

Imagine yourself in a much-lauded plush fashion store in the city in search of a finest quality wedding suit but to be baffled to be standing amidst the racks of shoddy fabrics of all sorts. The laborious yet futile search for quality makes your shopping feel like a chore. Same is the case when you get into the shoes of a corporate employer who is out hunting for engineers of the finest breed. Nevertheless, the chase ends in a vast storehouse of inept candidates.

In short, the number of employable candidates is taking a nose dive in this age when technology is making giant strides. If the recent survey is any indication only 20% of engineers in the country are employable. There is indeed a bit of truth in it. The key reason for this scenario is exponential expansion of technical education and resistance to bring in changes to the education system in India.

A surplus of 4K Engineering colleges!

The country, in its policy initiative of increasing gross enrolment ratio to 30, has allowed massification of higher education system which has resulted in the establishment of a large number of educational institutions. We



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have about 900 universities and 40,000 colleges. About 4,000 engineering colleges are beyond the existing demand. Yet, the sad part is that the attractiveness towards the course has started to fade so much so that last year nation saw a dip in the admissions to engineering colleges by 50%.

When there is a spurt in the number of seats by throwing open opportunities for all, the quality suffers. The growth ratio goes below the required rate when the employment quotient is less than the demand. Excessive supply could lead to massive unemployment.

Outdated curriculum

Sadly though, the learning process and the curriculum remain unchanged. As a matter of fact, the system has become the butt of the joke for many experts who say students are being prepared to practice engineering for their parents' era and not for the 21st century. The universities make changes in their curriculum once in 4 or 5 years but invariably it is a cut and paste exercise. There is a directive that the technical institutions should get their courses accredited by the National



Board of Accreditation but not even 5% of them could abide by the order.

The accreditation agency mandate of Outcome-Based Education is not being followed. Engineering education should impart the effective application and use of scientific principles to solve real-world glitches.

A good graduate a good demonstrator

Upshot of industries is measured with respect to the production and there are no such evaluation practices in the education system in India. Further, outcome-based education starts with a clear statement on knowledge, skill and attitude.

The graduate engineer should be able to demonstrate themselves as having acquired the required knowledge and skills on successful completion of a four-year programme of study and these should be evidently assessable. These are stated as programme outcomes and course outcomes and are related to the vision and

mission of the institute and the programme and graduate attributes.

The graduate attributes are a set of generic statements with respect to knowledge, skills and attitude essential for the graduate engineer. The curriculum has to be designed by following in the steps/ documents related to outcome-based, (ducation) to ensure the



graduates of their institutions could take up the jobs responsibilities they are expected to handle.

Poor grades and detainment

Some of the students joining the engineering courses are not really motivated to achieve the objectives set in the curriculum. Such students demand reduced content, bring down the requirements in assessments and finally the achievement in the courses will be low. Students move from one semester to the next semesters without attaining the essential grades.

Some of the universities recommend minimum credit requirements. Students detained for want of required credits will have to obtain the required credits either by repeating the course or by self-study during the break period. The technological universities in Kerala (KTU) and Tamil Nadu (Anna University) have relaxed the requirements whereas the Visvesvaraya Technological University (VTU) in Karnataka still follows it.

The student community must be able to understand the requirements of the industry and they should also contribute to the scheming of the curriculum. Teachers have a greater role to play and are primarily responsible for the curriculum design. The board of studies and

GO BEYOND TEXTUAL KNOWLEDGE - E. SREEDHARAN



Learn the subject thoroughly. Knowledge is strength. Knowledge about the subject will attract respect and will always be your greatest strength. And then develop good qualities. Mere knowledge of engineering is not enough if you don't have values or ethics. You can never be a brilliant engineer if you don't love your country.

of all stakeholders viz, faculty, industry representatives, alumni and even students will have to take decisions which will facilitate fixing higher attainment levels.

Incorporate New-gen Teaching Methods

The next challenge is to put a well-planned teaching and learning practice. We still follow a chalk and duster process which has been in practice from time immemorial. Today, the children are glued to digital devices. They may not appreciate following the archival mode of education.