONFERENCES :

Proposed Date	Title	Objective	Name of the Organising Secretary / Officer to be contacted
28-30 Oct. 1993	25th and 26th AIAET National Conference	Theme :- Opening Learning	Dr. Santosh Panda, Conference Secretary, AIAET, F-5-E, DDD Munirka New Delhi- 110 067
10-12 Nov. 1993	International conference on Engineering Education	Theme :- Future trends and challenges in Engineering Education.	The Association of Engineering Education in south East Asia and The Pacific (AEESEAP) and co-sponsored by FEISEAP and IACEE.  Address-International conference on Engineering Education 93, c/o Applied Research Corporation Engineering. E-4 -04 -11, National University of Singapore; Kent Ridge crescent, Singapore 0511.
10-12 Dec. 1993	National Conference on Engineering Education	Theme : Engineering Education and Development.	National Conference on Engineering Education. Amrit Vahini College of Engineering, Amrit nagar, P.O. Sangamner S.K. -422608. Tal Sangamner, Dist. Ahmadnagar (M.S.)

