

Engineering Education – is it Unemployment

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ABSTRACT

Engineering education is the activity of teaching knowledge and principles related to the professional practice of engineering. Education is one of the best businesses in the current Indian scenario. The immense interest in engineering courses among Indian parents was aptly followed by the mushrooming engineering colleges in the past decade. Except a handful, the histories of majority of engineering colleges in India span not more than 15 years. Indian education system is swarmed with a wide variety of curricula most of which are designed to excel with rote learning. The pupils trained in an education system like this are capable of memorizing chunks of information but only a creamy layer of them have applicative skills, which is the prime requisite of the recruiting companies. Anyone with a gifted memory and ability to rote learn any amount of data can pass out an engineering degree with distinction. The scored marks or percentages can never be considered as a true measure of intelligence. In India we don't really face unemployment but what we actually face is the 'unemployable' problem. Current studies reveal that only about 15-25 % of the Indian engineering grads are employable, having the skill sets that employers look for.

1. INTRODUCTION

Dictionary.com defines an "unemployed" person as one "without a paid job but available to work". The same site defines an "unemployable" person as someone who is "not able to get paid employment because of a lack of skills or qualifications. "Unemployment has been one of the biggest challenges plaguing the global economy. Closer home, going by statistics, a staggering 13.3 per cent of India's population in the age group of 15-29 years are unemployed. Yet, as our unemployment figures continue to rise, almost every industry, be it manufacturing, technology, hospitality or corporate, is facing a shortage of skilled workforce. The real problem, as research clearly suggests, is finding suitable candidates to fill jobs.

Being unemployed and unemployable are two different issues. Being unemployable means that a job-seeker does not possess the prerequisite soft skills and qualities that a specific job demands, inspite of being technically proficient.

Recent reports also indicate that as many as 47 per cent of Indian graduates are not qualified for any industry job. Adding fuel to fire, surveys by various agencies reveal that more than 70 per cent of our engineering graduates are not employable. The distressing news is that the problem of employability in India is rampant in both blue and white-collar jobs. So what are the contributing factors to this disparity? Societal inequalities, inadequate education infrastructure, quality of education and lack of effective assessment of skills are some of the reasons why a majority of working class personnel in our country are not qualified for the jobs that they aspire for.

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 promote 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.

STRENGTHS OF INDIAN ENGINEERING EDUCATION

- India has had a long tradition of erudition and knowledge generation and dissemination from ancient times. However, some of the traditional knowledge, for example, in Ayurveda, is not fully documented or systematized or made up-to-date.
- Leading institutions in India can attract and enroll international students, which will bring about the much needed student interactions and financial inputs.
- India's median age is about 26 years and nearly 600 million people are in the working age group. We have the work force for the world, not just for India. Unlike China, India's growth will be driven by domestic consumption'
- Innovation is identified as almost synonymous with young age and good education.
- India is fortunate to have the largest number of English-speaking people, perhaps next to the US.
- India has a fairly good and wide information, communication and technology (ICT) network, which is getting better with time.
- More people recognize the importance of quality education as the way to move ahead in life and have the resources and willingness to spend on good education.

SWOT ANALYSIS

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| <p>Strengths</p> <ul style="list-style-type: none"> •Young, capable & dynamic human resources - Working age population to comprise over 63 % of the aggregate by 2016. •Big democracy, Big market & free media •Professional course with job guarantee. •Emerging promising sectors include Retail, Telecom, Construction, Hospitality, and Agribusiness/ food processing | <p>Weaknesses</p> <ul style="list-style-type: none"> •Disconnect between skills provided and skills required by the industry •Unsatisfactory employability of trainees because of poor quality of training •Shortage of trained instructors and low instructor training capacity in the country •Outdated curriculum & lack of market orientation in vocational training institution |
| <p>Opportunities</p> <ul style="list-style-type: none"> •India's tremendous potential-Demographic •Big potential market in education Sector Service sector: 40 million jobs by 2020- 11th Plan Approach Paper •Retail sector: 115,000 jobs by 2020- Retailers Association of India •The Emerging sector has lot many verticles like Hospitality, Retail, sales ITES, insurance, Manufacturing, banking where there is huge gap in manpower demand and supply •India is the largest home for consumers of education services in the world. | <p>Threats</p> <ul style="list-style-type: none"> •High competitive & marketing forces. •Inadequate funding for vocational programs. •Economic slow down. •Minimum wage going up.. |

REASONS FOR UNEMPLOYABILITY OF ENGINEERING GRADUATES

- The shortage of faculty both in numbers and in quality is the most serious problem facing higher engineering education system .
- A person who graduated with his/her first degree (BE or B Tech) to start teaching in the following academic year.
- Lack of adequate high-quality educational facilities is making a large number of Indian students go abroad for higher studies.
- In most of the engineering institutions the course curriculum is, by and large, theoretical in nature and students are not made aware of the applications of the theories in industry.
- The assignments given quite often are routine and do not involve any research or innovation.
- Industry –Institute linkage is missing. If at all its there, itsfor attracting students into the engineering stream.
- The current system ,curb independent thinking, self-study skills, resourcefulness, intellectual maturity, academic confidence, and the very motivation to learn with excellence.
- Depth of understanding, originality, authenticity, creativity, and perseverance are not encouraged. Assessments done only through exams.
- Mismatch between education and job requirement.
- Graduates often complain that they were not exposed to life skills training or internship opportunities during their graduation years, which would have prepared them for the real workplace scenario.

- Lack of English knowledge and cognitive skills in students.
- The academic performance of students aspiring for engineering education seems to very poor. Many students are forced to pursue their career in engineering for the sake of parents status..
- Institution wants to increase its pass out ratio. Students concentrate on grades and not on learning.

STEPS TO BE TAKEN TO IMPROVE THE SITUATION

- Rehiring retired faculty and inducting qualified engineers from the industry and R&D institutions as adjunct faculty.
- The industries in order to promote welfare, should extend financial, managerial support. There should be more interaction between industries and institutes which will lead to providing continuing education, expert exchange, and sharing of resources.
- 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. Many consider such schools/courses as “inferior” and it affects their dignity. Making a vocational subject to pass the exam.
- Education in India needs to more skill oriented – both in terms of life-skills as well as livelihood skills.
- Promote partnership between NGOs, private sector & public Sector, along with increase scope of Apprenticeship Training in Service Sector, Informal Sector and High Tech Sector.
- Proper career guidance to the students will help them to reinvent themselves and make their education meaningful.

2. CONCLUSION

The improvement of infrastructure, redesign of curricula, improvement of teaching-learning methods and attracting well qualified teachers are only a few steps that could be initiated by individual institutions. The core intention of the researcher here is to show an engineering aspirant about the realities to sharpen the skills that will obtain them a definite future rather than giving way to attractive ads of the institutions, which might only fetch them just a degree worth for nothing.

3. REFERENCES

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