

CHALLENGES BEFORE ENGINEERING EDUCATION IN INDIA

Dr. D.P.Gupta,

Director
Haryana College of Technology
& Management, Haryana, India

Arvind Dewanga,

Asstt. Professor,
Civil Engineering Department
Haryana College of Technology
& Management, Haryana, India

ABSTRACT

We know that the present day economies are governed by market forces. After globalization, liberalization and privatization, the market has become very demanding, suddenly we are pushed into a situation where these are no excuse for incompetence. The jungle rule prevails. It is the survival of the fittest. Technical Education is one of the most significant components of human resources development spectrum in improving the quality of life of the people. In recognition of the importance of this sector, the planners have accorded priority to this sector. There has been phenomenal growth in the field of technical education during the previous plan periods. At the dawn of independence, there were hardly 4 degree and 8 diploma institutions. There are at present 222 degree and 203 diploma institutions, with intake capacity of 63,515 and 50,479 students respectively. Technical and higher education has its own issues to contend with. From making available adequate number of colleges and universities including technical and vocational institutes, ensuring quality of education, promoting the spirit of quest, to working out meaning full curricula aligned with the job market. The entire education sector is expectedly buzzing with activity. Every now and then we hear of young people giving up Lucrative Corporate Careers to take on the responsibility of teaching the needy. This growing social consciousness needs to be promoted and sustained. This paper focus, the aligning technical and higher education with the labour market and challenges before education in India along with imperatives for building a knowledge society. This paper suggest that highest growth in elementary occupation that has large base and in high skill category having a very small base. A large number of people require vocational skills and their number is also growing.

Keywords: Engineering, Teaching, Technical Education, Engineering & Technical Education, Professional Education.

INTRODUCTION:

The history of inculcating formal technical education in India started in the 19th century although it got momentum in 20th century with the onset of Constitution of Technical Education Committee of Central Advisory Board of Education (CABE). After India achieved Independence in the year 1947, the head-start of technical education emerged as a major concern for the Indian Government in order to face upcoming challenges and bring the country ahead.

The established the Indian Institutes of Technology, Indian Institutes of Management and Indian Institutes of Science were a vital step in the development of technical education in the Indian subcontinent. The ability of these institutions to produce competent and hard core intelligent scientists and engineers had managed to change the outlook of Indian on the global front. India was earlier known for yoga, meditation and holy places, but now it is reckoned for computer engineers.

Therefore, in order to maintain the standard of technical education all across the country, a statutory authority namely- The All India Council for Technical Education was set up in 1945. AICTE is renowned for planning, formulating and sustaining similar standards through accreditation, funding in particular colleges, monitoring and evaluation and awards thereby ascertaining coordination in management of technical education in India. The main objective of these authorities is to ensure that all the admission procedures, selection criteria, entrance examination and information regarding allied preparation material are carried out appropriately all across the country. Under the term 'Technical', there comes a number of courses which include degree and diploma courses in Engineering, Master degree Courses in Engineering, Master of Computer Application (MCA), Master of Business Administration (MBA), Pharmacy Courses, Courses in Architecture and Applied Arts and Hotel Management and Catering Technology Courses.

ALIGNING HIGHER EDUCATION WITH THE LABOUR MARKET:

In recent years, Indian economy has grown rapidly interestingly, by skipping the manufacturing stage and going straight to the services sector, the country took a rather unconventional, path to growth. This resulted is a surge in demand for graduated in certain areas taking the higher education sector by surprise. Unable to meet this demand, technical and higher education sector received a lot of flak. Ironically these shortages were accompanied with rising graduate unemployment and underemployment. Changing nature of work and growing integration of Labour markets at the global level makes the coordination between higher education and labour market complex.

There have been three key developments in the Indian Labour market in recent years. First the country's high economic growth created new jobs in the IT and IT enabled services, pharmaceuticals, biotechnology and engineering design sectors. In addition, several new economy sectors such as finance, insurance, organized retail; aviation, hospitality, animation, media, real estate and infrastructure opened up a wide variety of Job opportunities, not all necessarily requiring graduate qualification.

Secondly many Indians are new hired for jobs overseas and a wide range of jobs are offshore to India. At the same time, Indian companies are also hiring foreign nationals. Thus, there is a global labour market. More and better jobs are being created for Indians, who are playing and important role in this global labour market.

Finally, due to technical changes, most jobs in both manufacturing and services sector are new clustered at the low productivity end, while some are at the high productivity end, with the middle hollowing out. Thus, a majority of the work force is engaged in jobs requiring basic of intermediate skills.

Presently there is so many number of Engineering Colleges, Polytechnic Colleges in India. All these should have augmented the pace of industrial development. Instead, the institutes are producing persons who fall much short of desired expectations of the industries. In other side the industries are on a look out for persons who technically equipped, possess managerial skills, are creative, and can easily adapt to the changing market situations.

There developments are evident from the population data of 2001 census. Out of 402 billion workers, merely 12.5 million workers were in high skill category (legislators, senior officials, managers & professionals) that could be related to people requiring graduate degree or above. 127 million cultivators, 107 million agricultural labourers and 16.9 million workers in household industries did not obviously require graduate qualification.

Higher education enrolment ratio at 11% through low in absolute terms appears to be adequate to meet demand for graduates. Its growth of about 9% annually in recent years (through not as dramatic as China where it has grown by 20% annually) is healthy and yet there are skill shortage in many areas. The reason for this lies in the internal structure of the India technical and higher education and training sectors are organized in the country.

Higher education in India is skewed of favours of humanities and arts and about 4/5th of the graduates do not have any employable skills with rigid academic structures, there is little student choice and large variation in quality across institutions. Ordinary graduates that the country's higher education system churns out (Produce

mechanically and in large quantities) are unfit for the new jobs being created. It is therefore not surprising that graduate unemployment rate at 19.6% is significantly higher than the overall rate and more than 60% of graduates perform jobs that do not require graduate skills. President Obama has recently announced \$12 billion plan for investing in community colleges that focus on vocational skills to give a boost to the ailing US economy based in Leitch review, the UK has taken up initiatives to make its higher education skill oriented.

In sum, in overall terms, India does not have a problem of supply of graduates; the problem lies in the uneven quality of graduate and skill mismatch and small number of people with rapid economic growth, investment-boom and accompanying structural changes, the situation had aggravated in certain segments, bringing focus on higher education and skill development in recent years.

Now with slowdown, with media reporting job losses and weak placements, people are voluntarily opting for further education and skill up gradation. Thus skill shortages are not general, but specific and often temporary and cyclical. The solution may, therefore, not lie in large scale expansion of higher education, but in identifying the shortages and finding context specific solutions and building adaptive capacity in the system.

Linkage between higher education and the labour market are tenuous. Addressing the problem of unemployment and underemployment of graduates on the one hand, and the problem of skill shortages on the other requires interventions that makes the connections between higher education and the jobs more efficient.

NEED OF TODAY'S:

There is found that the students of Engineering Colleges of each state of this country should be given apprenticeship, and on job training opportunities. This will lead to availability of trained human resources to the industries of the region. Further, it will also widen the placement opportunities of the students in the industries, and service sector. Since technology has become the key factor in deciding the course of development of any nation, there is a need to encourage technology up-gradation of the industries, therefore enhancing the research potential of the industries. All the inventions and innovations, stem out from the developed nations, which is a result of tremendous effort that they put in R & D. Thus R & D facilities have to be promoted in the industries.

Globalization has compelled industries to produce standardized, calibrated and quality products, here, Institutes can help industries of the region in providing easy access to this.

In times of rapid change, institutions have to become more responsive to changing labour markets and students interests. Unfortunately, universities are not particularly innovative institutions they are not well suited to quickly pulling together whatever resources are needed to respond to a new problem or challenge. This problem is more serious in India due to the structural rigidities of the system, near absence of competition between institutions, and mindset problems.

In recent years, survival initiatives have been taken to bridge the gap. Industry specific and context-specific solution is being tried in many sectors. Experience has shown that private institutions are for more adaptable and non-formal provision is better in responding to the students' demand. Thus, a suitable mix of the public and the private, the formal and the non formal provision for higher education and training provides, an optimal solution and would meet the changing needs of economy and society.

Unified education and training system are best suited to respond to changes in the job markets. This would require building pathway between the vocational and the higher education sectors through a national qualifications framework and re-branding of vocational education. Managing Public-Private Mix and devising policies that ensure healthy growth of both the public and the private sectors are needed.

The problem lies in the fact that our education system is designed for those who wish to pursue higher studies in universities or in technical institutions [medicine /engineering etc.] making no allowance for those who do not have the aptitude for higher studies. The result is that students either drop out after class ten or twelve or enroll in degree colleges for want of anything better to do. We thus spend huge amount on producing a large number of unemployable youth who hold university degrees. They are not educated unemployed, but unemployable graduates! Any employer will tell you how frustrating it is to get the right people for available jobs. Construction companies do not get adequately trained masons, carpenters, blacksmiths, electricians, etc. Offices cannot get good stenographers, computer operators, accountants, etc. Factories and workshops cannot get mechanics and technicians. These graduates do not possess employable skills even if they are considered educated.

Deemed Universities have also mushroomed. Most of them do not belong to the same class as those recognized as such twenty years ago. This provision was reserved for a few truly outstanding education and research institutions, with a consideration that they would bring depth and variety into the education system.

CONCLUSION:

Three major steps need to be taken to correct the situation. One the industries in order to promote welfare, should extend financial, managerial support. However, there is eagerly look forward to more interaction between industries and institutes which will lead to providing continuing education, expert exchange , and sharing of resources.

Second make a vocational subject compulsory at the plus 2 level for all students. It may be argued that there are separate schools for vocational education. Unfortunately, many consider such schools/courses as “inferior” and it affects their dignity [caste oriented professions may have something to do with this mindset]. Making a vocational subject to pass the exam .It would also foster dignity of labour, something woefully absent in our culture. Education in India needs to more skill oriented – both in in terms of life-skills as well as livelihood skills. In sheer numerical terms , India has the man power to substantially meet the needs of a world hungry for skilled workers, provided its education system can convert those numbers into a skilled work-force with the needed diversity of skills.

Third promote partnership between NGOs, private sector & public Sector, along with increase scope of Apprenticeship Training in Service Sector, Informal Sector and High Tech Sector.

REFERENCES:

- [1] Prof. Yashpal,[Former Chairman UGC]-“Management of Universities” Yojana-2009
- [2] Pawan Agrawal,[Former Financial Advior and Coordinator in UGC]- “Aligning Higher education with the Labour Market” Yojana-2009
- [3] B.K. Saha [Retd. IAS]-“Making Secondary Education more relevant” Yojna-2009
- [4] Shashank Chaturvedi [Research Scholar, Centre for Political Studies, JNU, New-Delhi]-“Challenges Before education in India”-2009.
- [5] Dr.A.J.V.Prasad – Secretary, Technical Education, Man Power Planning, & Technology, Govt. of CHHATTISGARH, “WORKSHOP ON INDUSTRY INS TITUTE LINKAGE POLICY”- Souvenir-2006.
